TEACHING AND LEARNING AT TERTIARY-LEVEL VOCATIONAL EDUCATION: A PHENOMENOLOGICAL INQUIRY INTO ADMINISTRATORS', TEACHERS´ AND STUDENTS´ PERCEPTIONS AND EXPERIENCES

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ABSTRACT

TEACHING AND LEARNING AT TERTIARY-LEVEL VOCATIONAL EDUCATION: A PHENOMENOLOGICAL INQUIRY INTO TEACHERS', STUDENTS´ AND ADMINISTRATORS' PERCEPTIONS AND EXPERIENCES

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The aim of this study is to explore the phenomenon of teaching and learning at higher vocational education schools through teachers', students' and administrators', perceptions about effective vocational teaching and learning, and to investigate the challenges faced by the teachers, students and administrators, and their practices to cope with them. In line with this thrust, phenomenological research design was employed, and data were collected at eight higher vocational schools in Nevşehir, Turkey with the participation of 8 administrators, and 16 teachers and 70 students in sixteen focus groups, who were selected through maximum variation and snowball sampling strategies. Individual and focus group interviews were utilized as data collection methods, together with non-participant observation conducted to confirm and supplement interview data. Data analysis, conducted through inductive content analysis approach, revealed that effective vocational teaching and learning was defined from two perspectives: product-

oriented teaching versus process-oriented teaching, and product-oriented learning versus process-oriented learning. Concerning characteristics of effective vocational teacher, emerging themes were teacher knowledge, teacher role and teacher traits while effective vocational learner characteristics were related to learners' entry, affective and cognitive characteristics, and personal traits. Also, perceptions regarding aim of higher vocational education and characteristics of effective vocational program emerged from data. The challenges hindering effective vocational teaching and learning were found related to teachers, students, curriculum, context, system, employers and parents while the strategies to cope with those challenges were categorized as teacher-led, student-led and administrator-led practices. Finally, data revealed recommendations made to improve effectiveness of higher vocational education.

Keywords: Vocational teaching, vocational learning, higher vocational education, conceptions, challenges

ÖZ

MESLEK YÜKSEKOKULLARINDA ÖĞRETİM VE ÖĞRENME: ÖĞRETİM ELEMANLARI, ÖĞRENCİ VE YÖNETİCİLERİN ALGILARI VE DENEYİMLERİ ÜZERİNE BİR OLGUBİLİM ÇALIŞMASI

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Bu çalışmanın amacı, meslek yüksekokullarındaki öğretim ve öğrenim olgusunu öğretmen, öğrenci ve yöneticilerin algıları ve anlayışları doğrultusunda derinlemesine incelemek ve etkili mesleki öğretim ve öğrenmeyi zorlaştıran etmenleri ve öğretmen, öğrenci ve yöneticilerin bu zorluklarla baş etme yollarını tespit etmektir. Bu amaçla, çalışmada nitel araştırma yaklaşımı çerçevesinde fenomenoloji (olgubilim) araştırma deseni uygulanmıştır. Veri, Nevşehir'de bulunan 8 meslek yüksekokulunda, maksimum çeşitlilik ve kartopu örneklem stratejileri kullanılarak seçilmiş 16 öğretmen ve toplamda 70 öğrenciyi içeren 16 odak gruptan ve 8 yöneticiden yarı-yapılandırılmış görüşme yoluyla toplanmıştır. Ayrıca, görüşmeler yoluyla elde dilen veriler, katılımsız gözlemler yoluyla doğrulanmış ve desteklenmiştir. Verilerin analizinde tümevarımsal içerik analizi yaklaşımı benimsenmiştir. Elde edilen sonuçlara göre, etkili mesleki öğretim ve öğrenim, sonuç odaklı öğretime karşı süreç odaklı öğretim ve sonuç odaklı öğrenime karşı süreç odaklı öğrenim olmak üzere iki karşıt anlayış doğrultusunda

betimlenmiştir. Etkili meslek öğretmeninin özellikleri, bilgi temeli, öğretmen rolleri ve kişisel özellikler olmak üzere üç tema etrafında toplanırken etkili mesleki eğitim öğrencisinin özelliklerine ilişkin temalar, mesleki yükseköğretime giriş özellikleri, duyuşsal özellikler, bilişsel özellikler ve kişilik özellikleri olarak ortaya çıkmıştır. Ek olarak, mesleki yükseköğretimin amaçları ve meslek yüksekokulundaki etkili bir mesleki eğitim programının özellikleri de elde edilen sonuçlar arasındadır. Etkili öğretim ve öğrenmeyi engelleyen faktörlerin ise öğretmen, öğrenci, eğitim programı, bağlam, sistem, işveren ve aile kaynaklı olduğu görülmüş ve bu etmenlerle baş etme stratejileri, öğretmen, öğrenci ve yönetici öncülüğündeki uygulamalar olarak gruplanmıştır. Toplanan veriden ayrıca, etkili mesleki öğretim ve öğrenime yönelik öneriler ortaya çıkmıştır.

Anahtar kelimeler: Mesleki öğretim, mesleki öğrenim, mesleki yükseköğretim, anlayışlar, zorlaştırıcı etmenler

To my beloved son, Batuhan,
who brought joy and challenge to my life,
expanded my horizons and deepened my insights,
and made this work more meaningful and valuable

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CHAPTER 1

INTRODUCTION

This chapter presents the background to the study, purpose of the study together with research questions, significance of the study, and definitions of the terms relevant for this study.

1.1 Background to the Study

Characterized with the two basic roles of preparing individuals for job entry and upskilling the current workforce (Organization for Economic Cooperation and Development (OECD), 2012) higher vocational education and training plays a key role in supplying skilled workers needed by the labour market as the skills provided by basic level vocational education at upper-secondary schools is not enough anymore to meet the demands of the labour market in the 21st century (OECD, 2014). Labour market in the information era is being driven by rapidly changing demands and requisites of the knowledge-innovative economy in which industries and organizational structures depend on the production, dissemination and use of knowledge (OECD, 2004), thus making workplaces and employers seek workers with generic skills and competences with the ability of using, producing and adapting to new forms of knowledge (Cairney, Sommerlad, & Owen, 2002; OECD, 2004).

In general terms, European Center for the Development of Vocational Training (CEDEFOP) (2011a) defines the role of vocational education as "equipping people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market" (p. 7). Assigned with this role, schools and institutions offering higher vocational education purpose to supply "the increasing demand for higher professional and technical skills from

employers, and rising demand for high level education from groups that traditionally did not participate in post-secondary education" (OECD, 2012, p.18).

Despite clear purposes it serves, it has been difficult to characterize vocational education at tertiary level as there is a blurred boundary between the training systems in use in the world, which are initial vocational education, continuous vocational education and higher education (CEDEFOP, 2011a). To make a clear distinction between vocational educational and training systems at tertiary level and to identify the position of higher vocational education in Turkish education system, educational classification proposed by United Nations, namely International Standard Classification of Education (ISCED), is predicated on within the context of this study.

According to ISCED (2011) classification, higher vocational education, called as short-cycle tertiary education or programs at Level 5B, provides students with "practically-based" and "occupationally-specific" education and training, professional knowledge, skills and competences to enter labour market, and is referred to "(higher) technical education, community college education, technician or advanced/higher vocational training, associate degree, or bachelor+2" (ISCED, 2011). As stated among the principal characteristics of higher vocational education within ISCED, content presented at higher vocational schools, typically, with at least two years of educational duration, is more complex than secondary vocational education but less theoretically oriented than bachelor degrees.

Rather than academic orientation, vocational education at tertiary level intends to develop craftsmanship, practical experience and practical problem-solving and to "prepare people for careers in higher level technical, professional and managerial positions through the provision of job-specific skills" (CEDEFOP, 2012; OECD, 2012) for it is the role of higher education to enhance learners' knowledge, skills, attitudes and abilities, and simultaneously empower them as lifelong, critical and reflective learners for the sake of employability (Harvey, 2000). Focusing on expertise, Lucas, Spencer and Claxton (2012) put emphasis on working competence, comprising "knowing" and "thinking", as the all-encompassing goal of vocational education and noted that it is "about the ability to make good decisions in a real situation, at a specific moment in time, and not about

checking off a list of specific, task-based competencies" (p. 38). From socio-cultural perspective, vocational education also fosters learners' self-confidence, self-esteem, job satisfaction, positive changes in health outcomes and active engagement with family and community (CEDEFOP, 2011b).

Though the common point is its being "vocational," "occupational," "professional," varying conceptions of vocational education is the result of its heterogeneity in terms of its purposes, institutions, participants and programs, making it difficult to give a singular and unitary description of vocational education (Billett, 2011, quoted in CEDEFOP, 2017), and thus problematizing the accounts of effective vocational teaching and learning. In addition, Blom and Meyers (2003) maintained that within vocational education system were four subsystems interacting each other constantly, namely policies, administration, programs and learning experiences (see Figure 1.1) and the quality of each is measured according to its own quality criteria.

Figure 1.1 *Four Interacting Subsystems of Quality VET Systems (Blom & Meyers, 2003)*

In an attempt to develop a theoretical framework in this context, the concept of vocational pedagogy has been coined by Lucas et al. (2012) in order to define

working approaches to teaching and learning in vocational education (Commission of Adult Vocational Teaching and Learning (CAVTL), 2013) and develop models that work best in vocational education context (Faraday, Overton, & Cooper, 2011). Broadly, it is noted by CAVTL (2013) that excellent vocational teaching and learning depends on a clear line of sight to work; collaboration between employers, trainers and providers for the design and delivery of vocational programs; "dual" professional teachers with occupational and pedagogical knowledge and skills; and access to industry facilities and resources with recent technology and standard (p. 9). Going into deeper, the concept of vocational pedagogy deals with the outcomes of vocational education, identity of vocational teachers, models of and analogies for vocational education (Lucas et al., 2012), and teaching skills, teaching relationships, teacher reflection and teaching models and teaching context (Faraday et al., 2011). More specifically, vocational pedagogy is concerned with:

- integration of theory and practice (CAVTL, 2013; de Brujin & Leeman, 2011; Kerna, 2012);
- use of variety of learning environments like real or stimulated workplace, classroom and workshops settings (Black & Yasukawa, 2013; Evans, Guile, & Harris, 2009; Mcrone et al., 2015; Moodie & Wheelan, 2012);
- use of authentic tasks in real or real-like contexts through practical problem solving, hands-on activities and reflection (CAVTL, 2013; de Brujin & Leeman, 2011; Lucas et al., 2012);
- responsiveness to diverse individual needs (CAVTL, 2013; Chappell, 2003; Cullen et al., 2002; de Brujin & Leeman, 2011; Harkin, 2012; McCrone et al., 2015; Lucas et al., 2012);
- contextualized teaching and learning embedded in communities of practice (Barnett, 2006; Canning, 2011; Catts, Falk and Wallace, 2011; CAVTL, 2013; Evans et al., 2009; Smith & Blake, 2005);
- collective and collaborative approach to teaching and learning (Black & Yasukawa, 2013; CAVTL, 2013; Chappell & Hawke, 2003; de Brujin & Leeman, 2011);
- coaching and mentoring (de Brujin & Leeman, 2011; Evans et al., 2009; Jameson, 2012);
- use of variety of assessment and feedback methods (CAVTL, 2013; Lucas et al., 2012);
- dual identity of teachers with occupational and pedagogical knowledge (Barnett, 2006; CAVTL, 2013; Orr & Simmons, 2010; Palmiere, 2004); and
- eclectic and pragmatic approach to teaching (CAVTL, 2013; Chappell, 2003; Cullen et al., 2002; Harkin, 2012; Lucas et al., 2012).

In addition to these, as vocational education is "hands-on, practical, experiential, real-world" (Lucas et al., 2012, p. 9), situated and context-bound (Faraday et al., 2011), enacted through formal vocational and technical school programs, in training centers or institutes, and in the workplace, both on and off the job (Tsang, 1997), effective vocational teaching and learning also require recontextualization (Barnett, 2006; Evans et al., 2009), as a form of learning transfer, in order to put the knowledge generated and practiced in one context to work in another through the recontextualization of content, pedagogy, workplace and learner (Evans et al., 2009).

Moreover, teachers' pedagogical content knowledge, used to tailor pedagogy according to the content, includes up-to-date occupational knowledge and knowledge of disciplines/subjects which underpin job knowledge and practices (Barnett, 2006; Chappell, 2003; Harkin, 2012; Lucas et al., 2012; Shulman, 2005; Young, 2004) and is needed to inform the practices and decisions of vocational teachers for the sake of effective vocational teaching and learning. However, as discussed by Cochran, Deruiter and King (1993, cited in Chappell, 1995), most research on teachers' knowledge dealt with these two domains: subject knowledge and pedagogical knowledge, disregarding other domains like knowledge of learners, technological knowledge, knowledge of educational contexts and curriculum knowledge (Robertson, 2008).

Concerning effective vocational learning, discussions centered on two perspectives: (1) learning as the acquisition of vocational knowledge, and (2) learning as the contextualized application of knowledge (Catts et al., 2011), conceptualized as quantitative (knowledge acquisition) versus qualitative (meaning making) perspectives by Biggs (1994), and surface learning approach versus deep learning approach by Säljö (1979, cited in Richardson, 2005). As a result of transition from teacher-centered to learning-centered approaches (CEDEFOP, 2004; Chappell, 2003), situated learning advanced by Lave and Wenger (1991) has been equated with effective vocational learning as it helps vocational learners construct vocational knowledge and skills through participation in communities of practice and interacting by members of that society (Barnett, 2006; Catts et al., 2011; CAVTL, 2013; Evans et al., 2009; Smith & Blake, 2005), namely employees

and trainers at workplaces and peers and teachers at schools. Beside, experiential learning, together with problem-based and inquiry-based learning, is found requisite for effective vocational learning enacted through hands-on activities and supported with reflection and feedback (Clark, Threeton & Ewing, 2010; Lucas et al., 2012; Scott & Sarkees-Wircenski, 2008). Therefore, vocational learning can be defined from a constructivist perspective as an active process in which learners construct occupational knowledge rather than acquiring it passively while vocational teaching can be viewed as facilitating that construction rather than imparting mere knowledge (Duffy & Cunningham, 1996).

Due to direct links with labour market, effectiveness of vocational education and training has been widely measured with the use of performance-oriented outcomes (Imel, 1990). Since the skills, knowledge and understanding provided through vocational education is necessary for the growth, productivity and competitiveness of economies (OECD, 2004) responsiveness of vocational education to the labour market has been the main objective and concern of policy makers, social partners and vocational education providers (see World Economic Forum Global Agenda Council on Employment, 2014). Bosch and Charest (2010) argue that the value of vocational education for the society and companies is determined when the trainees enter the labour market and put their gains into practice. For this end, outcome-based qualification frameworks are being inevitably designed by countries to regulate and contract the provision of education (Allais, 2014), and vocational education and training is labeled effective in case of its responsiveness to competence standards.

In Europe, together with the national qualifications framework designed for each country there is an overarching Framework for Qualifications of European Higher Education Area (QF-EHEA) which defines the learning outcomes to be gained at the end of each level of higher education. In addition, European Qualifications Framework for Lifelong Learning (EQF-LLL) has been introduced to define the learning outcomes for each level of education by taking lifelong learning principle into consideration. In Turkish context, National Qualifications Framework for Higher Education in Turkey (NQF-HETR) was constructed through stakeholders' contributions and ideas to comply with Bologna Process and the

knowledge, skills and competencies to be gained minimally at the end associate's, bachelor's, master's and doctoral degrees were defined. Within this framework, programs offered at higher vocational schools (short cycle in QF-EHEA and 5th Level in EQF-LLL) are defined as vocationally-oriented and practice-based associate's degree educational programmes, and these schools have aligned the course and curriculum objectives with the learning outcomes specified in the national qualifications framework. However, whether the teaching and learning processes at these vocational schools lead to these qualifications (knowledge, skills and competences) or required processes to gain these qualifications have not been described yet.

As discussed by Bedi and Germein (2016) and Mitchell, Chappell, Bateman and Roy (2006) policy and research discourses mostly appropriate the term "effective vocational teaching and learning" by dealing with matters exterior to the pedagogical experience occurring between teachers and learners although higher vocational schools have mostly been viewed as being "teaching and training institutions" since its faculty is not required to conduct research, and can ,therefore, devote their time to teaching and learning (Vaughn, 2006). Although this view may be a popular long-held belief the idea that higher vocational school faculty have special knowledge about being effective teachers or that they utilize this knowledge has little empirical support (Palmieri, 2004; Shepherd, 2009). Likewise, Chappell, Solomon, Tennant and Yates (2002) criticized outcome-oriented perspective in vocational education as "the journey to vocational competence is now regarded by many as less significant than the arrival, with the quality of the journey largely left to the professional competence of the teacher or trainer" (p. 7) although it is widely accepted that "the effectiveness of any education system also strongly depends on the quality of interactions and relationships that occur between the teachers and students." (UNESCO-UNEVOC, 2014, p. 5). Amongst others, Lucas et al. (2012), echoed similar concerns by suggesting that key to the delivery of excellent teaching and learning is knowledge and understanding about pedagogy. Therefore, shedding light on the teaching and learning practices, and the factors that have facilitative and distractive impact on those practices is required to understand and reveal the processes leading to those demanded outcomes and qualifications. To respond this

need, this study focuses on the description and exploration of teaching and learning processes at higher vocational schools, how these processes enable acquisition of intended outcomes, and what facilitates and challenges these processes rather than investigating solely the acquisition level of outcomes and the product.

1.2 Purpose of the Study

In line with the abovementioned thrust, the purpose of this study is to explore effective teaching and learning processes experienced by the teachers and their students at tertiary-level vocational education. Specifically, the study investigates (1) teachers', students' and administrators' perceptions regarding effective teaching and learning at higher vocational education programs, (2) characteristics of effective vocational teacher and learner, (3) challenges faced by the teachers, students and administrators hindering effectiveness of teaching and learning, and (4) practices of the teachers, students and administrators to cope with these challenges. In line with these purposes, this study attempts to answer to the following research questions through the perceptions of the teachers, students and administrators at higher vocational schools:

1) What are the perceptions of teachers, students and administrators on effective vocational teaching and learning at higher vocational education level?
2) What are the perceptions of teachers, students and administrators about the challenges faced at higher vocational schools during the teaching and learning processes?
3) What are the practices of teachers, students and administrators to cope with challenges hindering effective teaching and learning at higher vocational education level?

1.3 Significance of the Study

Although effectiveness of teaching and learning is a frequently researched area effective vocational teaching and learning which is seen "a poorer cousin" of academic teaching and has been under-researched and under-theorized (Lucas et al., 2012; UNESCO-UNEVOC, 2014). It was noted in the Skills Commission's inquiry into *Teacher Training in Vocational Education* (2010) that vocational pedagogy is in its infancy due to the limited empirical support as the research

majorly focused on those elements of vocational education which are structures, systems, qualifications and national bodies rather than on pedagogy (Lucas et al., 2012) and good practice of vocational teaching and learning (Bedi & Germein, 2006).

In addition, due to emphasis on teachers, their roles and competence requirements (Mitchell, Chappell, Bateman & Roy, 2006) and demands on teachers (Wheelahan, 2010) in line with the constant changes in labor market (CEDEFOP, 2004; 2012; Chappell & Hawke, 2008; OECD, 2012; Robertson, 2008) effective vocational education has been associated with teacher characteristics (knowledge, skills, competences, personal qualities etc.) though it also comprises "the nature of training institutions and the teaching and learning process, improvement and innovation processes and the attributes of incoming students (Visser, 1994, cited in Blom & Meyers, 2003). Similarly, Faraday et al. (2011) discuss that what distinguishes vocational education from other types is the "context" which includes "the nature of the vocational subject, the setting where teaching and learning takes place, objectives and desired outcomes for a session plus specifications of the qualification, the nature of the learners, their level and how they learn best including their learning styles (p. 2). More broadly, Seyfried (1998, cited in Blom & Meyers, 2003) asserted that process-oriented, product-oriented and context-oriented perspectives are needed when evaluating the quality of vocational programs, and the contextual factors were stated to be learners' personal characteristics and background, community influences, labour market and family factors (Blom & Meyers, 2003). Blom and Meyers especially highlighted that although contextual factors have a direct influence on vocational education policies in the international arena quality indicators focus on process of vocational training and outputs without measuring background context.

Beside, though there has been extensive research on conceptions of general teaching and learning (Biggs, 1990; Dall'Alba, 1990, Martin & Balla, 1990, cited in Samuelowicz and Bain, 1992; Säljö, 1979, cited in Richardson, 2005; Purdie, Hattie & Douglas, 1996); conceptions of vocational teaching and learning are missing in the literature as the main focus in that context has been on the conceptions of vocational education (CEDEFOP, 2017) and vocational competence

(Velde, 1999). Defining the conceptions of effective vocational teaching and learning is crucially significant as conceptions held by teachers influence their judgments and guide their practices (Pajares, 1992) and are important in teaching improvement (Devlin, 2006) and in development of agreed terminology and definition for research (Pajares, 1992). Therefore, this study is expected to pioneer similar studies in other contexts to form required body of research on conceptions of vocational teaching and learning to develop terminology related to this research area.

Furthermore, Clark (1979) marked that within the two main approaches to effective teaching research, quantitative and qualitative, either teacher behaviour or teacher thinking processes were under research, and students were involved in research with a particular focus on their achievement and outcomes, rather than looking into their voices, ideas, and opinions concerning effective teaching and learning (Shepherd, 2009). Determining student perceptions of effective teaching methods, how they learn better and asking students for their opinions is, therefore, required to increase teacher awareness, improve instruction in the classroom (McCaslin & Good, 1996) and support student learning (Dahl, 1995, cited in Said, 2018).

Considering all these issues, this study stemmed from the perceived requirement to contribute to newly growing the body of knowledge and research on vocational pedagogy by exploring on teachers' and students' experiences, conceptions and perceptions with regard to effective teaching and learning at higher vocational schools in a different context, namely Nevşehir, Turkey, with a multidimensional focus on factors related to teachers, students, curriculum, context, educational system, employer and parents.

In addition, though international literature has mostly studied this phenomenon qualitatively due to complex and context-specific nature of teaching (Cochran-Smith & Lytle, 1990) and learning (Elton & Laurillard, 1979) researchers in Turkey utilized quantitative research methods to explore external factors that have indirect impact on vocational teaching and learning rather than in-depth and rich description of effective pedagogical practices of vocational teachers and learning experiences of vocational students. Therefore, this study will also serve to

fill in the gap in national context by describing teachers', students' and administrators' conceptions of effective vocational teaching and learning at tertiary level; identifying characteristics of effective vocational teacher and learner, and revealing challenges which inhibit effective teaching and learning at higher vocational schools together with existing practices and possible solutions to overcome them, which will in turn serve as a mirror for teachers and help them evaluate and reflect on their practice and learn students' views on their methods, and will provide insight for vocational teacher education and in-service training. Also, the description of this phenomenon through qualitative research can help identification of new research problems for researchers to conduct both quantitative and qualitative research.

1.4 Definition of Terms

Higher Vocational Education: Defined as "short-cycle tertiary education" focusing on specific occupational skills, (Level 5B) within ISCED (2011) classification, and "post-secondary vocational education" in OECD (2012) terms, higher vocational education aims at "development and application of knowledge and skills for middle level occupations needed by society from time to time" (Moodie, 2002, p. 260).

Higher Vocational School: Higher vocational schools refer to education and training institutions which aim to raise qualified workforce for specific occupations and offer two-year education on trimester or semester basis and award its graduates with associate degree (Turkish Higher Education Law, No: 2547) .

Vocational Teacher: Vocational teachers are full-time and part-time trainers and lecturers who are responsible for developing courses and learning materials, teaching, training, learning and assessment at higher vocational schools.

Vocational Learner/Student: In this study, "vocational learner/student" is used to include any students placed and enrolled in higher vocational schools with the aim of either upskilling or initial and further vocational education (OECD, 2012).

Conception: Literally, a conception is "an idea of what something or someone is like, or a basic understanding of a situation or a principle" (Cambridge

Online Dictionary, n.d.). To Pratt (1992), the term conception refers to "specific meanings attached to phenomena which then mediate our response to situations involving those phenomena" (p. 204), which shows up in this study as meaning attached by vocational teachers and learners to the phenomenon of effective vocational teaching and learning.

Conception of teaching: It refers to "the connotations of the definition or the set of definitions" (CEDEFOP, 2017) with regard to effective vocational teaching made by vocational teachers and learners at higher vocational schools in Nevşehir, Turkey. Specifically, Lam and Kamber (2006) define it as "the beliefs about teaching that guide a teacher's perception of a situation and will shape actions" (p. 694 while it is defined as "sets of assumptions, knowledge and beliefs about teaching" (Ross, 2017).

Conception of learning: A conception of learning is about beliefs and personal meanings that teachers and students have about the phenomena of learning (Devlin, 2006, cited in Kennedy, 2010). To Marton, Dall'Alba and Beaty (1993) a conception of learning comprises two parts: "a way of seeing what is learned and a way of seeing how it is learned" (p. 296). Therefore, in this study, conception of learning has been used to indicate how vocational teachers and students consider and make sense of effective vocational learning (Ramsden, 2003, cited in Yuksel, & Sutton-Brady, 2007).

CHAPTER 2

REVIEW OF THE LITERATURE

In this chapter, the concept of vocational pedagogy, and approaches to vocational teaching and vocational learning are discussed. Along with these, the factors that have impact on the vocational teaching and learning processes are presented, followed by research on vocational teaching and learning in both international and national context.

2.1 Concept of Vocational Pedagogy

Teaching effectiveness has always become an overriding ambition for all educational systems around the world. Effective teaching is considered to be "a complex set of knowledge, abilities, and personal attributes of teachers in dynamic interplay" (Davey, 1991, p. 121) that has impact on the personalities and abilities of the growing students (Koutrouba, 2012). In other words, effective teaching is generally referred with a focus on student outcomes, and the teacher behaviours and classroom processes that promote better student outcomes (Ko, Sammons, & Bakkum, 2013). Rather than narrowing effective teaching to teacher behaviours and student outcomes, Rowe, Wilkin and Winson (2012) discussed the notion of "effective teaching as strengthened pedagogy," advanced in the policy papers by General Teaching Council for England (2011), by citing the idea behind it, which states that effective teaching does not only cover practices and values of individual teachers in the classroom but also includes the domains of curriculum and assessment, and social, cultural and policy aspects of learning.

With regard to vocational education, the pedagogy required for effective vocational teaching and learning is generally under-researched and under-theorized (Lucas, 2015). Despite attempts, as underlined on the report of UNESCO-

UNEVOC (2014), essential aspects of vocational pedagogy has not been determined through an international consensus. In addition to that, "there is, as yet, insufficient understanding about the relative effectiveness of teaching and learning methods used in vocational education" (Lucas et al., 2012, p. 9). Correspondingly, Chappell and Hawke (2003) reported that a huge variety of teaching and learning methods were being conducted, in order to respond to the pressures, without any theoretical or conceptual underpinning, and they called for a contemporary vocational pedagogy. In parallel, stressing the need for a robust vocational teaching and learning system, the need for a serious focus on vocational pedagogy was underlined in the report of CAVTL (2013), as follows:

> … if we are really to improve TVET in all of its many forms then we need to understand the teaching and learning methods which make it work best. In short, we need to have a robust model of vocational pedagogy – the science, art and craft of teaching and learning vocational education. We need to be able to describe with clarity and confidence the teaching and learning methods that are most effective for a range of different learners seeking to acquire skills, competences and dispositions in many different contexts (p. 5).

Due to this need, the concept "vocational pedagogy" has been put forward by Lucas et al. (2012) to cover the issues of effective teaching and learning in vocational education and training. According to their definition, vocational pedagogy is "the science, art, and craft of teaching that prepares people for certain kinds of working lives" (p. 14). More simply, Lucas (2014) defined it as "the sum total of the many decisions which vocational teachers take as they teach, adjusting their approaches to meet the needs of learners and to match the context in which they find themselves" (p. 2). Elaborating on this recent concept, CAVTL (2013), listed eight characteristics of excellent vocational teaching and learning as are in the following:

- developing occupational expertise by integrating theory and continuous practice;
- having work-related attributes needed for occupational expertise;
- real or stimulated work experience through practical problem solving and reflection;
- collaborative and contextualized teaching and learning enacted within the communities of practice;
- being informed and aware of the recent technological developments used in the workplaces;

- use of assessment and feedback methods utilized for occupations at the workplace;
- benefiting from a variety of learning environments like real or stimulated workplace, classroom and workshops; and
- keeping on the top of dynamic occupational standards through collective learning (p. 9).

Besides these, it was also highlighted in the report that occupations need to be taught by "dual" professionals with subject and pedagogical knowledge. This duality required vocational teachers to recontextualize learning and teaching to the occupation and workplace (CAVTL, 2013; Faraday et al., 2011; McCrone et al., 2015) in order for learners to be able to use knowledge in the work context and comprehend the relevance of knowledge to the workplace.

Deriving from the research in Europe and Australia, Chappell (2004) also proposed three features for the contemporary vocational pedagogy by outlining the key features of vocational learning under three headings: (1) learner-centered, (2) work-centered, and (3) attribute-centered, and suggested that these concepts be considered not as exclusive components but parallel threads put together while making pedagogical decisions (Chappell, 2004). He asserts that due to the increasing interest in constructivism and recent socio-economic changes in the contemporary environment like changing conceptions of knowledge, work organization, skill and job requirements, technological developments, and the need for lifelong learning, there has been a move from instruction to learning, behaviorism to constructivism, individual competence to collective competence, job-specific technical skills to generic skills and attributes, and from "classroom-based pedagogical practices to non-classroom based and work-integrated development programs" (p. 9).

Similarly, learner-centeredness was also highlighted on a research paper by CEDEFOP (2015) on vocational pedagogies with the emphasis on the need for "meeting students' interests and needs, individualization of education and training processes and competence development; innovative methods including small group work, problem-based approaches; and project-based teaching" to lead to effective vocational teaching and learning (p. 28). Furthermore, key dimensions of vocational

pedagogy advanced by de Brujin and Leeman (2011) were listed on this CEDEFOP (2015) report to be (1) formation of vocational identity by achieving both vocational knowledge/skills, culture and ethics; (2) the use of authentic tasks by conducting real-world like learning activities or performing tasks in real or real-like settings; (3) reconciliation of theory and practice by integrating theory and knowledge of techniques into practical tasks; (4) construction by meeting individual needs; (5) adaptive instruction and modelling by tailoring teaching in accordance with the needs, qualifications, preferences and learning styles of the learners; (6) coaching and mentoring, especially for work-based learning and skill acquisition; and (7) reflection by developing self-regulative skills and learning to learn.

The birth of this recent concept, vocational pedagogy, is the result of attempts to improve the quality of vocational teaching and learning as it is believed by Lucas (2014) that theorizing vocational pedagogy would lead to the development of models and tools on which vocational teaching and learning would depend to match the teaching and learning methods with the needs of students and contexts. Despite lack of consensus and comprehensive grasp, these attempts to develop a theory of vocational pedagogy handled with teacher knowledge, teacher roles and characteristics, teaching approaches to vocational teaching and learning (learner-centered, constructivist, socially situated and transformative approaches), learning environments and learning transfer, learners' affective characteristics like motivation, interest and self-perception and knowledge underpinning vocational education in order to identify the elements of effective vocational teaching and learning.

2.2 Approaches to Vocational Teaching

In order to identify the elements of effective teaching, Stronge (2007) reviewed and synthesized the research on teacher effectiveness, which revealed the following domains of effective teaching: strong verbal abilities, prior teaching experience, content knowledge, personal qualities of teachers like caring, fairness, positive attitude about life and teaching, reflective thinking, high expectation for themselves and their students, classroom management and organizational abilities, implementation of instruction, and monitoring students process and potential.

Likewise, in Rowe et al.'s (2012) review, key characteristics of effective teaching included intrinsic factors, namely teaching environment, teaching approaches and teacher characteristics, and extrinsic factors like school ethos, institutional leadership, research, systems and policies, time and space, and professional development. Addressing to vocational education, McCrone et al. (2015) conducted a review to identify the key features and essential dimensions of vocational teaching and learning, which were found to be: teaching and learning environment, teaching approaches and learning methods, teacher attributes and learner relationships, and supporting factors like strong leadership, developing a whole-institution ethos and culture, progression to further study or employment, professional development and being responsive to learner diversity.

Herein, effective vocational teaching, equated with vocational pedagogy (Lucas et al. (2012) was discussed in terms of how it is conceptualized in contemporary era, knowledge base of effective vocational teachers, contemporary teaching approaches to vocational education, integration of theory and practice for learning transfer, learning environments together with the descriptions of effective vocational teaching models and frameworks.

In contrary to outcome or competence-oriented views, there has been recent emphasis on "situated" aspects of vocational teaching. Differentiating vocational teaching from academic teaching, Orr and Robinson (2013) labeled vocational pedagogy as "situated" for the fact that effective vocational teaching and learning is "hands-on, practical, experiential, real-world as well as, and often at the same time as, something which involves feedback, questioning, application, and reflection and, when required, theoretical models and explanation" (Lucas et al., 2012, p. 9). As identified by Lave and Wenger (1991), learning is situated, content-dependent and socially constructed, occurring in communities of practice where learners acquire new knowledge and skills by interacting with the members of community acting in the context. With regard to vocational training which is characterized by different sites of learning like school and workplaces, teachers are required to be part of a community of practice in which they could conform their pedagogy to the practices of jobs which their students will take up (Black & Yasukawa, 2013; Evans et al., 2009; Mcrone et al., 2015; Moodie & Wheelan,

2012). To Evans et al. (2009), there is no "context-free" knowledge as all forms of knowledge are embedded in particular contexts and communities of practice, posing challenges for vocational teachers and learners to put the knowledge generated in one context to work in another. Though contexts are mostly considered as settings and places Evans et al. (2009) extend it "to 'schools of thought', the traditions and norms of practice, the life experiences in which knowledge of different kinds is generated" (p.331). As a solution, they proposed the concept of recontextualization which requires integration of subject-based knowledge with work-based knowledge through pedagogy. The concept of recontextualization was drawn from Bernstein's (2000) rules used while framing and classifying the knowledge, namely distributive, recontextualizing and evaluative, and as explained by Wheelahan (2015) the rule of recontextualization determined the knowledge and skills to be selected from the field and how they would be translated to pedagogical knowledge and practice. Vocational teachers, applying the rule of recontextualization, are supposed to "reformulate vocational knowledge from work where it has mainly a productive function to a teaching-learning function, and they make this recontextualized vocational knowledge comprehensible to others- to the students" (Moodie & Wheelahan, 2012, pp. 17-18).

Recontextualization has been attached high importance for vocational teaching and learning to make the knowledge acquired at school relevant to workplace and have the vocational learners apply that knowledge in a meaningful way. For this end, Evans et al. (2009) identified four types of recontextualization: (1) content recontextualization, (2) pedagogic recontextualization, (3) workplace recontextualization, and (4) learner recontextualization (see Figure 2.1).

Content recontextualization refers to making disciplinary knowledge relevant to work through curriculum design. Göhlich and Schöpf (2011) putting emphasis on situated learning and how it transformed the traditional context-free transfer of knowledge at vocational training in Germany, provided examples of content recontextualization, which showed up in the form of delivery of vocational knowledge through experience-related learning in concreted learning situations at the school context and use of mentoring at workplace. By supporting knowledge development by coaching and mentoring, *workplace recontextualization* is enabled

through workplace practices, and use of workplace discourse and codes in pedagogic practice (Alvunger & Johansson, 2018). In correlation to that, *pedagogic recontextualization* requires teachers to use the selected content in teaching and learning activities, assess it appropriately and facilitate the environment by organizing, sequencing and structuring the curriculum accordingly (Evans et al., 2009). Along with those, the meaning-making processes of vocational learners, as one of the main actors and recipients, varied due to their prior knowledge of work and prior experiences, and as Evans et al. (2009) suggested, *learner recontextualization* is a process of vocational identity formation and takes places through learning strategies vocational learners use to integrate different types of knowledge and experiences, and to create new ones.

In addition to recontextualization modes, Evans et al. (2009) suggested chains of responses forged in the process of putting knowledge to work based on the findings of the research they conducted in Canada and United Kingdom, namely building multi-faceted partnerships with industry; diagnosing workplace problems and solutions; gradual release of new knowledge; conversations between mentors and employees; using workplace materials and resources; using industry educators as knowledge brokers; and accessing an accreditation system.

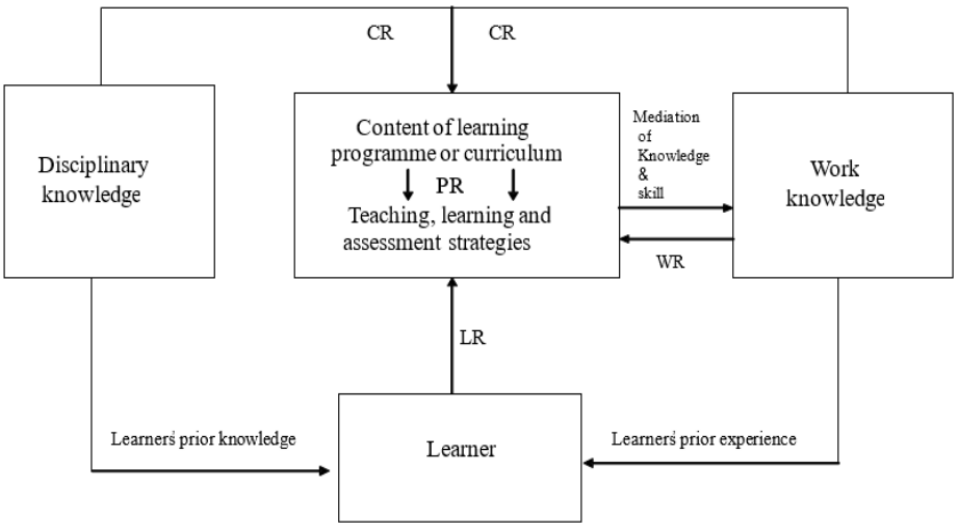

Figure 2.1 *Recontextualization Types Applied in Vocational Training (Evans et al., 2009)*

Rather than conceptualization of effective vocational teaching so comprehensively by handling with content, workplace, learner and pedagogy, some scholars (Barnett, 2006; Chappell, 2003; Harkin, 2012; Lucas et al., 2012; Shulman, 2005; Young, 2004) deliberated on knowledge bases which inform the practices of vocational teachers because as highlighted by Brennan Kemmis and Green (2013) and Wheelahan (2015) the knowledge base of vocational teachers differs from the teachers' in general subjects since vocational knowledge is context-bound, action-oriented and experience-based.

Shulman (1987), without distinguishing general and vocational education, maintained the knowledge bases that all teachers need to have, namely general content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners, knowledge of educational contexts, and knowledge of educational ends, purposes and values. Taking Shulman's idea of pedagogical content knowledge further, Mishra and Koehler (2006) introduced technological pedagogical content knowledge (TPACK) and they noted that teachers' knowledge of content, pedagogy and technology and the "complex interplay of these three bodies of knowledge" (p. 1025) was essential for good teaching.

With regard to knowledge bases for vocational teaching, Shulman (2005), coined the concept of signature pedagogy, corresponding to pedagogical content knowledge, by asserting that signature pedagogies should be considered when preparing individuals for particular professions as "in signature pedagogies novices are instructed in critical aspects of the three fundamental dimensions of the professional work: *to think, to perform and to act with integrity*" (2005, p. 52). Shulman (2005) also provided dimensions of a signature pedagogy: which are surface structure (teaching and learning strategies used while preparing for a profession), deep structure (knowledge and know-how taught while preparing individuals in the profession) and finally implicit structure (moral dimension concerning professional attitudes, values and dispositions). To express in simpler way, signature pedagogy for a profession identifies the content, skills and values required to perform that job. Shulman (2005) gives an example of signature pedagogies utilized at medical schools where a senior physician teaches by a

patient's bedside and asks interns questions about the symptoms and treatment options. This example evidently reveals the need for vocational teachers to integrate their vocational expertise with their teaching capability; the two critical aspects which the signature pedagogy concept embraces (UNESCO-UNEVOC, 2014). These aspects are also highlighted in the project of CEDEFOP (2004) titled *Professionalisation of VET Teachers for the Future* (PROFF) with the overemphasis on the need for vocational teachers to have both up-to-date subject expertise and learner-centered pedagogical skills.

In parallel to that, pedagogical content knowledge was also labeled as discipline-specific pedagogy or subject-specific didactics, and was highly valued in German context (Mulder, 2017) where instructional methods and practices needed to teach and learn particular occupations are identified, set, and incorporated into vocational teacher education (Billett, 2011). According to this view, the pedagogy required by each discipline or subject varied because, as Brennan Kemmis and Smith (2006) elaborated, the principles of pedagogy remain constant; however, pedagogical methods may change according to disciplines because some methods apply more to some disciplines while some do not work in that area. Contrary to that, Johansson, Hedman and Lemar (2007, cited in CEDEFOP, 2015) differentiated subject/discipline specific pedagogy and vocational didactics marking that the former was related to cognitive learning theories while it was constructivist learning theories that guided vocational didactics (see Table 2.1). This contradiction seems to arise from disagreement about the scope of vocational subjects: whether vocational subjects merely cover the knowledge of a discipline or a number of disciplines underpinning the job-related knowledge and skills. This nature of vocational subjects was also underlined in CAVTL (2013) report with an additional note on the need for vocational teachers to integrate theoretical and occupational knowledge for the sake of improving their subject expertise:

> The best vocational teaching and learning combines theoretical knowledge from the underpinning disciplines (for example, maths, psychology, human sciences, and economics) with the occupational knowledge of practice (for example, how to cut hair, build circuit boards, administer medicines). To do this, teachers, trainers and learners have to recontextualize theoretical and occupational knowledge to suit specific situations. Both types of knowledge are highly dynamic. So, individuals need to carry on learning through being

> exposed to new forms of knowledge and practice in order to make real the line of sight to work (p. 15).

In other words, vocational subjects accommodate both knowledge of disciplines and occupations; therefore, "vocational pedagogy, the content and the process of vocational teaching and learning, is influenced on the one hand by workplace activities and on the other- though at a considerable remove at lower levels- by disciplinary knowledge" (Barnett, 2006, p. 145).

Other from this perspective which highlighted the need for tailoring pedagogy according to the disciplines/subjects underpinning occupations, vocational teaching has been discussed with a focus on the distinguishing nature of vocational knowledge. Within vocational subjects, there exists plural types of vocational knowledge like verbalizable and tacit conceptual vocational knowledge, and verbalizable and tacit procedural knowledge (Stevenson, 2001). Stevenson (2001) thereby recommends a holistic approach to vocational teaching by focusing on plural forms of vocational knowledge rather than emphasizing particularly expressible knowledge, and by providing opportunities of plural forms of learning experiences through situated learning and meaning construction.

Similarly, Markowitsch, Grollmann and Hefler (2017) suggested three perspectives to look at the conceptions of vocational education and training in the working paper for CEDEFOP: epistemological/pedagogical perspective, educational system perspective, and socio-economic /labour market perspective. From epistemological/pedagogical perspective, two opposing approaches to knowledge, namely "tacit knowing view" and "cognitive view," affected vocational knowledge understanding and corresponding teaching and learning practices in distinctive ways. To cognitive view, vocational knowledge is "explicit (know-that), abstract, standardized and impersonal" produced by "scientific disciplines and applied in practice" while tacit knowing view "understands knowledge as experience and emphasizes that knowledge is mainly practical ('know-how', skills), implicit, personal and situational" (CEDEFOP, 2017, pp. 8-9). According to the former view, teacher-centered learning, which involves transfer of structured information to students and testing the explicit information learned by students by

paper-pencil exams, is considered to be efficient; on the other hand, tacit knowing view equates learning with practical experience gained in communities of practice; therefore, requiring vocational teachers to create learning environments where students would gain experience.

Table 2.1 *Main Differences between Vocational Didactics and Subject-Specific Didactics*

Vocational Didactics	*Subject-specific Didactics*
Mostly guided by constructivist learning theory	Mostly related to cognitive learning theory.
Teaching and learning have to cross a wide range of scientific knowledge areas.	Guided by university knowledge fields, there is a desire to keep subjects separate
Vocational education inherits its didactic from working life, often with blurred knowledge area.	Subjects are based on more or less well framed disciplines.
Vocational didactic is action-oriented and what is learned is not separated from its usefulness.	Focus on theory and the quality of knowledge.
There is generally a problem to solve, which requires both theoretical and practical skills.	Based on the didactic question of 'how?' which is answered by academia.
There is often tacit and informal learning included in vocational didactic.	The knowledge can often be communicated verbally or in written form.
Occupations are framed by various rules and regulations, which have to be integrated in training.	Subject-specific didactics do not have the same 'embeddedness'.
Specific demands from labour market stakeholders carry considerable weight, as does working context.	Demands from stakeholders leave greater freedom for interpretation.

Source: CEDEOP (2015), adapted from Johansson et al. (2007).

Chappell (2003), however, confronted such discriminative approach to vocational teaching and learning, and advocated for a pragmatic and eclectic approach to vocational teaching:

> Vocational pedagogy draws on a mix of educational assumptions and theories about teaching and learning and vocational teaching and learning practices reflect this eclecticism. Indeed, a mixture of teacher and learner centered approaches are often variously combined in vocational education learning programs, which therefore assumes that vocational learning outcomes are achieved through the transmission, acquisition and active (re)construction of vocational knowledge and skills by learners (p. 4).

Despite that need, Darwin (2007) maintained that vocational curricula and teaching have been majorly under the explicit influence of behaviorism which was based on apprenticeship model, acquisition of observable and measurable knowledge and

skills through guided instruction of teachers, reproduction and independent practice. However, Doolittle and Camp (1999) discussed that although vocational education founded upon behaviorism it was also influenced implicitly by cognitivism, and constructivist principles have gained recent ground in vocational education; therefore, behaviorist, cognitivist and constructivist principles were utilized at varying levels and contexts in vocational education. The behaviorist pedagogical practices used in vocational education are instructional cues, demonstration, practice, reinforcement, behavioral objectives and positive feedback mechanisms (Chappell, 2003). Some other instructional activities aligned with behaviorism are active responding, required practice, and shaping (MacFarland, 1985). As to cognitivism, it is needed by trainers to identify the learner's mental schemas for how to perform tasks and solve problems, and then design methods to teach and model new problem-solving strategies accordingly due to the fact that by changing the individual's mental model of how to perform a task, the new task performance behavior can be learned (Tway, 2003). For this end, the strategies of framing, outlining, concept mapping and advance organizers are utilized to help learners connect new information with existing knowledge in meaningful ways (Chappell & Johnston, 2003). Besides those, the emphasis in vocational education on learning approaches like experiential, problem-solving and project-based approaches, and situated and work-based learning theories demonstrate the influence of constructivist theory on vocational education (Chappell, 2004). Additionally, designing learning environments incorporating learner-centered teaching practices, problem-based learning, contextual teaching and learning experiences, integrated academic and vocational curriculum, and authentic assessments were counted as examples of constructivist approach to vocational education (Brown, 1998). Doolittle and Camp (1999) also noted that constructivist pedagogical strategies like discussions, group work, theoretical and practical problem solving, the sharing of information, reflection, presentation of alternative perspectives, modelling, coaching and mentoring are being used in vocational education.

Having all these on hand, Cullen et al. (2002) underlined the significance of context as a crucial element of new pedagogy and cautioned vocational teachers

against prioritizing one approach over another as contemporary vocational teaching and learning practices require more pragmatic and eclectic approaches due to the diverse needs, goals, outcomes, learning sites. Furthermore, Harkin (2012) mentioned the context-bound nature of vocational teaching and marked:

> It may be helpful to think not of vocational pedagogy but of a series of overlapping pedagogies for learning, depending on subject area, level, the location of the learning, and the ages of the learners. There is no one-size-fits-all approach. There is a strong consensus that effective teaching methods for vocational learning are based on realistic work problems and scenarios, led by teachers and trainers who have recent and relevant vocational experience (p. 28).

Similarly, Lucas et al. (2012) suggest that vocational pedagogy should take goals, characteristics of vocational subjects, corresponding teaching and learning methods and contextual factors into consideration (see Figure 2.2). To them, rather than adopting an instructional theory and approach and utilizing relevant methods and techniques, a vocational teacher needs to provide a mix of approaches and methods and accord his/her instruction by firstly considering the goal which can be 1) routine expertise (being skillful), 2) resourcefulness (stopping to think to deal with the non-routine), 3) functional literacies (communication, and the functional skills of literacy, numeracy, and ICT), 4) craftsmanship (vocational sensibility; aspiration to do a good job; pride in a job well done), 5) business-like attitudes (commercial or entrepreneurial sense – financial or social), and 6) wider skills for growth (for employability and lifelong learning) (p.46). According to their view, vocational teachers need to select and apply the best mixture of methods that will work in specific contexts based on the goal they adopted. More broadly, Cohen and Brawer (2003) defined five goals of higher vocational education delivered at colleges/ higher vocational schools as: 1) academic transfer (colleges prepare students for transfer to four-year institutions or award of associates' degree), 2) professional/technical education (students study at professional/technical programs provided by colleges for a terminal degree or working upon completion) , 3) continuing education (rigorous industry certifications for skill upgrade and professional development offered by colleges in collaboration with professional associations or private vendors) , 4) basic skills/developmental education (skills

shortages of poorly prepared secondary school graduates are remedied by colleges), and 5) community service (colleges serve as cultural and recreational centers for their communities).

Figure 2.2 *The Process of Developing a Vocational Pedagogy* (Lucas et al.,2012)

This variety of goals implies diversity of learners (age, educational background, prior knowledge, etc.), providers (vocational schools, workplaces, public institutions, etc.), consumers (employers, students), and learning sites (school environment, workplace, simulated/online platforms, etc.), making vocational teaching challenging, and requiring vocational teachers to adopt contextual strategies.

As Lucas et al. (2012) noted, besides goals, the characteristics of subject to be taught must be comprehended by the teacher. Young (2004, p. 4, cited in Lucas et al., 2012) highlighted that each vocational subject requires different organization, teaching and assessment, therefore, while making pedagogical decisions of (1) the balance between subject content knowledge and workplace procedural knowledge to decide where most of the teaching will be done, (2) the degree to which the subject is established and has an agreed body of content or workplace procedural knowledge, or professional body, (3) the extent to which a competence or outcomes

approach is appropriate for assessing both vocational skills and knowledge, (4) the relative value assigned to generic pedagogic skills that are common across different vocational areas, and the ease with which those can be translated into a curriculum, and 5) the balance between general pedagogy and specific vocational pedagogy in training programs where continuing general education continues to be important, should be considered.

In addition, concerned with the medium through which the work is expressed, Lucas et al. (2012) mapped common courses against physical materials, symbols and people framework (see Figure 2.3). Within this framework, Lucas et al. (2012) categorized vocational courses according to the elements they work with, which provide implications for pedagogy utilized to teach and learning activities. They also noted that despite distinguishing the elements of vocational subjects in such a way all vocational subjects may involve the use of same three "media" to the varying extents. For example, the learners studying at Child Care program most frequently work with people; however, this subject also requires dealing with physical materials to a great extent and symbols at a considerable level. Besides this categorization, they provide generalizations for the learning methods for each aspect as follows and suggest that vocational teachers need to include relevant aspects and accord their teaching considering these conceptualizations:

- Physical materials – for example, imitating, practising, trial and error as part of real-world problem-solving;
- People – for example, feedback, conversation, simulation, especially including role play;
- Symbols (words, numbers and images) – for example, learning through thinking critically, and via virtual environments (p. 36).

In addition to goals of vocational education, nature of vocational subjects taught at vocational schools, and the need for a blended approach to vocational teaching and learning, Lucas et al. (2012) highlighted the significance of contextual factors and the need for considering these factors while making pedagogical decisions. These factors are learners (the motivations and preferences of vocational learners), vocational education teachers and their expertise, and vocational education settings (physical setting and culture of learning).

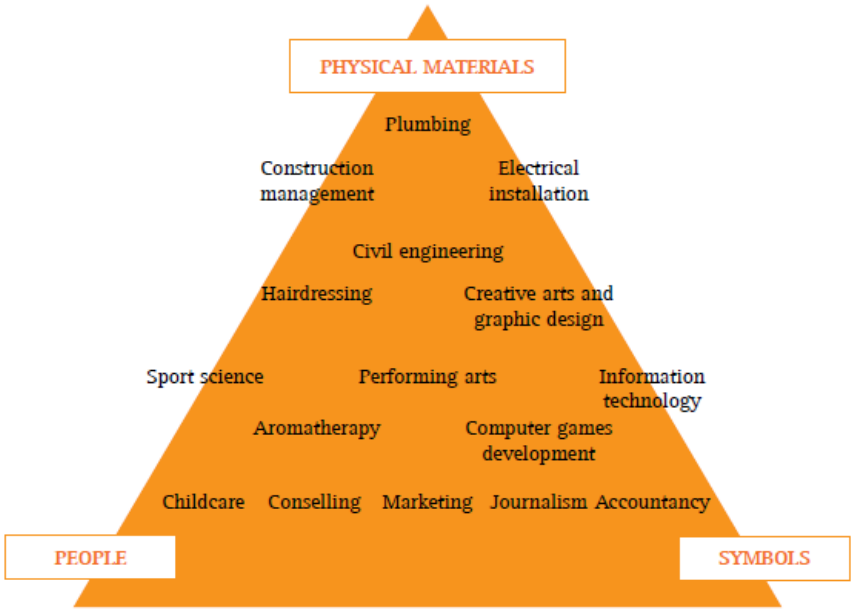

Figure 2.3 *Vocational Courses within "Materials", "Symbols" and "People" Framework (Lucas et al., 2012)*

Despite recommendations with regard to teaching and learning methods, any type of teaching cannot be considered context-free and universal without a specific reference to a group of learners and teachers. Arguing that vocational teaching and learning is not different from any other type of teaching and learning except its context Faraday et al. (2011) suggest that teaching context needs to be particularly considered while studying vocational education as it covers:

> a mixture of aspects and includes the nature of the vocational subject and the setting where teaching and learning takes place, including the specialist facilities and resources required for that vocational subject. It also includes the learning objectives and desired outcomes for a session plus specifications of the qualification. The nature of the learners, their level, and how they learn best including their learning styles, is also a part of the context. A teacher's choice of teaching strategy or model to enable effective teaching and learning is affected by context in that, for example, it would be difficult to do 'role play' or whole class 'questioning' in a noisy workshop with confined space (p. 11).

Based on their study, Faraday et al. (2011) also developed an effective vocational teaching framework that encompassed four different elements: teaching skills, teaching relationships, teacher reflection and teaching models and teaching

context (see Figure 2.5). Of equal importance, the components in the framework do not act linearly but should be embedded in simultaneously while making decisions about a particular session for the effectiveness of vocational teaching and learning. Faraday et al. (2011, p. 57) give the operational definitions of each component as follows: teaching model as the sequence of activities designed to achieve objectives; teaching relationships as teacher and learner roles, relationships and reactions; teaching context as support systems, facilities/resources, learners' individual needs, requirements of the learning programme/qualification specifications; teaching strategies as the repertoire of tools and teaching skills as the way of selecting and using those tools; and teacher reflection as his/her own thinking about how the session can be improved.

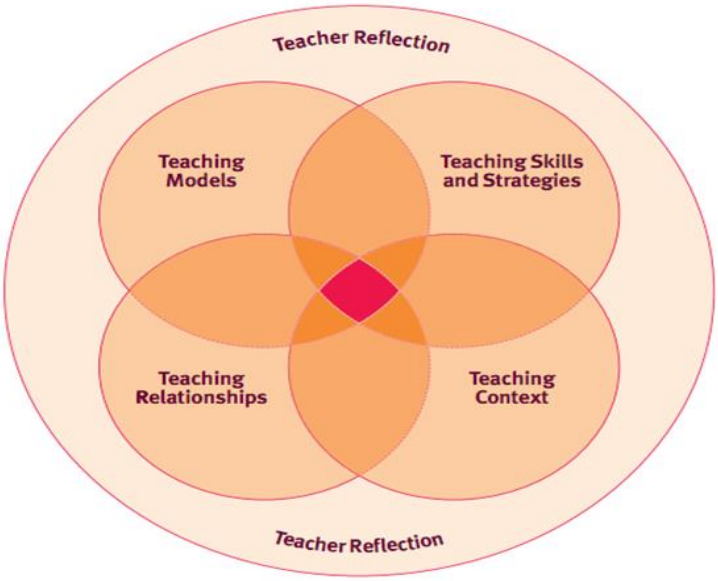

Figure 2.4 *A Framework for Effective Vocational Teaching and Learning*

To conclude, it is needed to consider the teaching and learning contexts which are characterized with varying goals; knowledge and skill requirements; the characteristics, needs and interests of the actors, and interaction/relationship among these actors; and the materials worked with while evaluating the effectiveness of vocational teaching.

2.3 Approaches to Vocational Learning

Due to the varying views, the term "learning" has been used widely with different meanings. Most prevalently, learning is viewed as acquisition of knowledge passively on one side while it is seen as "an active process in which the learner relates new experience to existing meaning, and may accommodate and assimilate new ideas" on the other (Watkins, Carnell, Lodge, Wagner & Whalley, 2002:1). Specifically, vocational learning, which is the focus of this study, is defined by Stasz and Wright (2004) as "any activities and experiences that lead to understandings of and/or skills relevant to a range of work environments" (p. 3).

Based on the behaviorist principles, the most dominant account of vocational learning has been "acquisition of skills (job-specific and transferable), along with underpinning knowledge to ensure their appropriate deployment in the workplace" (Colley, James, Tedder, & Diment, 2003, p. 473). As stated in Technical and Further Education New South Wales (TAFE NSW) report (2004) the discussions about vocational learning in the related literature centered prevalently on "what" (generic competencies versus job specific training, and learning for employment versus learning for individual empowerment and transformation) rather than "how", which has gained ground after 2000s.

Whether vocational or not, Watkins et al. (2002) assert that the goal and the context of learning should be specified in order to consider any type of learning effective by asking the questions of: effective for what? and effective for when?. To them, contemporary context has been characterized with knowledge generation rather than knowledge acquisition, which requires learners to be involved in metacognitive processes; planning, monitoring and reflecting on their own learning. In line with that, Catts et al. (2011) note effective vocational knowing and learning consist of two dimensions: (1) learning as the acquisition of vocational knowledge, and (2) learning as the contextualized (socio-political and cultural) application of the accumulated knowledge. Supportively, Canning (2011) maintained that:

> The vocational aspects of learning can, therefore, be better developed through engaging in the occupational practices of the industry. Put simply, to teach core skills you need to start with the contextualized "practices" that you want to teach and use these multiple and collective experiences to help the student make the necessary connections and insights in order to learn.

> This "useful" type of learning will normally be active, embodied and particular, and will, over time, provide the necessary "understanding" required to develop expertise in the field (p. 189).

In other words, Canning (2011) advocates recontextualized vocational learning, a notion which was advanced by Evans et al. (2009). As was mentioned in previous section, Evans et al. (2009) propose recontextualization of content, pedagogy, workplace and learner, which is required to make vocational teaching and learning relevant to work and link contexts where learning occurs. Through learner recontextualization, which is the process of meaning-making and vocational identity formation, vocational learners, who have prior knowledge and experiences, share knowledge in communities of practice and draw connections between prior and new knowledge and experiences. Likewise, McCrone et al. (2015) maintained that relating vocational teaching and learning to workplace or contextualizing those processes in the work area, occupation and sector is needed in order for vocational teaching and learning to be effective. Very similar to that, Hager (2004) names this process as productive learning through which learners create new learning by simultaneously reshaping the environment where learning occurs. For productive learning, learners need to construct learning, identity and the environment by linking acquisition of knowledge with participation.

The notion of recontextualization essentially deals with reframing the transfer of learning, namely transfer of knowledge generated and practiced in one context to new and different contexts, where transferred knowledge "engage with and change those practices, traditions and experiences" (Taylor, Evans & Pinsent-Johnson, 2010, p. 331). Transfer of learning has been viewed as "the ultimate aim of teaching and learning" (Cree & Macaulay, 2000) and has been at the center of discussions concerning learning psychology (Illeris, 2009). Toll and Taylor (2006, cited in Taylor et al., 2010) draw three sources that have impact of transfer of learning through literature review: the training program's design and development, the organizational climate and individual learner characteristics. To Marinu and Genereux (1995, cited in Cree & Macaulay, 2000), learner, instructional tasks, instructional context, the transfer task and the transfer context are the elements involved in transfer of learning, and Bransford, Brown and Cocking (2000) address

the issue of learning transfer by defining it as an active and dynamic process rather than a passive end-product; in which learners actively construct meaning by linking prior and new knowledge and experiences. In vocational education, as indicated by previous research, students had difficulty to transfer what they learned at school to the workplaces (Kilbrink, Bjurulf, Baartman & de Bruijn, 2018), therefore, contextualized knowledge and practices have been of critical importance for effective vocational learning.

With regard to transfer of learning in vocational education, situated learning has been most discussed theme (Catts et al., 2011) as the result of shift from behavourism to constructivism. Among constructivist learning theories, situated learning theory views learning as a social process in which learners acquire and generate new knowledge and skills by participating in communities of practice (Lave & Wenger, 1991). The idea of "communities of practice" is what makes situated learning critical and relevant to vocational learning as:

> A community of practice comprises a group of people who work together and who have developed an understanding of the way they do their work. As newcomers join the group at a novice level, they are peripheral to the work, but as they become more proficient they take on a more central role; they move from the periphery to the core. On the other hand, newcomers may have skill sets the community of practice really needs, so they can pass their skills and knowledge to other members and gain new skills and knowledge in return. In this way all members benefit (Smith & Blake, 2005, p. 9).

In the context of vocational education, teachers - students, teachers - workplace trainers/employees, students - workplace trainers/employees, teachers - students -workplace trainers/employees can form communities of practice both at school-based and work-based learning settings. However, creating a situated learning environment is also required for the knowledge acquisition and generation for those communities of practice. In CAVTL report (2013), creation of learning environments where vocational learners would take ownership of their learning has been counted as the key feature of effective vocational teaching and learning.

Drawing from literature, Herrington and Oliver (2000) listed the characteristics of the situated learning environments, which are: authentic context, authentic activities, access to expert performances and the modelling of processes,

provision of multiple roles and perspectives, collaborative construction of knowledge, provision of coaching and scaffolding, promotion of reflection to enable abstractions and articulation to enable tacit knowledge to be made explicit, and integrated assessment of learning within the tasks (p. 4).

Brown, Collins and Duguid (1989) argue that the factor hindering the effective learning in formal learning settings is the lack of authenticity of context and activities because meaningful learning can occur in the social and physical context where the learners will use the outcomes later. Herein, they emphasize the importance of workplace learning or so-called stimulated workplace environment; however, there are two pathways, namely school-based and work-based, existing in vocational education (OECD, 2009). In school-based models, students study at school and participate in workplace learning as part of their study while approaches to work-based learning differ from country to country (OECD, 2009). In some models of work-based pathway, students primarily work as employees by being placed in the workplace while studying at a vocational school while at some other models, students mainly attend schools along with some time spent in the workplace or undertaking work-related projects (Atkinson, 2016). Though there are studies that focus on workplaces as a place of learning (Billett, 2008; Boud & Middleton, 2003; Chappell et al., 2002) both theoretical training delivered at vocational schools and practical training involved at the workplace are necessary to acquire job knowledge and skills (Aarkrog, 2005). Likewise, Alexander (2001) contended that higher vocational learners need to master job-related knowledge provided at schools because without that, they cannot think critically about their experiences, and therefore, cannot base their judgments made at workplace on reliable knowledge. Therefore, effective vocational learning requires a holistic and integrated view gained at both learning environments: schools and workplaces. In order to overcome the challenges posed due to lack of integration of learning in both environments, Griffiths and Guile (2003) proposed the notion of connectivity while Schaap, Baartman and de Burijn (2011) and Zitter and Hoove (2012) brought forward the idea of hybrid learning environment based on the concept of connectivity. According to this view, the learning processes at schools and workplaces can be organized and structured to enable students to integrate formal

knowledge, work process knowledge and practical knowledge by intentional and careful design of hybrid learning environments where two dimensions of vocational learning is assembled: acquisition and participation (Zitter & Hoove, 2012). Schaap et al. (2011) provide a description of hybrid learning environment as follows:

> A hybrid learning environment is a specific and unique learning environment which combines relevant and effective components of vocational schools and workplaces. Unique refers here to own aims, responsibilities, targets, markets and thus learning possibilities, since there is no physical distinction between a vocational school (i.e., learning) and an organization (i.e., working) (p. 113).

Supporting this view, the notion of boundary crossing was emphasized by Akkerman and Bakker (2012). Conceiving school-work transition as boundary, they assert that boundary crossing, which is different from transfer of learning as it is one-directional, can help establishing a productive relation between school and work by "creating continuity in actions and interactions between school institutes and local workplaces" (p.170). Akkerman and Bakker (2012) mentioned release days as an example of boundary, during which students came back to schools from workplaces to present and discuss their workplace experiences with the teachers and other students, as release days established continuity between school and work through continuous reflection.

Reflection is also a critical element of experiential learning embedded in constructivist perspective (Kolb, 1984), which also has implications for vocational teaching and learning. Kolb (1984) defined experiential learning as the "process whereby knowledge is created through the transformation of experience" (p. 41), a cyclical process which is enacted in four stages: concrete experience, reflective observation, abstract conceptualization and active experimentation. Smith (2001, cited in Clark et al., 2010) provided a more relevant definition of experiential learning to vocational learning by marking it is a "sort of learning undertaken by students who are given a chance to acquire and apply knowledge, skills and feelings in an immediate and relevant setting" (p.1). In vocational education, theoretical knowledge acquired in classroom setting is put into experience in the laboratories through problem solving and hands-on activities under the supervision of teachers, and in real life settings at an on-the-job location (Clark et al., 2010). As they

asserted, experiential learning process in vocational education is not limited to hands-on tasks, but requires feedback mechanism and reflection. By highlighting the importance of reflection for vocational learning, Scott and Sarkees-Wircenski (2008) note that vocational teaching and learning need to be experiential with students reflecting on what they have learned, how they applied it and how they can improve themselves. Besides reflection, experiential learning requires that students should be engaged in a learning process in which they are provided with constant feedback on their experiences in order to improve learning (Kolb & Kolb, 2005).

Lucas et al. (2012) gathered the learning methods from previous research that work well in vocational contexts. They state that majority of these methods are experiential combining reflection, feedback and theory as well. These methods are: learning by watching, learning by imitating, learning by practising (trial and error), learning through feedback, learning through conversation, learning by teaching and helping, learning by real-world problem-solving learning through enquiry, learning by thinking critically and producing knowledge, learning by listening, transcribing and remembering, learning by drafting and sketching, learning by reflecting, learning on the fly (learners' asking for help from whoever available to answer their questions), learning by being coached, learning by competing, learning through virtual environments, learning through simulation and role play, and learning through games (p. 61).

Apart from all, Smith and Kling (2011) argue the impact of self-perception on the quality of vocational learning by highlighting the direct relationship between vocational learners' self-perception and learning success. They marked that "how we see and value ourselves, and how we believe the outside world sees and values us, is called self-perception, and it has a strong impact on the nature and quality of our vocational learning" (p. 255). They discussed that increasing the level of self-perception would lead to learning success and through snowball effect, learning success would pave way for higher level of self-perception.

Deriving findings from three studies and combining the findings from them, as was presented in Figure 2.4, Smith and Kling (2011) developed a model, an interactive cycle, for the relationship between self-perception and vocational learning. They noted that an interactive cycle exists between learners' self-

perception, behaviours (e.g. engagement in learning activities) and feelings (e.g. motivation), and learners' self-perception is influenced by learners' previous learning experiences and behaviours, previous acknowledged success as learner, and external interventions like positive reinforcement and support from peers, teachers, employers and work colleagues, and guided reflection (pp. 253-254).

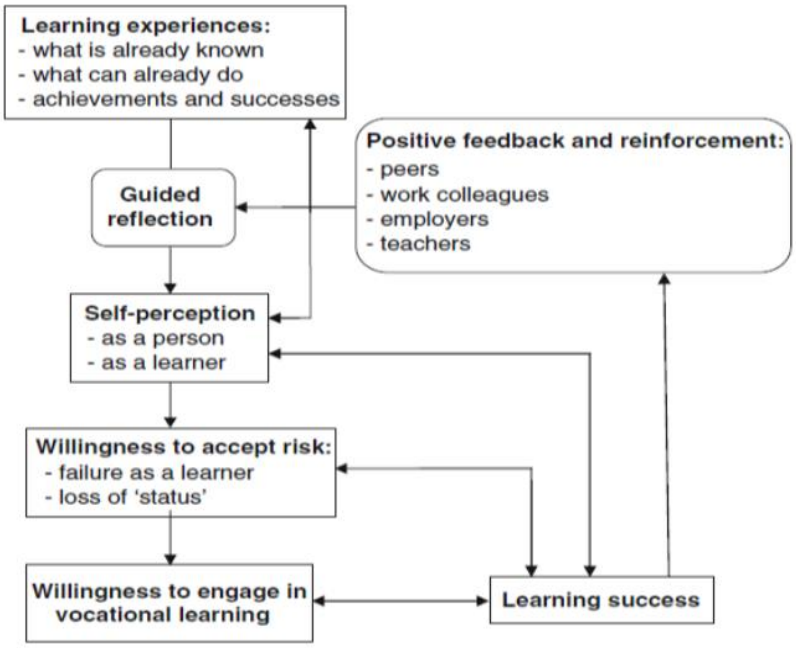

Figure 2.5 *The Relationship between Self-Perception and Vocational Learning (Smith &Kling, 2011, p. 253).*

They also added that as learners' self-perception level increases they tend to take more risks for the sake of learning and show more willingness to engage in learning activities and environments. In relation to improvement of self-perception for effective vocational learning, mentoring and coaching, a critical element of guided reflection, is found necessary for learners to understand what they already know and evaluate what they can do (Smith & Kling, 2011).

In summary, effective vocational learning that can take place both at schools and workplaces, depends on situated learning experiences in communities of practice, recontextualization of learning through transfer of learning by closing the mismatch between the contexts where knowledge is acquired and used, provision

of learning environments where students are provided with hands-on, real-life, authentic materials and activities through mentoring and coaching, and the improvement in positive self-perception of vocational learners.

2.4 Factors Influencing Vocational Teaching and Learning

Vocational education is influenced by external factors like changing needs of labor market, rapid technological developments (CEDEFOP, 2012; OECD, 2012; Robertson, 2008) and diversified work environment (Chappell & Hawke, 2008; Chappell & Johnston, 2003). Besides them, external factors affecting and providing implications for vocational education were given in a research paper by CEDEFOP (2018a, p. 14) as follows: (a) demographic change, (b) the business cycle, (c) globalization/offshoring, (d) technical change/digitization/robotics, (e) organizational change within workplaces and within sectors, (f) public policy (e.g. systems of social protection that use VET as part of their efforts to combat social exclusion, macroeconomic policy).

Additionally, progressive and immediate changes in industry and labour market, arising from globalization, technological change and liberalization of markets (CEDEFOP, 2004) are accompanied with changing conceptions of knowledge, skill and learning (Chappell, 2004), and changing nature of work and work organization (Chappell et al., 2002) which have inevitably had profound impact on the design and provision of vocational education. Darwin (2007) argues that changing nature of work makes it disputable how to conceive the vocational learner, the design of vocational learning, required pedagogies and learning environments, thus making it problematic for vocational teachers to identify effective pedagogies as it is challenging for them to find a balance "between the educational-social and the labour market-instrumental discourse of contemporary vocational and technical education" (p. 61).

Due to its direct connection to labour market, conceptions of vocational education have centered on the outcomes of teaching and learning, which in turn, required the definition of national vocational qualifications based learning outcomes to provide mobility of learners and international comparability (CEDEFOP, 2015; 2017; Kinta, 2013), and emphasis on competence-based

vocational education which is defined as "the knowledge, skills and attitudes (competencies) to be taught in a vocational pro- gram are those required by workers to perform successfully in the related job or occupation" (Watson, 1991, p. 134).

Within this framework, when teaching processes are specifically taken into account, literature review revealed vocational teacher identity (Lucas et al., 2012; Orr & Simmons, 2010), vocational teacher preparation (UNESCO-UNEVOC, 2014), teachers' knowledge and skills (Chappell & Hawke, 2003; Lucas, 2015; CAVTL, 2013); the shift from teaching to learning (CEDEFOP, 2015; Chappell, 2004), diversified learning environments (Faraday et al., 2011; Robertson, 2008); diversity in learner characteristics (Fletcher, Djajalaksana & Eison, 2012; McCrone et al., 2015; Robertson, 2008); educational system-related factors (CEDEFOP, 2018a; Grubb, 2006; Hyland, 2017; Lucas et al., 2010); mismatch between supply and demand of vocational knowledge and skills (Bartlett, 2013; CEDEFOP, 2015; 2018b; Günay & Özer, 2016); and costs of vocational education (Hoeckel, 2008; Grubb, 2006) as the factors to be recognized while evaluating the effectiveness of vocational teaching and learning.

Among the teacher-related factors was the pedagogical knowledge and practice of vocational teachers as teaching and learning processes at vocational education level are deeply influenced by the pedagogy utilized by these teachers as stated in a report by Margo et al. (2008) for the Institute for Public Policy Research because:

> teaching vocational subjects will not only require different and specialized subject and professional knowledge, but different teaching skills, such as the ability to hold dynamic and active lessons with hands-on experience for pupils and within less traditional classroom environments. Early research suggests that teaching vocational subjects successfully may be more challenging and require more training than teaching academic subjects (p. 6).

Vocational and technical education comprises both theoretical and practical-occupational-hands-on knowledge, which in turn puts vocational and technical education teachers in a unique position for they are supposed to integrate academic and occupational knowledge (Kerna, 2012). This condition is the result of dual character of vocational teaching:

> The industrial education teacher is a teacher of two worlds: the world of the conventional classroom; for he has to possess the skills which every other teacher has to be able to teach the fundamentals of every task before proceeding to the laboratory. The second world is the world of the laboratory because he must be there to instruct and guide the students' production enterprises (Akpan, 2008).

Dual identity which vocational teachers are characterized with has a clear influence on the teachers' pedagogy because as stated by Lucas et al. (2012) the dual worlds of educational institution and workplace require two sets of expertise – teachers with current experience of the workplace and workers who can teach. Thus, with a dual professional identity (Orr & Simmons, 2010), vocational education teachers are required to both have subject expertise and be a "good" teacher due to the implicit assumption of that subject expertise, as being skilled as an educator is not the main determinant of the quality of vocational teaching and learning (Orr, 2009). Based on this assumption, vocational education teachers have been recruited traditionally, from artisans, tradesmen, technicians and engineer/technologist or academic fields whose major training has been concentrated on technical or academic areas but with fewer being trained as teachers and trainers (Kerre, 1997). In other words, they are expected to be simultaneously members of their discipline/trade and educators (Palmiere, 2004).

This situation is considered to be a problem on one side but as richness on the other. For instance, Haycock and Kelly (2009) mark that this is problematic, for it creates confusion and contradiction while Chappell and Johnston (2003) allege that the educational identity of vocational educators is strong as they easily move between the world of work and the world of education.

Besides identity, pre-service vocational teacher education presents a complex set of problems in most countries. These problems are partially caused by the areas of teacher preparation because vocational teacher education is approached in the same way as other areas of teacher education although it clearly differentiates from teaching in other areas. This is also expressed in a report by UNESCO-UNEVOC (2014):

> Existing systems generally tend to provide the same pre-service training preparation for technical and vocational education teachers as received by

> their counterparts across the wider field of teaching. Moreover, many technical and vocational education teachers enter the classroom without the benefit of an industrial background, and having often lacked the opportunity to experience the world of work (p. 5).

Upon graduation, due to the approach that universities adopt while training vocational and technical education teachers, they feel incompetent and unqualified as teachers as stated in the Diploma Survey Report by Association of Colleges (2009) where it is reported that teachers who are delivered diplomas feel that they have not received adequate level of training to be able to utilize applied pedagogies required to teach them.

As to student-related factors, apart from students' cognitive and affective characteristics, diversity in learner characteristics in vocational education (Fletcher et al., 2012; McCrone et al., 2015; Robertson, 2008; Smith, 2005) and low level of literacy and numeracy skills (Lucas et al., 2012; OECD, 2012) acted as factors which influence vocational teaching and learning processes. Vocational learners differ in age (from young adults to adults) and cultural and socio-economic backgrounds while, as discussed by Smith (2005) some have social, mental and physical problems, resulting in varying learner needs, which makes it challenging for vocational teachers to respond to all (Fletcher et al., 2012). Beside, with regard to their prior knowledge and current studies, vocational students achieve lower level of academic skills, namely literacy and numeracy, in contrast to students at academic track as vocational education is supposed to provide occupation-specific knowledge and skills (Grubb, 2006).

In addition to abovementioned factors, educational systems across countries provide vocational education in different levels (secondary and post-secondary vocational education) and models (school-based, work-based, apprenticeship) (CEDEFOP, 2018a) leading to role conflicts. As discussed by Grubb (2006) in the review prepared for OECD, provision of programs and courses by universities which overlap with the ones at higher vocational schools leads to blurring the boundary of higher vocational education and universities, and creates competition between universities and post-secondary vocational institutions. Moreover, it is not

precise what level of education corresponds to what level of labour force (Grubb, 2006). In his words:

> It is much more difficult to understand the kinds of occupations that each level emphasizes, partly because program and occupational titles are often ambiguous. Programs in business, IT, and health occupations exist at the secondary, post-secondary VET, and university levels; electronics or technician or engineering programs can be found at many levels, from short-term job training up to the university level. Furthermore, some institutions that seem to occupy the same level of the educational systems of different countries seem to operate at different levels of sophistication (p. 12).

Beside, the status of vocational education serves as a factor affecting the inputs, processes and output of vocational education. When compared to academic knowledge and skills achieved through general education, vocational education was perceived to be "poorer cousin" of academic education (Lucas et al., 2012), "sector of second chance" (Atkins, 2010), "of low esteem" (Lucas et al., 2010) and "second class system" (CEDEFOP, 2018a). As discussed in CEDEFOP research paper (2018a) vocational education are mostly selected by the students with low income, who lack alternative opportunities and socially excluded. Hyland (2017) discusses that inferior status of vocational education is the result of lack of investment in vocational education, low number of enrollees who are suitably qualified for vocational education and lack of esteem for vocational qualifications.

In addition, mismatch between the knowledge and skills provided by the vocational education institutions and needed by the employers in the form of over or under-qualification (Bartlett, 2013; CEDEFOP, 2015; 2018b; Günay & Özer, 2016) was another factor related to vocational education. Mismatches could be *vertical* when the level of knowledge and skills is less or more than needed to perform the job; *horizontal* when the education level is appropriate but the education type is not for the job, and *geographical* when the level of education and knowledge and skills is based in a country or region but different from other settings (CEDEFOP, 2015). The relevant research indicated that the knowledge and skills of vocational graduates mostly failed to respond to the needs of employers and labour market due to vertical mismatch (Bartlett, 2013; CEDEFOP, 2015; 2018b; Günay & Özer, 2016).

Funding and costs of vocational education can be defined as another factor. Mostly agreed, vocational education is costly when compared to general education (Hoeckel, 2008) due to the costs associated with materials, equipment, special facilities, work-based placements and internships (Grubb, 2006). As vocational education is characterized by diversified learning environments (Faraday et al., 2011; Robertson, 2008) the costs of equipment and materials required to create authentic context at schools and financing internships require allocation of more financial resources for vocational education.

2.5 Research on Vocational Teaching and Learning

Due to the varying conceptions of vocational education (CEDEFOP, 2017; McCrone et al., 2015) conceptions of and approaches to effective vocational teaching and learning varied. Mitchell et al. (2006) maintain that effective vocational teaching and learning has been conceptualized through policy and research discourses concerning compliance, managerial and organizational issues rather than experience of pedagogy. In other words, the pedagogical issues related to vocational education has been is under-researched and under-theorized despite some notable attempts (Lucas et al., 2012; McCrone et al., 2015; UNESCO-UNEVOC, 2014) as research often focused on system-related issues like kinds of competences required to do well in the workplace (Palmieri, 2004). Lucas et al. (2012) also confirm the tendency of research to deal with structures, systems, qualifications and national bodies rather than on pedagogy.

Presented in the following, research review, conducted for this study on effective vocational teaching and learning, revealed characteristics of quality vocational teaching and its elements; capabilities, personal qualities and competences of effective vocational teachers; effective teaching and learning methods utilized in vocational education; learner preferences and learning approaches, and challenges hindering vocational education and training.

First of all, Corben and Thomson (2001) conducted a qualitative study in order to identify the practices of exemplary vocational teaching by interviewing eighteen expert teachers at a vocational institute in Australia. The findings indicated that effective vocational teachers had a “rich and complex knowledge base”. The

attributes that data revealed were: (1) learner focus, (2) technical knowledge and currency, (3) expertise in learning and teaching, (4) personal attributes, beliefs and values; and (5) influences on teacher development. More specifically, excellent vocational teachers are responsive to the needs of curriculum and learners; use a variety of strategies and resources to motivate learners; integrate theory into workplace practice and sequence activities in a meaningful and holistic way; have passion for learning and helping students to learn and reach their potential; and believe in the transformative nature of education.

Likewise, in the project of TAFE NSW (2004) titled *VET Teaching & Learning Project*, it was aimed to figure out the dimensions of great vocational teaching and twenty-four case studies were reviewed to reveal common themes. Learner-related themes were a variety of learning mode, self-directness, and peer learning and development of generic skill sets while teacher-related themes were found to be peer learning and reflective practice, holistic and learner-centered approaches, pastoral care for learners and strong partnerships. In addition, the themes: participatory approaches in the teaching process, lifelong learning orientation, use of multiple strategies for teaching, learning, assessment and evaluation, multiple roles for teachers and learners, designing a transformative climate, and provision of constructivist, situated and social learning.

As one of the major studies, Faraday et al. (2011) involved eight further education colleges to define the effective teaching practices of vocational teachers through observations and interviews. In the study, they used a framework consisting of elements of effective vocational teaching: teaching skills, teaching relationships, teacher reflection and teaching models, teaching context was the fifth element emerged during the study. The findings showed that teaching models were not used by the teachers intentionally, systematically and in a planned way while making decisions about how to teach though they used some aspects of it. Additionally, they found that teachers changed their practice according to the program level and learners' abilities, and they utilized teaching skills to choose their strategy among the strategies of differentiation, presentation and demonstration, using technology, group and individual learning, reinforcing learning and assessing learning, and the use of multiple strategies in a session. Also, they observed that vocational teachers

based their teaching on some learning theories, the most prevalent of which were found to be experiential learning and learning styles theories. Finally, data revealed that effective vocational teachers were passionate to teach and make learning happen; reflective by reviewing their practice and discussing it with colleagues.

In another research conducted by a study group for National Centre for Vocational Education Research (NCVER) (2001), key stakeholders were interviewed to find out the essential competencies and capabilities that vocational teachers/trainers were required to possess. The results indicated that top six competencies and capabilities, in order of importance were 1) teaching/delivery, 2) industry experience and knowledge, 3) analytical/critical/lateral thinking, 4) deal with students as individuals, 5) flexibility, and 6) self -management.

In the study of Smith and Yasukawa (2017), six focus groups of students and five focus groups of teachers from different vocational institutions were interviewed to explore the factors that make a vocational teacher good. According to students' views, professionalism (being organized and prepared for the class, returning assessment tasks on time etc.); expertise and standing (relevant industry experience, deep subject knowledge, etc.); relationships with, and attitudes towards, students (effective classroom management, teacher roles as expert, colleague, mentor, authority); pedagogy (designing differentiated learning, motivating students and providing helpful explanations). Teachers' views revealed that good vocational teachers had industry/disciplinary expertise and standing (knowledge and experience of the industry or discipline area, expertise as base of pedagogy); pedagogy knowledge and expertise (knowing learners, variety of approaches, flexibility, adaptability); relationships with, and attitudes towards, students (passion for teaching, empathy, approachability, sense of humour, caring and teacher roles as mentor, expert, role-model, career advisor etc.); and professionalism (being well organized and prepared in their teaching and managing the administrative tasks, continuous development etc.).

Orr (2009) conducted a research between December 2008 and May 2009 on the dual roles of in-service teacher trainees working at two Further Education (FE) Colleges in England. Data were collected through face-to-face semi-structured interviews with two teacher educators and a human resources manager at each

college and by telephone with a total of 20 trainee teachers from the two colleges who were teaching on a wide range of courses. The results indicated that the lack of a culture of pedagogical development in colleges where there found to be pressure for trainees to quickly cope with teaching led to conservative practice by the prioritization of expedience over flair. Additionally, theorization was not considered as a means to analyze or extend practice and some trainees had simply perceived theory as the validated or given name to their existing practice. Finally, it was found out that initial teacher training just helped trainees achieve bureaucratic experience and learn to cope in difficult circumstances, therefore, the pedagogy and profession of FE teachers could not develop.

Aiming to explore qualities of effective vocational teachers, students' assessment preferences and preferred learning environments, Said (2018) conducted a qualitative study with the participation of ten students from two higher vocational schools in Malta. Data were collected through semi-structured and photo-elicitation interviews. The findings revealed that students found teaching and learning effective when they could relate what they have learned to the job context. Additionally, students preferred interactive lectures that would prepare them for the job by integrating theory and practice rather than lectures based on presentations. Students valued industrial knowledge and experience as they wanted their teachers to give concrete industrial examples and relate the content to the one required at workplace. Personal qualities of effective teachers were being open, approachable, enthusiastic and charismatic. As to students' assessment preferences, they believed that home-based assignments and projects were effective to evaluate learning, putting much value on feedback. Finally, perceptions regarding effective learning environments varied in terms of type and style depending on the past and current experiences together with their beliefs about effective teaching and learning, which were group work, discussion, practical work, new place outside class and subject content.

Concerning another research context, Ismail, Mohd Nopiah and Mohd Sattar (2018) aimed to explore the challenges faced by vocational teachers in public skills training institutions in Malaysia, and in line with that, they conducted qualitative research design and collected data from thirteen participants including

teachers and administrators, through interviews. The results indicated that there were six core challenges faced by vocational teachers: (1) lack of motivation and interest in teaching the assigned subjects; (2) lack of skills, qualifications and industrial experience; (3) difficulty to meet the needs of students with low academic knowledge and skills as it requires extra teaching effort; (4) difficulty in attending professional courses due to limited budget allocation, rotation system, and heavy workload; (5) difficulty in article writing task; and (6) difficulty in using English as the medium of instruction.

Harkin (2012) reported the findings of the research by Institute for Learning in which 120 respondents including teachers, trainers and assessors from colleges and private training providers, participated by keeping a reflective diary and attending seminars where they discussed key issues related to vocational teaching and learning. The barriers to improving teaching in vocational education were found to be: inadequate resources for learning; lack of recent vocational employment experience of teachers; lack of time for teachers to teach due to their responsibilities to keep paperwork, assess learners, keep up to date, attend meetings, etc.; lack of teaching staff motivation and up to date knowledge, skills and attitudes; recruitment of unsuitable learners to programmes, lack of learners' necessary attributes, previous education experiences of learners; lack of updating and refreshing of a teacher's repertoire of approaches to teaching, and lack of employer involvement in vocational learning at a local level due to limited employer time and vocational staff time.

As to international research on vocational learning, Placklé et al. (2014) sought to identify learner preferences with regard to learning environments in vocational education which they referred to as "powerful learning environments". They developed an instrument to measure students' preferences on the dimensions of powerful learning environments in vocational education, which included (1) authentic and challenging content, (2) self-regulated learning, (3) collaborative problem solving, (4) assessment for learning, (5) differentiation, (6) coaching, (7) reflective dialogue teachers, and (8) reflective dialogue peers. In total, 544 students in the fifth, sixth and seventh grades of secondary vocational schools participated in the study, and according to the results, learners preferred authentic learning tasks

that challenged them and they wanted to solve authentic problems in collaboration with peers. Moreover, they preferred evaluation for learning and coaching which offers structure and trust. However, it was found that students did not favor reflective dialogues with teachers or peers.

Stavenga de Jong, Wierstra and Hermanussen *(2006)*, in their quantitative study, aimed to explore the relationships between school-based (academic) and work-based (experiential) learning approaches of students in vocational education programs. The participants of the study were 899 students of a Dutch secondary vocational school, 758 of whom provided data on school-based learning, while 407 of them provided data on work-based learning. The findings indicated that vocational students mainly used constructive, reproductive and versatile learning styles while they found three other learning styles used at workplace: learning by doing, guided learning and reflective learning. Adding that there is a weak relationship between learning styles used at two settings, they concluded that learning approaches were context-specific.

Involving expert opinion in their research, Lucas et al. (2012) found out that effective vocational education needs to be taught in the context of practical problem-solving, and that high-quality vocational education almost always involves blending methods. The views of experts revealed that the best vocational education learning was broadly hands-on, practical, experiential, real-world and it involved feedback, questioning, application and reflection and, when required, theoretical models and explanations.

In Turkish context, majorly quantitative research methods along with mixed research design were employed in most studies related to vocational education, and they generally focused on the description of economic outputs of vocational education through human capital perspective along with some studies on curriculum evaluation, self-efficacy beliefs of teachers and students, students' attitude towards and views about the professions, and challenges hindering vocational education and possible solutions rather than describing good practice. One of the most recent nationwide study was conducted by Higher Education Council (2018) to investigate the conditions at higher vocational schools, identify the challenges and propose solutions to those problems. Totally, 13.501 teachers

and 167 industry representatives participated in the study and data were collected from them via questionnaires, consisting of questions about students, teachers, graduates, infrastructure and links with the industry. The challenges that data analysis produced were: lack of guidance and counselling, poor school-industry links, establishment of higher vocational schools in inappropriate regions and settings, lower status of higher vocational schools, employment of graduates of 4-year programs in place of graduates from higher vocational schools, imbalance between program capacity and demand in the labour market, and lack of responsive curricula.

Bahşi (2011) conducted a quantitative study by administering a questionnaire with the participation of 239 administrators working at the higher vocational schools in Turkey. According to the perceptions of administrators, financial constraints, insufficient infrastructure and lack of tools and materials pose challenges for higher vocational schools in Turkey. Additional challenges were found to be: inadequate number of teaching staff, heavy workload of existing teachers, inadequate number of qualified teachers, teachers' being uninformed about field-specific developments due to heavy workload, limited opportunities for teachers to be involved in professional development, lack of legislation to regulate employment of graduates, lack of support from local governors, and lack of recognition of the mission of higher vocational schools.

Employing mixed method research design, Kaya (2014) aimed to explore students' views about the higher vocational school they study at, their perceptions about the training offered there and their future career. Along with this aim, he collected data from 108 students studying at two programs at a higher vocational school via questionnaires followed by interviews with ten of them. The results showed that challenges faced were: inadequate number of teachers and their being lack of subject expertise, students' lack of prior knowledge and skills, lack of equipment and materials at the school, insufficient practical training and applied courses, degraded status of higher vocational schools and lack of socio-cultural activities.

Ekici (2009) conducted a survey study with the aim of investigating teaching models utilized by vocational high school teachers. 174 teachers from different

vocational high schools in Ankara participated in the study. The results indicated that teachers mostly preferred the visual and individual teaching models. Furthermore, a statistically significant difference was determined among teaching models in terms of teachers' gender, professional experience, socioeconomic condition of the schools they work and department.

Review of literature and recent research highlighted that vocational pedagogy is a recent concept that emphasize the use of a mix of approaches to learning and teaching in consideration of learners, location where learning takes place and is for, the subject to be taught, goals and expected outcomes of the education and training along with the required knowledge base for effective vocational teaching, qualities of teachers and learning environment, and learning methods and preferences. Rather than applying the principles of effective teaching in general education, the need for and use of this pedagogy was revealed through the research. The studies covered above indicated that although vocational education teacher's vocational expertise has gained precedence over pedagogic expertise, pedagogical knowledge and skills integrated with workplace knowledge was found more important than mere knowledge of industry. Also, it was indicated that vocational education teachers need to make use of various teaching strategies and methods during a course depending on the context, learners and content.

As for the methodology, it is clear that the studies conducted in the international context mostly utilized qualitative methods to explore the phenomena of effective vocational teaching and learning while researchers in Turkey majorly employed quantitative methods and focused primarily on extrinsic factors. This review also indicated the need for qualitative studies in Turkey which aim to explore intrinsic factors affecting vocational education like teaching-learning processes and relationship between teachers and students and learning context as qualitative methods would provide in-depth and rich description of effective pedagogical practices of vocational teachers in Turkish context.

2.6 Summary of the Literature Review

The concept of vocational pedagogy has emerged to develop an understanding with regard to effective vocational teaching and learning as it has

been an under-researched and under-theorized area (Lucas et al., 2012). Vocational pedagogy is defined as the "art, science and craft of teaching that prepares people for certain kinds of working lives" (Lucas et al., 2012, p. 14). More simply, Lucas (2014) defined it as "the sum total of the many decisions which vocational teachers take as they teach, adjusting their approaches to meet the needs of learners and to match the context in which they find themselves" (p. 2). As stated in CAVTL (2013:9) report, effective vocational teaching and learning requires: development of occupational expertise through the integration of theory and continuous practice; having work-related attributes required for occupational expertise, real or stimulated work experience through practical problem solving and reflection; being informed and aware of the recent technological developments used in the workplaces; use of assessment and feedback methods utilized for occupations at the workplace; benefiting from a variety of learning environments like real or stimulated workplace, classroom and workshops; and keeping on the top of dynamic occupational standards through collective learning.

Once understood and developed, Lucas (2014) believes that the theory of vocational pedagogy would help formulation of models and tools of effective vocational teaching and learning. In this theorizing process, research handled with teacher knowledge, teacher roles and characteristics, teaching approaches to vocational teaching and learning (learner-centered, constructivist, socially situated and transformative approaches), learning environments and learning transfer, learners' affective characteristics like motivation, interest and self-perception and knowledge underpinning vocational education in order to identify the elements of effective vocational teaching and learning.

Considering the approaches to effective vocational teaching, literature review revealed the recent emphasis has been on the construction of vocational knowledge and skills within communities of practice in an authentic context due to the situated and context-bound nature of vocational teaching and learning practices (Evans et al., 2009; Lucas et al., 2012; Orr & Robinson, 2013) because vocational teaching and learning is "hands-on, practical, experiential, real-world as well as, and often at the same time as, something which involves feedback, questioning, application, and reflection and, when required, theoretical models and explanation"

(Lucas et al., 2012:9), enacted in variety of contexts, like school and workplace settings (Black & Yasukawa, 2013; Evans et al., 2009; Mcrone et al., 2015; Moodie & Wheelan, 2012). As vocational knowledge and skills are context-specific embedded in communities of practice effective teaching requires recontextualization which requires integration of subject-based knowledge with work-based knowledge through pedagogy in order to put the knowledge generated in one context to work in another (Evans et al., 2009). Evans et al. (2009) proposed four types of recontextualization: content (putting knowledge to work in the program design environment), pedagogy (putting knowledge to work in teaching and facilitating environment), workplace (putting knowledge to work in the workplace environment) and learner (putting knowledge to work by meaning making). In other words, recontextualization, dealing with transfer of learning, proves to be the translation and justification of vocational knowledge and skills, which are generated in one context, in another.

Apart from that, knowledge bases which inform the practices of vocational teachers has been a critical element for effective vocational teaching (Barnett, 2006; Chappell, 2003; Harkin, 2012; Lucas et al., 2012; Shulman, 2005; Young, 2004). Pedagogical content knowledge (Shulman, 1987) was discussed within the framework of vocational education as a capability of effective vocational teachers. According to this view, effective vocational teaching required both up-to-date subject knowledge and expertise combined with pedagogical skills. Labeling it differently- signature pedagogy by Shulman (2005), subject-specific pedagogy (Brennan Kemmis & Smith, 2006) and vocational didactics (Johansson et al., 2007, cited in CEDEFOP, 2015) the discussions went around the scope and characteristics of vocational subjects along with the knowledge underpinning them.

Teaching approaches, namely use of behaviorist, cognitivist and constructivist principles, were also discussed in terms of effective vocational teaching. Design, delivery and assessment of vocational education has majorly been under the explicit influence of behaviourism (Darwin, 2007; Doolittle & Camp, 1999); however, due to transition from teacher-centered to learner-centred approaches constructivist principles and approaches have gained ground in vocational education (situated learning, experiential learning, productive learning,

transformative learning etc.). For effective vocational teaching, on the other hand, eclectic and pragmatist approach was favored rather than adoption and precedence of one approach over another due to the diverse contexts and diverse learners with changing needs, preferences and interests (CAVTL, 2013; Chappell, 2003; Cullen et al., 2002; Harkin, 2012; Lucas et al., 2012).

Having developed a model for effective vocational teaching and learning, Lucas et al. (2012) defined five key steps to be followed in developing vocational pedagogy involving (1) clarification of goal of vocational education, (2) understanding the nature of subject to be studied, (3) identification and clarification of breadth of outcomes, (4) blending teaching and learning methods according to the context, and (5) considering contextual factors like the nature of learners, the expertise of the 'teacher'; and the settings for learning. Likewise, Faraday et al. (2011) proposed an effective teaching framework to be considered while making decisions about a particular session. This framework consisted of five different elements: teaching skills (the way of selecting and using those tools); teaching relationships (teacher and learner roles, relationships and reactions); teacher reflection (thinking about how the session can be improved); teaching models (sequence of activities designed to achieve objectives); and teaching context (support systems, facilities/resources, learners' individual needs, requirements of the learning program/ qualification specifications).

As to the approaches to effective vocational learning, discussion centered on two opposing views: learning as acquisition and learning as participation. Combining two perspectives, Catts et al. (2011) defined effective vocational learning through the dimensions of learning as the acquisition of vocational knowledge, and learning as the contextualized (socio-political and cultural) application of accumulated knowledge.

Situated learning advanced by Lave and Wenger (1991) has been the most prevalent theme in discussions about effective vocational learning due to the idea of communities of practice (Barnett, 2006; Catts et al., 2011; CAVTL, 2013; Evans et al., 2009; Smith & Blake, 2005), in which vocational learners could construct vocational knowledge and skills by interacting by members of that society, namely employees and trainers at workplaces and peers and teachers at schools. Therefore,

creating a situated learning environment where vocational learners could take the ownership of their own learning by interacting and constructing knowledge and skills has been viewed as the critical feature of effective vocational learning (CAVTL, 2013).

As vocational education is characterized with distinct learning contexts, designing hybrid learning environments (Schaap et al., 2011; Zitter & Hoove, 2012) and transfer of learning in the form of recontextualization (Evans et al., 2009) and boundry crossing (Akkerman & Bakker, 2012) were proposed in order to integrate theory and practice and provide an effective transition from school to work or vice versa. In that integration and transition process, reflection and feedback have been perceived as important elements of effective vocational learning, which have also been discussed in the framework of experiential learning (Kolb, 1984). Lucas et al. (2012) also proposed learning methods which would lead to effective vocational learning and majority of which are experiential combining reflection, feedback and theory as follows: learning by watching, learning by imitating, learning by practising (trial and error), learning through feedback, learning through conversation, learning by teaching and helping, learning by real-world problem-solving learning through enquiry, learning by thinking critically and producing knowledge, learning by listening, transcribing and remembering, learning by drafting and sketching, learning by reflecting, learning on the fly (learners' asking for help from whoever available to answer their questions), learning by being coached, learning by competing, learning through virtual environments, learning through simulation and role play, and learning through games (p. 61).

Last of all, effective vocational learning has been found related to self-perception of learners (Smith & Kling, 2011) in addition to their other affective characteristics like motivation and interest. Having developed a framework which features the relationship between self-perception and vocational learning, they discussed increasing the level of self-perception would lead to learning success and through snowball effect, learning success would pave way for higher level of self-perception.

Besides approaches to effective vocational teaching and learning, extrinsic and intrinsic factors that affect vocational teaching and learning were presented and discussed in the review.

External factors like changing needs of labor market, rapid technological developments (CEDEFOP, 2012; OECD, 2012; Robertson, 2008); diversified work environment (Chappell & Hawke, 2008; Chappell & Johnston, 2003); changing conceptions of knowledge, skill and learning (Chappell, 2013), and changing nature of work and work organization (Chappell et al., 2002) are found among the factors having extrinsic impact on teaching and learning processes in vocational schools. In addition to them, CEDEFOP (2018, p. 14) listed these external factors involving (a) demographic change, (b) the business cycle, (c) globalization/offshoring, (d) technical change/digitization/robotics, (e) organizational change within workplaces and within sectors, (f) public policy (e.g., systems of social protection that use VET as part of their efforts to combat social exclusion, macroeconomic policy).

Considering the intrinsic factors, which have a direct impact on teaching and learning, literature review indicated following factors: vocational teacher identity (Lucas et al., 2012; Orr & Simmons, 2010), vocational teacher preparation (UNESCO-UNEVOC, 2014), teachers' knowledge and skills (Chappell & Hawke, 2003; Lucas, 2015; CAVTL, 2013; UNEVOC, 2014); the shift from teaching to learning (CEDEFOP, 2015; Chappell, 2003), diversified learning environments (Faraday et al., 2011; Robertson, 2008), diversity in learner characteristics (Fletcher et al., 2012; McCrone et al., 2015; Robertson, 2008; Smith, 2005); educational system-related factors (Atkins, 2010; CEDEFOP, 2018a; Grubb, 2006; Hyland, 2017; Lucas et al., 2010); mismatch between supply and demand of vocational knowledge and skills (Bartlett, 2013; CEDEFOP, 2015; 2018b; Günay & Özer, 2016); and costs of vocational education (Grubb, 2006; Hoeckel, 2008).

Finally, review of previous research indicated that research on effective vocational teaching and learning was mostly conducted qualitatively and focused on the characteristics of quality vocational teaching and its elements; capabilities, personal qualities and competences of effective vocational teachers; effective teaching and learning methods utilized in vocational education; learner preferences and learning approaches, and challenges hindering vocational education and

training. In the national context, quantitative studies were conducted dealing with organizational and managerial issues, challenges and possible solutions, and attitude; indicating, therefore, the need for qualitative studies to explore and understand the phenomena of effective vocational teaching and learning in Turkey. From this perspective, the literature informs the current study both conceptually and methodologically as well as providing areas of critical research to contribute further to the knowledge claims.

CHAPTER 3

METHOD

In this chapter, research design, research questions, data sources, data collection instruments, data collection process, and data analysis procedures are presented. The chapter concludes with a discussion of reliability and validity issues and limitations of the study.

3.1 Research Design

Aiming to investigate effective teaching and learning processes at tertiary-level vocational education schools through the perceptions of teachers, students and administrators I utilized a qualitative research approach. The study of lived experiences of teachers and students, who are the main actors of effective teaching and learning processes, calls for qualitative rather than quantitative methodology because it allows more in depth and detailed understanding of the phenomenon constructed by individuals (Yıldırım & Şimsek, 2018) in a certain context (Bogdan & Biklen, 2007). Since effective teaching and learning are complex and contextual phenomena revealing the perceptions, understandings and experiences of of teachers, students and administrators in the context of Nevşehir requires an interpretative approach to this study to provide in-depth and rich description of the processes they are involved in through their own voices.

Merriam (2009) described qualitative research as "an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena with as little disruption of the natural setting as possible" (p. 5). To this end, qualitative researchers gather data in the natural settings where the participants experience the issue or the problem under study (Creswell, 2009), hence data become more valuable in its natural context (Bogdan & Biklen, 2007).

They purpose not to disrupt the natural setting and try to "explicate the ways people in particular settings come to understand, account for, take action, and otherwise manage their day-to-day situations" (Miles & Huberman, 1994, p. 7). Asking "how" questions rather than "why" or "to what extent" (Fraenkel & Wallen, 2006) qualitative researchers proceed as if they know very little about the people and places they visit (Bogdan & Biklen, 2007) and they provide rich and descriptive data. Detailed description of the meanings and processes that are not measured in frequency, amount or quantity (Denzin & Lincoln, 2000) but revealed by participants' own words (Marshall & Rossman, 2011) is one of the foundational characteristics and a must of qualitative research.

Within this tradition, I employed phenomenological research design as in this approach, the researcher focuses on a concept or phenomenon and seeks to understand the meaning of experiences of individuals who have experienced or lived the phenomenon (Creswell, 2007). In other words, it is sought to examine how those individuals who experience any phenomenon "perceive it, describe it, feel about it, judge it, remember it, make sense of it, and talk about it with others" (Patton, 2002, p. 104). In this study, the common points in the experiences, perceptions, descriptions, feelings, judgments and beliefs of of teachers, students and administrators about vocational teaching and learning at higher vocational schools are sought to discover the core meaning attached to vocational by different individuals because within phenomenological design, it is assumed that "there is an essence to experience" (Marshall & Rossman, 2011; Moustakas, 1994; Patton, 2002), implying that core elements of experience that is commonly shared by different individuals can be identified as phenomenologists seek commonality among experiences of participants (Eichelberger, 1989, cited in Patton, 2002).

A phenomenon can be in the form of experiences, perceptions, dispositions and concepts (Yıldırım & Şimşek, 2018), and the phenomenological focus of this study is on the perceptions and experiences of of teachers, students and administrators at higher vocational schools regarding effective vocational teaching and learning. Yıldırım and Şimşek (2018) also note the fact that we are familiar with those forms of phenomena does not imply that we exactly comprehend it; thus, phenomenological inquiry takes familiar but not fully conceived phenomena in its

scope to discover the meaning of the phenomenon in its own context. Though effective teaching and learning has been a familiarized phenomenon through frequent study and research I reformulate the foundational question of phenomenological inquiry raised by Patton (2002) in this study: "What is the meaning, structure and essence of effective teaching and learning experienced by the teachers and students at higher vocational schools?" to increase the level of understanding and explanation in this respect and reveal what it means for different individuals, namely from the perspectives of of teachers, students and administrators.

3.2 Research Questions

The purpose of this study is to investigate understandings and experiences of effective teaching and learning practices at vocational education at tertiary level. More specifically, following research questions guided the current study:

1) What are the perceptions of teachers, students and administrators on effective teaching and learning at higher vocational education level?
2) What are the perceptions of the teachers, students and administrators about the challenges faced at higher vocational schools during the teaching and learning processes?
3) What are the practices of teachers, students and administrators to cope with challenges hindering effective teaching and learning at higher vocational education level?

3.3 Context

This study was conducted at the higher vocational schools serving in Nevşehir, a Middle Anatolian city in Turkey. Nevşehir is located in the region of Cappadocia, in which Göreme National Park and Rock Sites of Cappadocia were declared as World Heritage Property in 1985 by UNESCO. Due to its unique and distinctive landscape characterized with cone-shaped rock formations called "fairy chimneys" and rock-face churches and cave dwellings, Nevşehir attracts tourists and serves as a popular tourism destination (UNESCO, World Heritage Convention) in Turkey. Owing to this fact, as reported by TUIK (Turkish Statistical Institute) for the year 2013, economy in Nevşehir mostly depends on tourism which is followed by agriculture, and socio-cultural life is under the influence of the

dynamics brought about by this economic structure rather than the socio-cultural dynamics related to industrialization since industrialization is not institutionalized and organized in Nevşehir (TUIK, 2013).

Along with the center of the province, there are seven districts in Nevşehir that are Acıgöl, Avanos, Derinkuyu, Gülşehir, Hacıbektaş, Kozaklı and Ürgüp. In addition to them, there are villages and towns, such as Göreme, Mustafapaşa, Uçhisar and Çavuşin which are the popular sites visited by both domestic and international tourists.

As to the population of the city, an increasing trend is being observed based on the statistics provided for the years 2007-2017 by TUIK with a growth from 280.058 in 2007 to 292.365 in 2017.

With regard to education, according to the data provided in National Education Statistics report of Ministry of National Education (2017-2018), there are 40 pre-schools with 6.245 students and 170 teachers, 129 primary schools with 16.511 students and 1226 teachers, and 104 lower secondary schools with 19.223 students and 1471 teachers in Nevşehir. Considering new entrants, at the beginning of the educational year 2017-2018, there were 4073 students newly enrolled at primary schools while 1926 students registered at general secondary schools, and 1895 students preferred vocational and technical secondary schools (MoNE, 2017-2018). In that report (MoNE, 2017-2018), the number of graduates at the end of 2016-2017 educational year was also presented: the number of students who completed 8th grade was 4259 while there were 1848 general secondary education graduates in comparison to 1804 graduates from vocational and technical secondary schools. These statistical indicators revealed that there was a nearly equal distribution between the students graduating from vocational and technical secondary schools and the ones who graduated from general secondary schools. In addition to enrolment and graduate rates at primary and secondary level, when the educational statistics provided by TUIK (2013) were examined the number of students per teacher at primary schools in Nevşehir was found out to be lower than the average of Turkey, which was 15 students per teacher at primary level while it was averagely 19 in Turkey, and 12 students per teacher at secondary schools in Nevşehir when compared to the average number of 15 nationwide.

At the upper secondary education level, the number of the schools in Nevşehir is 61 with 19.270 students in total (MoNE, 2017-2018). Out of 61 high schools, 26 schools are categorized under general high school label (including General High School, Anatolian High School, Anatolian Teacher Training High School, Science High School, Social Sciences High School, Fine Arts and Sports High School and Private High Schools) with totally 10.762 enrolled students while the majority, 35 in total, functions as vocational and technical high school (including Imam and Preacher High School, Anatolian Imam and Preacher High School, Vocational and Technical High Schools, Special Education Vocational High Schools and Private Vocational High Schools) with 8.508 students in total (MoNE, 2017-2018), indicating that although general high schools are fewer in number more students are enrolled in these schools. Considering the teachers, it was reported in the MoNE report (2017-2018) there were 586 teachers at general high schools while 805 teachers worked at vocational and technical high schools in Nevşehir in 2017-2018 educational year.

Higher vocational education, the focus of this study, is provided by two distinct institutions in Nevşehir: Nevşehir Hacı Bektaş Veli University and Kapadokya University.

The higher vocational schools affiliated with these universities, like all others in Turkey, offer two-year undergraduate study for all high school graduates who have taken the first stage of two-stage national university entrance exam and achieved minimum score. In Turkey, students become eligible by obtaining the score of at least 150 points to make preference for only associate degree programs provided by higher vocational schools. Based on the performance on the exam, high school GPA and school preferences made by the students, required to gain admittance to the higher vocational school, students are selected and placed to higher vocational schools by Student Selection and Placement Center. After completing the two-year study, graduates of higher vocational schools can enter the labour market, and/or apply to 4-year undergraduate programs by taking Vertical Transfer Test.

As a public university, Nevşehir Hacı Bektaş Veli University was founded in 2007 by uniting the faculties and higher vocational schools affiliated with

Hacettepe University, Gazi University and Erciyes University. Since 2007, additional faculties, higher vocational schools and research centers have been attached to the university. Currently in 2019, there are eight faculties, four institutes, three higher education schools, nine higher vocational schools, two of which have not started to enrol students, and fourteen research centers attached to the university.

Higher vocational schools affiliated with Nevşehir Hacı Bektaş Veli University are: (1) Avanos Higher Vocational School, (2) Gülşehir Higher Vocational School, (3) Hacı Bektaş Veli Higher Vocational School, (4) Health Services Higher Vocational School, (5) Nevşehir Higher Vocational School, (6) Ürgüp Sebahat and Erol Toksöz Higher Vocational School, and (7) Kozaklı Higher Vocational School. In addition to these, there are two other higher vocational school was founded in Acıgöl and Derinkuyu in 2018 but these schools have not started to enroll students yet.

As to the second university serving in Nevşehir, Kapadokya University is a private university founded in Mustafapaşa in 2017-2018 academic year by İlke Education and Welfare Foundation. Despite being recently founded, Kapadokya Higher Vocational School which is the only higher vocational school affiliated with this university was founded in 2005 as an independent higher vocational school, and Kapadokya University was established by adding faculties and research centers to already existing higher vocational school.

Kapadokya Higher Vocational School is a private fee-paying college offering vocational and technical education in 27 programs in two campuses, the central setting of which is in Mustafapaşa and the second campus is in İstanbul. Starting education in 2005 in Nevşehir, this school enrolled students in its Istanbul setting in 2011-2012 academic year. The programs offered at the school are classified under four divisions: (1) Health Programs, (2) Aviation Programs, (3) Cappadocia Programs and (4) Law Programs.

The programs common at both higher education settings, namely higher vocational schools affiliated with Nevşehir Hacı Bektaş Veli University and Kapadokya Higher Vocational School at Kapadokya University, are Architectural Restoration, Cabin Services, Child Care, Medical Documentation and Secretarial,

Cookery, Physiotherapy, and Tourist Guidance. Tourism programs that are Tourism and Hotel Management and Tourism and Travel Services are offered at two higher vocational schools at Nevşehir Hacı Bektaş Veli University. Other higher vocational education programs offered in Nevşehir ranged from medical to management and technology programs.

Accommodation types for the students at both universities are public dormitories, private residence halls, flat/house share, and house/flat renting. Concerning the capacities of dormitories affiliated to the Higher Education Loans and Dormitories Institution in Nevşehir, it was reported in the MoNE report (2017-2018) that there were 10 public dormitories in Nevşehir as of July, 2018. Six of them which have capacity to accommodate 4712 students are located in the city centre while there are one dormitory in Avanos with the capacity for 569 students, one in Gülşehir with the capacity for 100 students, one in Hacıbektaş with the student capacity of 456 and one in Ürgüp with the capacity for 671 students. Besides, there are private residence halls and one-bed apartments available for students in the city centre and towns of Nevşehir.

When the budget for universities is considered it was noted in MoNE report (2017-2018) that totally 101.226 000 Turkish Lira was allocated to Nevşehir Hacı Bektaş University for the year of 2018. Out of this amount, 61.488 000 was spared for personnel expenditures while 11.215 000 was for goods and services purchasing expenditures and 18.500 000 was allocated for capital expenditures. Since Kapadokya University is a non-profit, fee-paying university the expenditures are covered through the income generated by tuition fee and state support provided according to the number of students enrolled.

3.4 Data Sources

As qualitative methods require in-depth information on small samples, different from quantitative methods utilizing probability sampling, purposeful sampling was employed in this study as the objective was “to select information-rich cases which will illuminate the questions under study” (Patton, 2002). Ritchie, Lewis and Elam (2003) elaborate on purposive sampling as in the following:

> …the aim of qualitative research is to gain an understanding of the nature and form of phenomena, to unpack meanings, to develop explanations or to generate ideas, concepts and theories. Samples, therefore, need to be selected to ensure the inclusion of relevant constituencies, events, processes and so on, that can illuminate and inform that understanding. Units are chosen because they typify a circumstance or hold a characteristic that is expected or known to have salience to the subject matter under study (pp. 82-83).

Since the point in phenomenological research is to grasp the meaning assigned to a phenomenon by small number of individuals (Creswell, 2007) rather than making generalization, providing estimates and determining statistically significant variables, selecting participants who would provide detailed understanding, rich and in-depth information of the relevant phenomenon is needed. Due to this fact, sampling in qualitative research requires definition of a criterion required to understand the relevant phenomenon by reaching a homogenous group experiencing that phenomenon, the criterion which shows up in this study is the selection of teachers and students who experience effective/ineffective teaching and learning at higher vocational schools in Nevşehir.

Considering the required sample size, the number of participants suggested in phenomenological research by Yıldırım and Şimşek (2018) is around 7-10 while Creswell (2007) asserts sample size can range from 5 to 25. However, as a rule of thumb, majority of qualitative studies tend to follow saturation to determine the sample size. Data saturation implies including participants continually till the data set is completed, which is indicated by data redundancy or replication (Bowen, 2008). Therefore, to determine the number of data sources both sample size recommendations and data saturation were considered in this study.

With regard to the selection of participants, purposive sampling strategies as required by qualitative methodology were utilized to reach the data sources of the study which consisted of teachers and students at the higher vocational schools in Nevşehir. Apart from teachers and students, one administrator, holding the position of director, from each higher vocational school was selected in this study. In case of unavailability of directors, assistant directors were involved as data source.

Having included all higher vocational schools in Nevşehir in the study, participant selection process firstly started with the identification of administrators at each higher vocational school in Nevşehir as primary contact for they worked closely with the teachers and had the knowledge of school context and students. I first contacted the administrators working as directors at each school and I asked them to participate in the study as interviewees after giving detailed information about the study. At three schools, namely S4, S6 and S7, I made telephone calls and requested appointment from directors for interview following brief information about the study. However, I could not make appointment for the interview with the administrators at five schools (S1, S2, S3, S5 and S8) due to their busy schedule; therefore, directors at those schools referred me to the assistant directors who would possibly participate in the study, and I contacted, asked for appointment and interviewed assistant directors at those five schools rather than directors as intended.

As for teachers and students, two sampling strategies, namely snowball (chain) and maximum variation sampling strategies, were employed concurrently. Snowball (chain) sampling is an approach used to locate information-rich key informants and/or critical cases (Patton, 2002) through the referral of the existing participants while it is the objective in maximum variation sampling to grasp "the central themes or principal outcomes that cut across a great deal of participant or program variation" (Patton, 2002).

At each school, the teachers contacted firstly were determined and accessed through the referral of administrators who were interviewed, and then they were asked for appointment for the observation and interview. After the observation of three to four hour session of the vocational course delivered by the selected teacher and following interview, the participant teacher guided me to contact his/her students and other teachers to be interviewed. The variation among participant teachers were provided through including the teachers teaching at distinct programs and departments.

The process of participant selection at each school was presented in the following diagram:

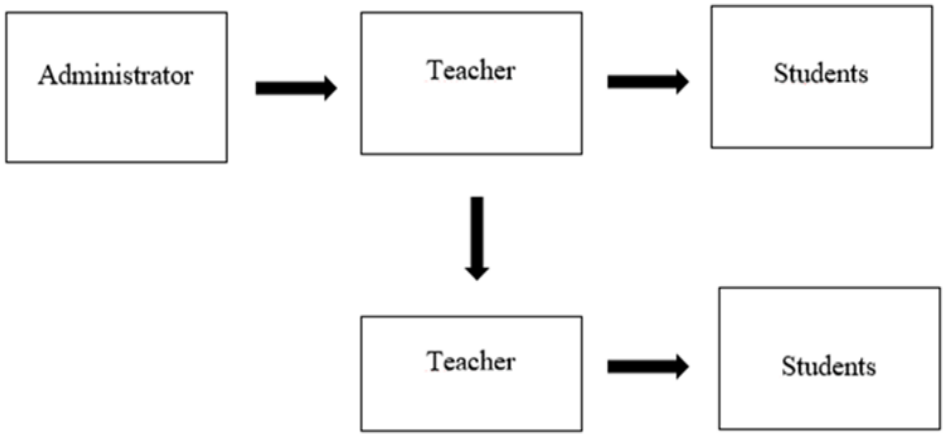

Figure 3.1 *Participant Selection Process*

After the interviews with the teachers were completed students of the interviewed teachers were selected upon teachers' recommendation to conduct focus group interviews. These groups consisted of 4-6 students in number, who proved to be varying as 1) high achieving/performing, 2) average achieving/performing, and 3) low achieving/performing students. Teachers were asked to select the students with various achieving rates to provide participant diversity because achievement was found through research to be influential on students' perceptions about effective teaching and learning (Park & Lee, 2006). In addition to that, the focus groups consisted of both male and female students as previous research (Korte, Lavin & Davies, 2013) indicated that there were differences between male and female students' perceptions regarding effective teaching and teacher characteristics. Although it was aimed to include both male and female students in the focus groups it was not possible to have both in some groups (F4, F6 and F14) in the case of absence of opposite sex.

Based on the abovementioned strategies used for selecting the participants, data were collected from teachers, students and administrators at the higher vocational schools in Nevşehir through interviews and observation of the vocational courses to explore the phenomenon of effective vocational teaching and learning in-depth and from multiple perspectives. Data sources are displayed in the table given below:

Table 3.1 *Data Sources of the Study*

Non-participant observation	
Courses	Three to four hours of a course of each participant vocational teacher, fifty-eight hours in total
Individual Interviews	
Administrators	One administrator from each school, eight administrators in total
Teachers	Sixteen vocational teachers
Focus Group Interviews	
Students	Sixteen focus groups; totally seventy students

Characteristics of schools, administrators, teachers and students were described in detail in the following sections.

3.4.1 Description of Study Schools

Higher vocational education in Nevşehir is provided by eight higher vocational schools, seven of which are affiliated with Nevşehir Hacı Bektaş Veli University while there is only one attached to Kapadokya University.

Based on the data retrieved from Higher Education Council Information Management System in May, 2018, and data obtained from administrators during individual interviews, it was found out that there were 11.149 students studying at the higher vocational schools in Nevşehir (see Table 3.2), and in 2017-2018 academic year, and majority of the students studying at these schools preferred daytime classes.

While the number of students taking evening classes at the higher vocational schools affiliated with Nevşehir Hacı Bektaş Veli University was 1994 out of 7588 students it was only two at Kapadokya Higher Vocational School. Online classes were offered at both schools; 465 students at Health Services Higher Vocational School studied at Medical Documentation and Secretarial program, and totally 513 students studied online at Child Care and Tourist Guidance programs at Kapadokya Higher Vocational School.

For the academic year of 2017-2018, there were 216 teachers working at higher vocational schools in Nevşehir, eighteen of whom had the title of assistant

professor while the rest worked as lecturers (see Table 3.3). As for the gender of the teachers, 91 teachers are female while 125 out of 216 teachers are male. The number of teachers working at the higher vocational schools of Nevşehir Hacı Bektaş Veli University is 123 distributed at 41 programs while at 27 programs are 93 teachers at Kapadokya Higher Vocational School.

Table 3.2 *Number of Students at the Higher Vocational Schools in Nevşehir (2017-2018)*

Name of Higher Education Institution	*Male*	*Female*	*Total*
Avanos Higher Vocational School	501	286	787
Gülşehir Higher Vocational School	589	600	1189
Hacı Bektaş Higher Vocational School	700	190	890
Health Services Higher Vocational School	324	848	1172
Nevşehir Higher Vocational School	1268	630	1898
Ürgüp Sebahat-Erol Toksöz Higher Vocational School	758	620	1378
Kozaklı Higher Vocational School	85	189	274
Kapadokya Higher Vocational School	1723	1838	3561

Note: The data were retrieved from Higher Education Council Information Management System on May, 2018.

Considering the location of the schools, five of the higher vocational schools in Nevşehir (S1, S2, S3, S6 and S7) as mostly usual in other parts of Turkey, are located in towns which are Avanos, Gülşehir, Hacıbektaş, Kozaklı and Ürgüp, offering education far from the main campus. The shortest distance to the main campus is 15.1 while the longest one is 66.9 kilometers. Of all, only three higher vocational schools (S4, S5 and S8), are located in the main campus. Except one (S8), the schools serving in towns are not at the very center. Only S1 is at the walking distance to the town center while transportation to other schools is provided by bus and/or minibus. Besides, of all, only one school (S8) offers education in two other settings apart from the one in the main campus, which are located in Ürgüp and Uçhisar.

Regarding the buildings where vocational education and training is provided, except for two (S3 and S8), all schools have one multi-storey building. The buildings of S1, S2 and S3 were originally built for other purposes like aged care facility, vocational high school and vocational training center, and were donated to Nevşehir Hacı Bektaş Veli University to serve as higher vocational schools. Similarly, the buildings of S8 are mostly historical structures used previously as mansion, hotel and madrasah (moslem theological school) though there are also newly constructed buildings for the purpose of creating application sites for students.

Table 3.3 *Number of Teachers Working at Higher Vocational Schools in Nevşehir (2017-2018)*

Name of Higher Education Institution	*Number of Programs*	*Assistant Professor*			*Lecturer*		
		Male	*Female*	*Total*	*Male*	*Female*	*Total*
Avanos Higher Vocational School	7	1	1	2	14	5	19
Gülşehir Higher Vocational School	6	2	1	3	9	5	14
Hacı Bektaş Higher Vocational School	5	1	0	1	12	5	17
Kozaklı Higher Vocational School	2	0	0	0	5	2	7
Nevşehir Higher Vocational School	9	3	1	4	18	10	28
Ürgüp Sebahat and Erol Toksöz Higher Vocational School	7	2	0	2	15	11	26
Health Services Higher Vocational School	5	1	1	2	3	9	12
Kapadokya Higher Vocational School	27	1	3	4	56	37	93

Note: The data were retrieved from Higher Education Council Information Management System on May, 2018.

At the schools with multi-storey buildings (S1, S2, S4, S5, S6 and S7), there are facilities like library, canteen, conference hall, cafeteria, computer lab and classrooms located on different floors while these venues are located at different buildings at S3 and S8. At S3, a detached outbuilding houses the conference hall, cafeteria, canteen and some workshops. Lastly at the main campus of S8, there are

nine venues where applied and theoretical courses are covered, a library, two canteens, a cafeteria, two conference halls and a computer lab. At one additional site of S8, there are two libraries, twelve classrooms and fifteen laboratories and at the second additional site is an application hall with a range of other facilities.

Depending on the need of the programs offered, all higher vocational schools included workshops or labs to provide opportunity for students to practice the theoretical knowledge through application, the equipment of which varied depending on the financial resources. The classrooms at S8 were furnished with mobile armchairs with writing tablet for students and mobile teacher's desk while the classroom furniture included tables with fixed legs and four-seater fixed bench with tip-up seats and fixed teacher's desk at other seven schools (S1, S2, S3, S4, S5, S6 and S7). Regarding the technological devices S1, S2, S3, S4, S5, S6, S7 and S8 all classrooms were equipped with projector and projection screen. There was no fixed computer in the classroom as teachers use either their personal tablets/laptops or the ones owned by the school.

At all schools except S8, as observed and found out through interviews, the materials at the workshops and labs were mostly donated or purchased in limited number, therefore; though the devices and tools at labs and workshops are not adequate in number, students are divided into groups to make it available for all students to use the tools/devices. Besides, students studying at some programs like Biomedical Device Technology and Aged Care can work with the materials only at the workplace during internship as acquiring the required tools and devices or reaching the real cases is not possible due to financial and accessibility constraints.

Depending on the academic schedule and curriculum of the program at higher vocational schools, students are taught on either semester or trimester basis. In Nevşehir, only one higher vocational school (S8) runs on the trimester system where the academic calendar of three programs and English Language Preparatory Program is divided into three terms: fall, spring and summer. Different from semester system lasting 15 weeks, each session at trimester system is 11-12 weeks long with less course load and credits. At other higher vocational schools (S1, S2, S3, S4, S5, S6 and S7), vocational education and training is provided through semester system which is a more common type of academic schedule in Nevşehir.

The curricula implemented at S1, S2, S3, S4, S5, S6 and S7 are developed and implemented by the lecturers while it is the school committee including lecturers, experts and administrators who design the curriculum at S8. Except S8, lecturers at other schools have the autonomy to adjust the curriculum, select the instructional methods and techniques, determine the assessment and evaluation methods and tools, and alter the materials and topics. On the other side, it is binding for the lecturers at S8 to stick to the curriculum, subject topics and assessment and evaluation rules while they can make their own decisions on the materials and tools, and instructional methods and techniques to be used.

The number of exams administered at the schools except S8 is two (one midterm and one final exam) while it ranges from zero to five at S8. Assessment techniques at the schools include pop-quiz, midterm exam, project, portfolio, practice-based skills test and interview.

As to workplace training, students studying at the semester basis do 30-workday traineeship on either the first or second summer term while trimester programs require students to study the summer term at school or at the workplace selected by the school. Traineeship period is evaluated by the employers by recording daily activities of the trainees at the workplace and assessing their performance through likert-type scale.

Extracurricular activities at all schools aim to have students to participate in social activities, and attend seminars and informative events. To increase the participation rate students are rewarded by points that students need to obtain to graduate.

3.4.2 Description of Administrators

Administrators were the first contacts at higher vocational schools in Nevşehir, and one participant holding administrative position at each school was selected to participate in the study. The objective of including administrators in the study was to obtain information about the school context, study programs, teacher and student profile, resources and the teachers that could be included in the study for the fact that administrators have comprehensive knowledge of context because they integrate and coordinate “the efforts of teachers, students, personnel and

parents to achieve the desired objectives of education and facilitate the over-all aspects of the teaching-learning process" (UNESCO, 2005, p.1).

The directors at the schools were the intended data source; however; due to their busy schedules assistant directors referred by the directors were included in the study at five schools. Therefore, three directors and five assistant directors (see Table 3.4) participated in the study. Among the participant directors, only one was female while seven out of eight were male, and the age range was between 30 and 39. Additionally, while two administrators completed doctoral studies five of them had master's degree. There was only one administrator with bachelor's degree.

Table 3.4 *Background Information of Administrators Participating in the Study*

ID	*Gender*	*Age*	*Field of Study*	*Degree*	*Academic Title*	*Position*
A1	Female	35	Computer Engineering	Master's	Lecturer	Assistant Director
A2	Male	36	Tourism and Hotel Management	Ph.D	Assistant Professor	Director
A3	Male	31	Business Management	Master's	Lecturer	Assistant Director
A4	Male	33	Electrical Education	Master's	Lecturer	Assistant Director
A5	Male	38	Accounting and Finance	Master's	Lecturer	Assistant Director
A6	Male	30	Physiotherapy and Rehabilitation	Bachelor's	Lecturer	Director
A7	Male	39	Business Management	Master's	Lecturer	Assistant Director
A8	Male	35	Chemistry	Ph.D	Assistant Professor	Director

One director and two assistant directors were recently assigned to administrative positions but they all asserted that they were knowledgeable about the school context as they were already teaching at the studied school. Of all, except one director, all of them taught some courses at the relevant programs. That director who did not teach at the school he managed reported that he was teaching at one faculty of the university.

3.4.3 Description of Teachers

Sixteen teachers, in total, working at the higher vocational schools in Nevşehir participated in the study. The number of participant teachers at each school varied depending on the availability of teachers, data saturation and volunteerism to participate in the study. Two teachers from S1, S2, S3, S4, S5 and S6; one teacher from S7 and three teachers from S8 were selected based on the referral of preceding participant, the first of whom was selected through the administrator's referral while the second and subsequent participant teachers were reached via chain referral. The teachers who nominated the potential subsequent participant were given a criterion to recruit a teacher from a different department considering the sampling strategy utilized. As required by the maximum variation sampling strategy, teachers were asked to nominate the subsequent teachers teaching at different programs to provide variance among participants and enrich data with different perspectives.

As shown in Table 3.5, the majority of participating teachers (68.75 %) were male while there were five female (31.25 %) teachers who were interviewed. Teachers' age ranged between 30 to 56 and the majority of them (62.25 %) held master's degree. Among the participants, there was only one teacher as a graduate from higher vocational school while three out of sixteen teachers were the holders of doctoral degree. Regarding their experience in teaching at the school selected for the study the range was from 1 to 10 years while total duration of teaching experience was ranging from 2 to 30 years. Finally, except three of them (18.75 %) all of the teachers had occupational experience, indicating that they practised the related job for some time (from 2 to 30 years) before starting to teach.

3.4.4 Description of Students

Another data source of this study was the second-grade students studying at the higher vocational schools in Nevşehir. First-grade students were not included in the study as second- grade students had more experience by spending more time at the school context, taking vocational and applied courses offered in the second year, and being familiarized with workplace through traineeship.

Table 3.5 *Background Information of the Teachers Selected for the Study*

ID	*Gender*	*Age*	*Field of Study*	*Degree*	*Title*	*Program*	*Teaching Experience (year)*	*Total Teaching Experience (year)*
T1	Male	41	Ceramics Education	Master's	Lecturer	Architectural & Decorative Arts	6	10
T2	Male	34	Computer Education	Master's	Lecturer	Computer Programming	6	11
T3	Male	53	Military Academy	Bachelor's	Lecturer	Horse Training	7	10
T4	Male	40	Cookery	Associate	Lecturer	Cookery	10	10
T5	Female	56	Business Management	Master's	Lecturer	Tourist Guidance	1	30
T6	Male	35	Electronics Education	Ph.D	Assistant Prof.	Biomedical Device Technology	7	14
T7	Female	31	Graphic Design	Master's	Lecturer	Graphic Design	5	8
T8	Female	31	Communication	Master's	Lecturer	Call Center Services	5	7
T9	Male	34	Economics	Master's	Lecturer	Banking and Insurance	7	7
T10	Male	35	Accounting and Finance	Ph.D	Assistant Prof.	Accounting and Taxation	6	10
T11	Male	40	Tourism and Hotel Management	Master's	Lecturer	Tourism and Hotel Management	7	7
T12	Female	46	Child Care Education	Master's	Lecturer	Child Care	4	21
T13	Female	31	Nursing	Master's	Lecturer	Aged Care	5	5
T14	Male	30	Tourism and Travel Services	Ph.D	Assistant Prof.	Tourism and Travel Services	6	6
T15	Male	41	Tourism and Hotel Management	Bachelor's	Lecturer	Tourist Guidance	5	10
T16	Male	30	Physical Therapy	Master's	Lecturer	Occupational Therapy	2	2

Totally, seventy students constituting sixteen focus groups participated in the study. To select students among the second graders maximum variation sampling was employed and four to six students were selected by the teachers based on gender and academic performance variation.

As presented in Table 3.6, background information of the students indicated that there was nearly an even distribution among the gender of students as thirty-one of them (48.44%) were female while thirty-three (51.56%) were male. However, when the within group characteristics were considered, it was found out that the opposite sex was absent at three focus groups (F4, F6 and F14) as these groups were totally composed of either male or female students.

The age range of the students were between 19 and 51, and the majority of students (53.12%) were the graduates of vocational high schools while 23.44% of them graduated from general high schools. Only six students out of seventy studied at the open high school.

Grand point average scores collected from the students through the demographic information sheet indicated that the scores ranged from lower to higher. However, besides GPA, while identifying the students, teachers noted that they also considered students' interest in the occupation, motivation, occupational skills and aptitude.

3.5 Data Collection Instruments

Individual and focus group interviews and non-participant observation were data collection methods utilized to collect data on the research questions of this study. Individual interviews administered with directors/assistant directors aimed at finding out information about the school context and to reach teachers via whom student groups and other teachers included in the study were accessed. As the main participants of this study were the teachers and students who experience effective teaching and learning at higher vocational schools in Nevşehir data were collected from them via semi-structured individual and focus group interviews and non-participant observation. Detailed information on these instruments are given in the following parts.

Table 3.6 *Background Information of the Students Selected for the Study*

ID	*Program*	*Female*	*Male*	*Age Range*	*High School Type*						*GPA Range*
F1	Architectural and Decorative Arts	5	0	19-22	Open	General	General	General	General	-	2.76-3.45
F2	Computer Programming	2	2	20-21	Vocational	Vocational	General	Vocational	-	-	2.30-2.48
F3	Horse Training	0	6	21-51	Anatolian	General	General	General	General	Open	2.15-3.10
F4	Cookery	2	2	19-23	Vocational	Anatolian	Anatolian	Anatolian	-	-	1.84-3.28
F5	Tourist Guidance	2	2	19-48	Open	Anatolian	Vocational	General	-	-	2.40-3.02
F6	Biomedical Device Technology	2	2	19-21	Vocational	Vocational	General	General	-	-	1.92-3.03
F7	Graphic Design	2	2	20-22	Vocational	Vocational	Vocational	Vocational	-	-	3.12-3.55
F8	Call Center Services	1	3	21-22	Vocational	Vocational	Anatolian	Anatolian	-	-	2.80-3.25
F9	Banking and Insurance	2	2	20-22	Vocational	Vocational	Vocational	Anatolian	-	-	3.07-3.47
F10	Accounting and Taxation	3	1	19-20	General	Vocational	Vocational	Vocational	-	-	2.36-3.50
F11	Tourism and Hotel Management	1	3	20-22	Vocational	Vocational	Vocational	Vocational	-	-	2.09-3.02
F12	Child Care	5	0	19-26	Vocational	Vocational	Open	General	Vocational	-	2.90-3.46
F13	Aged Care	3	2	19-24	Vocational	General	Vocational	General	General	-	2.35-3.67
F14	Tourist Guidance	1	4	30-40	Open	Open	Anatolian	Vocational	General	-	3.50-3.75
F15	Tourism and Travel Services	3	1	20-38	Vocational	Vocational	General	Vocational	-	-	3.12-3.34
F16	Occupational Therapy	1	3	19-25	Anatolian	Vocational	Vocational	Vocational	-	-	2.50-3.10

3.5.1 Observation Guide

Observation is a method used to achieve deeper understanding of the phenomena because it provides knowledge of the context in which events occur, and may enable reseacher to see things that participants themselves are not aware of, or that they are unwilling to discuss (Patton, 2002). Additionally, it helps the researcher explore complex relationships occurring in natural settings (Marshall & Rossman, 2011). Here in this study, I conducted non-participant observations before interviewing teachers and students to provide a basis for the interviews, i.e., to supplement and confirm the data collected through interviews (Bogdan & Biklen, 2007). I observed three to four-hour sessions of vocational courses of the participating teachers focusing on the dimensions of teaching and learning process in classroom.

I designed a semi-structured observation guide (Yıldırım & Şimşek, 2018) which consisted of the purpose of the study, research questions, information about data collection and dimensions to be focused on during observation. The dimensions included (a) physical environment, (b) characteristics of students and teachers, (c) interactions, (d) teachers, and (e) students (see Appendix A).

I observed a total of sixteen different vocational courses for six 3-hour sessions and ten 4-hour sessions between October, 2017 and April, 2018. Besides, before actual observations, I made visits to schools and observed one to two hours of courses beforehand to reduce the observer effect before the actual observations.

3.5.2 Semi-structured Individual Interview Guide

Interviews provide valuable information, which cannot be achieved through mere use of observation, about the participants' point of view by entering their perspective (Patton, 2002), Bogdan and Biklen (2007) stated that "the interview is used to gather descriptive data in the subjects' own words, so that the researcher can develop insights on how subjects interpret some piece of the world" (p.103). When interviewing is combined with observation (looking, hearing, seeing, smelling, touching etc.), as done in this study, it allows researchers to gain deeper understanding on the people's perspectives on everyday activities (Marshall & Rossman, 2011).

In this study, semi-structured interview approach was utilized to collect data from the administrators and teachers due to the fact that participants' answers to the questions may necessitate some additional questions which are different from the prepared questions at the structured interview protocols, and some additional questions may come to the interviewer's mind during the interview (Yıldırım & Şimsek, 2018).

For this purpose, semi-structured interview protocols were developed through an analysis of the relevant literature. The first drafts went through a cycle of revisions through expert review in the organization of questions by omitting, adding and reordering the questions. After each guide was finalized I conducted the pilot interviews in the spring term of the 2016-2017 academic year before applying to obtain approval and permission for the main study Human Subjects Ethical Committee (HSEC) at Middle East Technical University. The piloting process was presented in detail in the section 3.6, and final versions of interview protocols designed for administrators and teachers are presented in the appendices B and C.

The interview guide for administrators consisted of nine thematic questions on school context, factors that make teaching and learning effective, factors that make teaching and learning ineffective and challenging, actions and measures taken to eliminate those challenges, conceptions of effective vocational teaching and learning, description of an effective vocational teacher and student and recommendations for effective teaching and learning.

In parallel to administrator interview guide but with more details, the teacher interview guide consisted of nine thematic questions on factors that make vocational teaching and learning effective or ineffective/challenging, definitions of effective vocational teaching and learning, description of an effective vocational teacher and learner, and recommendations for more effective teaching and learning at higher vocational schools.

3.5.3 Focus Group Interview Guide

In order to find out students' perceptions regarding effective teaching and learning processes at higher vocational schools in Nevşehir, focus group interview was conducted with the students selected by the teachers who were interviewed.

Rather than interviewing students on individual basis group interview was more appropriate for this study as it is more likely at focus group interviewing to "generate a wider range of responses than in individual interviews" (Cohen, Manion, &Morrison, 2007, p.373). Additionally, group interviews can be useful to gain an insight into subsequent individual interviews that can be pursued in case of need (Bogdan & Biklen, 2007).

Similar to administrator and teacher interview protocols, I developed focus group interview questions through literature review and expert opinion and piloted. The questions in the final version of interview protocol designed for student focus groups are parallel with the questions in the teachers' to provide triangulation of data gathered (see Appendices D and E).

The interview protocol for student focus groups involved seven thematic questions on effective teaching, factors that make teaching and learning effective and ineffective/challenging, actions taken to eliminate those challenges, definition of effective vocational teaching and learning, description of an effective vocational learner and teacher, and recommendations for effective teaching and learning at higher vocational schools.

Totally sixteen focus groups, consisting of seventy students, participated in the study. All the students who were selected by the participant teachers volunteered for the interview and the number of students in focus groups ranged from four to six. Details regarding data collection process was provided in the section of data collection.

Having finalized the interview guides I applied to HSEC in April, 2017 and received approval for the main study. The due date of the permission was November, 2017. I reapplied in February, 2018 to extend the permission period as I was not able to complete data collection. The second period started in February, 2018 and ended in August, 2018.

3.6 Piloting Data Collection Instruments

Conducting the pilot study in qualitative research, as a smaller version of the main study, is useful and essential to inform the main study and try out strategies (Marshall & Rossman, 2011) as it helps the researcher: (1) reveal the issues and

barriers to be confronted while recruiting participants, (2) engage, test and understand oneself as a researcher (3) practice epoche to set aside prejudgments and biases, and (4) make modifications on the interview questions (Kim, 2010).

Considering all these advantages, I conducted the pilot study in two higher vocational schools, hereafter referred to as PS1 and PS2, with the participation of two administrators, three teachers and two student focus groups in total.

The draft interview protocol designed for administrators included ten questions seeking demographic information, information about the school context, the factors that make teaching and learning effective and ineffective at the programs offered at the school, the actions involved in to cope with challenges, description of effective vocational teacher and student, and finally their recommendations for effective teaching and learning at higher vocational education level.

Teachers' and students' draft interview protocols were parallel to each other for triangulation concerns and both protocols included questions on demographic and background information, perceptions about the effective teaching and learning practices, challenges that inhibit effective vocational teaching and learning and practices to cope with those problems, definition of effective vocational teaching and learning and characteristics of effective vocational teachers and learners, and finally their recommendations to improve the effectiveness of teaching and learning at higher vocational schools.

Using those draft interview protocols, I conducted the pilot interviews with the participants in three weeks' time in March 2017, corresponding to spring term in 2016-2017 academic year. The higher vocational schools where the pilot study was conducted varied in terms of student number and institution type. The first pilot school as a public institution offers vocational education and training for nearly 800 actively attending students while the second one provided training for 2860 students with the status of private institution (Higher Education Council Information Management System, 2016).

I visited PS1 four times while five visits were required to conduct the piloting of interview schedules at PS2. In order to contact the administrator at PS1, I made a call, made appointment and met the administrator in her office to give information about the study and set the date for interview. During the face-to-face

meeting with the administrator at PS1 I introduced myself to the school administrator and informed her of the study and its purpose. Since data gathered during the pilot study would not be used and published I did not need to receive official permission from the pilot schools, which was also indicated and approved by the administrators I contacted at each school. As for the PS2, since it was my former workplace and due to our mutual acquaintance, I sent an email to the school administrator in advance to inform him about the study and make an appointment.

I visited each administrator on the scheduled time, and at both PS1 and PS2, interviews with the administrators were held in their offices. Upon completing the interviews with two administrators lasting nearly one hour, I asked them to recruit a teacher I could interview. With their help and accompaniment, I met the teachers and introduced myself, the study, its purpose and significance. The teacher referred by the administrators accepted to participate in the pilot study and upon their approval we scheduled appointment for the interviews on their available time. The second teacher at PS2 was also accessed by the guidance of the preceding participant teacher. I left a copy of the interview protocol to allow all three teachers to have time to be familiar with the study and think about their teaching and learning practices.

At PS1, I interviewed one male teacher in the afternoon while two teachers, one male and one female, were interviewed at PS2, one in the afternoon and another in the afternoon on Saturday. Each interview was held in teachers' offices lasting nearly two hours, and one teacher from PS1 and the other from PS2 helped me contact their students. It was teachers who arranged the meeting for the interviews with the students; therefore, I met the students and conducted focus group interviews with them on the specified date and hour by the teacher. Since the second teacher at PS2 could not arrange a meeting with his students as students had a very busy schedule due to the applied courses in the spring term I completed pilot study with the participation of two focus groups of students. There were 5 students, all of whom were female, in focus group 1 while the second focus group was composed of 4 students as 2 male and 2 female, and students' performance level at both groups varied from high to low performing. Both focus group interviews were conducted in the meeting hall lasting nearly three hours.

Before conducting each interview, I introduced myself to the interviewees and I gave information about the study, its purpose and significance. Following that, considering ethical issues, I assured all interviewees of the anonymity of both participants and the interview data. After informing the interviewees about the approximate duration of the interview I asked them for their consent of the audiotape by telling them that the reason behind audiotaping was not to miss any points. All of the interviewees consented to be audiotaped, which gave me the chance to follow the interviewees in a more concentrated way.

When the interviews ended I asked each interviewee questions about the clarity, understandability, validity and focus of the questions. Specifically, they were asked if it was needed to modify or discard any questions to increase the adequacy of the questions to get the response they intend to. Although most of the interviewees marked that they liked the questions, grasped what they were asked about easily and did not have any difficulty in understanding, based on mostly my own impressions, experience as the researcher and recommendations of some interviewees to improve the questions I made changes in the question order, added, modified and discarded some probes, and changed the statements of some questions.

Starting with the administrators', I made the following changes in the interview protocol based on the recommendations made by the administrator at PS2 and my own impressions formed during the course of interview. First of all, as I had to clarify what was being asked when answers were sought for field of study and title within background questions I modified the term of "eğitim alanınız (field of study)" with "eğitim gördüğünüz alan (the field you studied)" and worded "job title" and "academic title" separately to eliminate confusion and ambiguities. Besides these, some minor changes were required in the way how questions were organized and addressed. Therefore, other changes in this protocol were made through adding prompts and probes to questions, modifying question statements, removing some prompts and probes, and reordering questions.

Subsequently, piloting the interview protocol for the teachers led me make some minor changes, as well, depending upon my impressions, reflection notes and interviewees' comments. Based on those and in parallel to the changes made in the

administrators' interview protocol I reordered questions, added, modified and discarded some probes, and changed the statements of some questions.

Likewise, parallel changes with the teachers' interview protocol were made in students' draft interview protocol despite the fact that students declared their satisfaction with most of the questions to keep the teachers' and students' protocols parallel, to make prompts more valid and coherent, and to increase the quality and utility of them for receiving adequate response. Since no recommendations were made by the focus groups I considered the changes I made on teachers' interview protocol and word-for-word changes with the prompts were made. Differing from the teachers', the only change was made in the first section, which focused on demographic information, and questions regarding the grade level and high school type were provided with alternatives and the question on the grade point average was modified as "current grade point average" as the students got confused and tended to write down the GPA they earned at high school.

Along with the abovementioned modifications, all of the draft interview protocols took their final forms. Though data collection started with these final forms I recognized the probability that it could be needed to develop new questions, especially sub-questions, during the data collection and analysis process as featured by qualitative research (Agee, 2009).

3.7 Data Collection Procedures

After receiving approval from HSEC on 9th of May, 2017, I started to contact administrators of each vocational school in Nevşehir by sending e-mails and making phone calls on the first place to arrange face-to-face meeting. Two administrators who were on leave then replied my email marking that I could contact assistant directors who were in line of duty at school. Upon that, I made phone calls and contacted those two assistant directors to make appointment. Furthermore, during face-to-face meetings, three administrators requested me to contact assistant directors for the interview as well because they were too busy to participate in the study.

On my first visit to schools I introduced myself to administrators, informed them about the study and the required data sources. Following that, I gave a copy

of the approval form I received from the HSEC at METU to each administrator and asked them about the procedures I should complete for the official permission to conduct the research at the school. I did not need to receive official permission from any of the schools, as indicated by the administrators I contacted for the reason that verbal approval of the administrators was deemed sufficient to authorize me to conduct my research.

Having set up appointment with the administrators on face-to-face meetings, I left a copy of the interview protocol to familiarize them with the interview questions. I visited each administrator on the scheduled time, and interviews were held in their offices. The interviews with administrators lasted from 60 to 90 minutes.

Between May and August 2017, I could reach five administrators for the fact that it was summer term and administrators were either on leave or busy with planning for the following academic year. Due to their busy schedules, I could contact and make appointments with other three administrators during fall and spring terms in 2017-2018 academic year. I, purposefully, conducted interviews with administrators simultaneously in the summer term to save time for the observations and interviews with teachers and students groups to be conducted during the academic year of 2017-2018, and reach the available participant administrators at the time when they were less busy.

Upon completing the interview with administrators, I asked them to refer a teacher I could interview. With their help and accompaniment, I met the teachers and introduced myself, the study, its purpose and significance. All of the teachers presented as candidates for interviews by the administrators accepted to participate in the study and upon their approval I asked them which vocational course I should observe. Determining the course to be observed I received the copy of the teachers' tutoring schedules, and the teacher specified the dates on which I could conduct observations. Keeping the teachers informed when I would observe, I made visits and observed one to two hours of courses beforehand to reduce the observer effect before the actual observations. It was also useful for me to get familiarized with the context and participants.

The observed courses differed in terms of the course type. While some hours of total course session were theoretical/academic and some were applied/practical. To make it clear, at the academic/theoretical courses, the focus is on fundamental concepts of the discipline and students' knowledge and skills are developed through theoretical and abstract thinking while, on the contrary, it is aimed to improve knowledge and skills of students by concrete application of the concepts at applied/practical courses. I did not restrict teachers about the course type and observed the vocational courses appointed by them. The details regarding the type of observed courses and course names were given in Table 3.7.

During the observation process, I entered the classroom earlier than the teacher, took a seat at the back row and got prepared by putting my materials, namely notebook, watch and pens on the desk. I spent the time before the teacher arrived taking notes on teaching-learning context like classroom size, seat arrangement, heating, and lighting, and equipment/tools. I also made drawings of the classroom facilities on my notebook which would help me visualize the context later on as I did not use video recorder or camera.

After the teacher entered the classroom, I introduced myself to all observees and informed them of the purpose and significance of the study. Then, I obtained informed consent from all observees, including both teachers and students.

Considering the ethical and procedural issues, observees were assured of the anonymity of the observee and the observational data. Following that, I took my seat and I started taking extensive notes by writing minute-by-minute record of happenings. I was as unobtrusive as possible and did not interact with the observees not to disrupt the natural occurrence of events and setting. I took field notes while observing all happenings in relation to the observation questions and recorded anything related to the activities and behaviours, human and social environment and non-verbal language from beginning to the end of each lesson as required by stream of behaviour records approach. Mainly descriptive notes were taken along with behaviours of participants, together with my own reflections and thoughts. However, I wrote down my reflections separately from the descriptive notes.

During the breaks, I stayed in the classroom to organize my notes and correct the illegible parts as I wrote very fast not to miss any occurrence.

Table 3.7 *Types and Hours of the Observed Courses*

Teacher Code	*Course Name*	*Applied Course Hour*	*Theoretical Course Hour*
T1	Glazing Technology I	2	2
T2	Computer Programming III	4	-
T3	Horsemanship II	4	-
T4	Turkish Cuisine	4	-
T5	Art History	-	3
T6	Microcontrollers I	2	2
T7	Graphic Patterns	4	-
T8	Call Center Management I	-	3
T9	Banking and Insurance Law	-	3
T10	Financial Statement Analysis	3	-
T11	Customer Relationship Management	-	3
T12	Material Development in Education	4	-
T13	Physiology	-	4
T14	Travel Agency and Tour Operations	-	3
T15	Tourism Geography	-	4
T16	Anatomy	-	4
Total		27	31

After I observed intended number of hours I thanked both the teacher and students for their contribution and participation in the study. Totally, 16 different courses were observed for six 3-hour sessions and ten 4-hour sessions from October, 2017 to March, 2018.

To report challenges I encountered, I mostly had difficulty at applied courses as it was very challenging to follow each student / group during application. Therefore, I mainly followed the teacher and his/her interaction with the student/group and periodically focused on other working students/groups. Besides, one teacher wanted me to assess the course I observed and learn if the course was effective or not. I showed the notes to the teacher and reminded the objective of the study, which is to explore the factors that makes teaching and learning effective, and assured the teacher that I would share the findings for member checking.

Immediately after each observation, I went on collecting data through interviews sequentially, firstly teachers and then his/her students from October, 2017 to March, 2018. First of all, I scheduled appointment with the teacher of the

observed course for the interviews on their available time. I left a copy of the interview protocol to allow teacher to have time to be familiar with the study and think about their teaching and learning practices. On the scheduled date, I visited the teachers again and the interviews were held at their offices within the working hours. Only one teacher was interviewed before the evening classes after 5 pm. The duration of interviews ranged from 70 to 150 minutes. The reason why some interviews lasted longer than expected was that some teachers digressed from the topic or I could not receive the answer to some questions in a clear way. In the first situation, I patiently waited and asked the question again using different words to have the participant return to the topic while I asked additional questions to obtain more detailed and to-the-point answers at the second condition.

As soon as I completed the interview with each teacher I asked him/her to select four to six students who take the course I observed and nominate the second teacher I could interview. When I asked the teachers why they nominated those teachers, all of them explained their criteria marking that the candidate teachers were experienced, effective and information-rich, and would possibly volunteer to participate in the study.

Focus groups were selected by the teachers themselves and variation was provided through selecting male and female students from high to low performing. Having identified the participating students, I met them in the office of the interviewed teacher, introduced myself and gave information about the study and its purpose. All of the students selected by the teachers approved to participate in the study.

After giving a copy of the interview protocol to each student we set the date for the interview. On the dates set for focus group interviews, I met the students and conducted the interviews either at empty classrooms or meeting rooms within the working hours. Focus group interviews were conducted between October, 2017 and March, 2018 and the duration of focus group interviews ranged from 150 to 180 minutes. What I noticed was all of the students were very eager to participate in the interview and they were very interested in the study. After I thanked students for their contribution and participation they noted that they were very glad for their opinions to be cared about.

Considering procedural and ethical issues before and during the interviews, both individual or focus group, I informed participants of the study, its purpose and significance. Besides that, I assured participants of that interviewees and interview data would be kept anonymous. Additionally, I asked for interviewee's consent of audiotaping. Except three teachers and two administrators, all of the participants let me audiotape the interviews.

During the interviews, both individual and focus group, I listened to the interviewees carefully, took brief notes besides audiotaping to tell the participant the summary at the end of the interview and receive confirmation. Total number of participants were given below:

Table 3.8 *Total Number of Participants*

School	*Administrator*	*Teacher*	*Student Focus Groups*
S1	1	2	2
S2	1	2	2
S3	1	2	2
S4	1	2	2
S5	1	2	2
S6	1	2	2
S7	1	1	1
S8	1	3	3
Total	8	16	16

Data were mostly collected sequentially within these schools by visiting one school at a time. However, when teachers or students were not available for longer than expected, I moved on to the next schools due to limited time, and collected data concurrently between two or three schools.

3.8 Data Analysis Procedures

Qualitative data analysis is defined by Bogdan and Biklen (2007) as "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (p. 157). While analyzing qualitative data

there are two approaches that can be adopted: descriptive analysis and content analysis (Strauss & Gorbin, 1990; cited in Yıldırım & Şimşek, 2018). In this study, the data collected through individual and focus group interviews and observation were analysed through inductive content analysis in which the patterns, themes and categories emerged out of data without the use of an existing framework (Patton, 2002; Yıldırım & Şimşek, 2018). Patton (2002) describes content analysis as "any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (p. 453). While employing content analysis, the objective is to figure out the concepts and relationships that would provide explanation for the collected data (Yıldırım & Şimşek, 2018), and the concepts emerging from the data are organized "under a higher order, more abstract concept called a category" (Strauss & Corbin, 1990, p.61, cited in Yıldırım & Şimşek, 2018).

The process of analyzing interview data gathered in this study started with the transcription of the interviews word-by-word through a word processing program in May, 2018. Transcription of interviews lasted nearly four months from May to August, 2018 due to the processes of organizing and simplifying the data along with transcription. I transcribed interview data (8 interviews with administrators, 16 interviews with teachers, 16 focus group interviews) and this process ended with 762-page raw interview data. I formatted that initial transcripts by aligning the body to the left of the page to create margin for coding and note-taking, making the raw data 1024 pages long.

Before I started coding I read the raw data for a few times to make myself familiarize with the content and to see the big picture. Then, in Stake's (2010) words, "taking things apart" process began by breaking the data down into codes inductively.

The coding process lasted from October, 2018 to January, 2019 because it was highly compelling and demanding due to inductive coding approach through which I figured out the codes without using a pre-existing code list. Furthermore, the nature of the phenomenon which was under study was characterized with complexity, versatility and intertwinement, which urged me to be mentally concentrated all the time during the coding process. In order not to lose focus, I

considered research questions and the objective of the study during coding process as suggested by Yıldırım and Şimşek (2018).

As soon as I finished coding of 40 interview transcripts, I listed all of them and classified them according to research questions. There were also additional codes pertaining to recommendations to improve learning and teaching at higher vocational schools that emerged out of data but which were not aimed to be answered through research questions. However, they were also significant codes providing insight to explore the phenomenon of effective vocational teaching and learning at tertiary level. Following coding, categories that would cover the codes in a meaningful way were formed based the two criteria proposed by Patton (2002): internal homogeneity and external heterogeneity. Internal homogeneity "concerns the extent to which the data that belong in a certain category hold together or "dovetail" in a meaningful way" while external heterogeneity is concerned with "the extent to which differences among categories are bold and clear" (Patton, 2002, p. 465). Considering these two criteria, the meaningful patterns and relationships were discovered that came up with codes as homogeneous as possible, and I assigned main themes and themes to these codes, which are heterogeneous among each other. I had to modify and refine the main themes, themes and subthemes for a few times in case of the presence of unassignable codes by forming more comprehensive and inclusive themes. Besides, I broke some main themes into new themes and some themes into new subthemes in addition to existing ones because of the need to be more specific within main themes/themes and to show new relations and dimensions. Finally, to put data back together which were taken apart (Stake, 2010), the whole coded and thematized data were compiled into a codebook by inserting each main theme, its themes and subthemes and codes to be used during write-up stage.

For final overview, I sent the codebook to my supervisor for review and verification and he checked the codes and themes, and their consistency, accuracy and meaningfulness. Additionally, two colleagues of mine reviewed the codebook and gave feedback. Based on the review, I made some minor changes concerning the themes' names and formed new subthemes to improve homogeneity among codes. I presented an excerpt from the finalized codebook which consist of main

themes, themes and subthemes and codes revealed by interview data analysis along with the codes assigned to participants on Table 3.10.

As soon as I finished analysis of interview data I proceeded to analysis of observational data. I had already organized and transcribed raw observational data through a word processing program in September, 2018 after I finished transcription of interview data. Upon completion of transcribing, I had 268 pages long raw data, and to prepare the transcriptions for the analysis I left a right margin to code making the observational data transcriptions 492 pages long. Before the start of coding, like I did with interview transcripts, I read the raw data twice to gain the overall understanding of the data, and adopting the inductive coding approach, I started coding in February, 2019 by zooming in data and identifying dimensions in the classrooms. I moved inductively despite the predefined list of codes included on the observation guide because they were solely used to provide focus while observing the classrooms.

The coding of observational data lasted six days. Similar to analysis of interview data, I formed codes, put those codes under broader level themes and created a codebook by picking themes and placing the related codes under them. I provided an excerpt from the codebook including themes and subthemes and codes formulated after the analysis of observational data on Table 3.11 and Table 3.12. The complete codebook was used for reference while writing up the results. The findings obtained from observational data were utilized to supplement the findings of interview data and while reporting they were intertwined and reported together.

I presented all the steps that I took in the data analysis process in Figure 3.2 and the timeline for the whole process I involved in on Table 3.9.

3.9 Trustworthiness

The constructs of reliability and validity in qualitative research are different from those in quantitative research (Yıldırım & Şimşek, 2018), and are replaced by the idea of trustworthiness (Lincoln & Guba, 1985); therefore, in this study, I used the terms of credibility, transferability, dependability, and confirmability that are the suggested terms in place of internal validity, external validity, reliability and objectivity by Lincoln and Guba (1985, p.300).

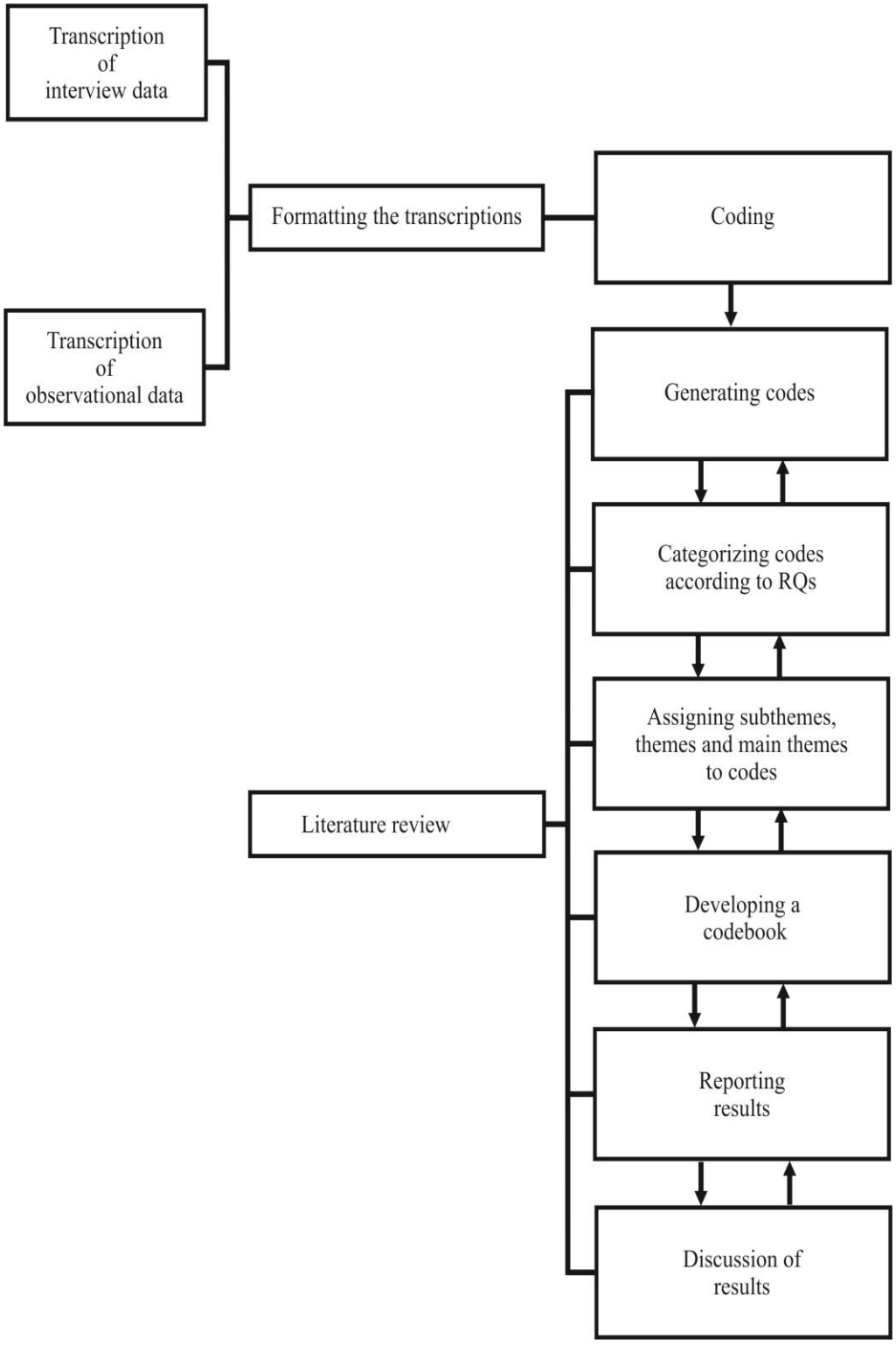

Figure 3.2 *Data Analysis Process*

Table 3.9. *Timeline for the Study*

Actions	April-September 15	October 16	November 16	December 16	January 17	February 17	March-May 17	May.17	August 17-March 18	May-September 18	October 18-February 19	February -May 19
Deciding on research questions and research plan												
Literature Review												
Development of the Interview Protocol												
Development of the Observation Guide												
Piloting												
HSEC Review and Approval												
Data Collection												
Transcription of Interview and Observational Data												
Data Analysis												
Write-up												

3.9.1 Credibility

Credibility in qualitative research, which corresponds to internal validity, is concerned if the research findings reflect reality, and it addresses the questions of: "How congruent are the findings with reality?, Do the findings capture what is really there?, and Are investigators observing or measuring what they think are measuring?" (Merriam, 2009, p. 213). In order to establish and increase the credibility of the study there are some strategies and/or techniques that can be used: triangulation (Creswell, 2007; Lincoln & Guba, 1985; Merriam, 2009; Patton, 2002; Yıldırım & Şimşek, 2018), member checks (Creswell, 2007; Lincoln & Guba, 1985; Merriam, 2009; Patton, 2002), peer-examination or peer debriefing (Creswell, 2007; Lincoln & Guba, 1985; Merriam, 2009; Patton, 2002), prolonged engagement (Creswell, 2007; Lincoln & Guba, 1985; Merriam, 2009), persistent observation (Lincoln & Guba, 1985), negative case analysis (Creswell, 2007;

Table 3.10 *An Excerpt from the Codebook Featuring Interview Data Analysis*

Main Theme	Theme	Subtheme	Subsubtheme	Code	Interviewee
Teacher-related challenges	Teacher Knowledge	(Lack of) Content Knowledge	Vocational Knowledge	be unaware of developments regarding job	F6, F14
				lack of job knowledge	A1, F3, F4, F12
				have outdated knowledge of job	F10
				lack of job practice/experience	T1, T4, T5, T9, T10, T11, T12, T13, T14, T15
			Subject Knowledge	lack of interdisciplinary approach	T13
				lack of knowledge of content required for job	F3, F4
				teach courses out-of-field/expertise	T8, T10, T15, F3, F5
		(Lack of) Pedagogical Knowledge	Knowledge of Learner	indifference to students' learning needs	F2, F7, F11, F12, F13
				lack of knowledge about students' socio-economic status	F1, F7
				neglect group characteristics (level differences)	F1, F2, F6, F12, F13, F15, F16
				ignorance of students' prior knowledge	F12, F13
				disregard individual differences among vocational learners	F1, F3, F5, F7, F10
			Content Delivery	deliver course content more complicated than needed	F1, F2, F6, F7, F10, F13, F14
				have academic focus rather than vocational one	T3, T4, T5, T8, T9, T11
				focus on memorization rather than meaning-making	F2, F5, F10, F12, F13, F16
				lack variety in instructional methods	T8, T10
				lack of contextualized teaching approach	A4, T9, T11, T14, F3
				lack of engaging all students	F5, F13, F14
				focus on theory rather than practice	F5, F13, F14
				lack of teaching experience	A1, A4, A7, A8

Table 3.11 *An Excerpt from the Codebook Featuring Observational Data Analysis (Teacher)*

Teacher		
Main Theme	Codes	Observees
Getting prepared	greet students	A,B,C,D, E, F,G,H,I,K,P
	inquire about missing students	E,J,N
	check notes	M
	ask students to turn on overhead projector	A,M
	ask warm-up questions	F,H,L,O
	check the technological tools for troubleshooting	B,J
Informing of the objectives/content	inform about the content to be covered during the session	A,E, I,J,K,L,M,O
	inform about the outcomes of the session	M
	inform about the order to be followed at the course	G,I,L
	remind the importance of the topic for job	H, J,P
	remind the importance of the topic	A, E,F,I,M,N,O
	remind the content to be covered in the next session	F,J,L,M,P
	explain how the content would be used at workplace	B,F,M,O,P
	inform about the content previously covered	A,B, E,F, H, I,O
	informing about the topics to be covered in the prospective exams	E,F,G,J,M
Stimulating recall of prior learning	check prior knowledge through display questions	I, F
	remind the content covered at another course	F,H
	remind the topics covered in the previous exams	E,H,I
	remind previously covered content	E, F,J,L,O
	remind the content covered at the end of lesson	H,I, L
	remind the connection with the present, previous and prospective topics	F,I,M,N,O,P
	review the content of student presentation	E,H,J,N

Table 3.12 *An Excerpt from the Codebook Featuring Observational Data Analysis (Student)*

Student			
Main Theme	Theme	Codes	Observees
On-task behaviour	Active engagement	answer teacher questions	A,B, C,D,F,H, I, J, M,O,P
		ask questions to improve understanding	A,B,C,D, E, F, G,M,N,O,P
		correct the mistakes after teacher's feedback	C, F, G
		make powerpoint presentation	E, H,J, K,N
		present the projects	L
		demonstration	L
		work in groups	F,K,L,N
		work on assigned project	A,B,C,D,F,G
		ask clarifying questions about the assignment	L
		carry out the directions of the teacher	A,B,C, D,J
		ask for feedback on the project	A,B,D,G
		give choral responses	P
	Passive engagement	take notes	F,M,O,P
		follow the content on the book	F
		write down dictated knowledge	E, H, I
		record the student presentation	L
		follow the course attentively	H, I, F,M,N,O,P
		take photo of teacher powerpoint slides	J,N
		view videos	F,H
		read the slides on teacher powerpoint presentation	H,J,K,N
		watch the teacher during demonstration	A, C, D

Lincoln & Guba, 1985; Patton, 2002), and referential adequacy (Lincoln & Guba, 1985). In this study, triangulation, member checks, prolonged engagement and peer debriefing were utilized to establish the credibility of findings.

Yıldırım and Şimşek (2018) described triangulation as using different data sources of information by examining evidence from the sources and using it to build a coherent justification of themes. From a different perspective, Patton (2002) examined triangulation under four categories which are data triangulation, investigator triangulation, theory triangulation and methodological triangulation.

Within this study, data triangulation was achieved by using multiple data collection instruments including individual and focus group interviews and non-participant observation of classrooms. Besides, data was gathered from different sources, namely teachers, students and administrators from different programs and higher vocational schools in various districts to allow me to find out the commonalities among different perspectives regarding effective teaching and learning practices and verify the findings.

In addition to data triangulation, investigator triangulation, which is also called peer debriefing (Lincoln & Guba, 1985; Patton, 2002), contributed to the credibility of the study, which was provided by including one colleague of mine to code, form themes and comment on results. Firstly, I randomly picked one interview transcript which was one of the most information-rich interviews and sent it to my colleague who had carried out qualitative research before. She and I analyzed the same transcript separately and compared the notes and codes together. There were a few codes we formed differently but we came to agreement by rewording those codes. Besides, after I finished coding I developed the codebook including codes and themes with brief descriptions and examples, and I sent it to her and my supervisor. I requested them to review and assess the codes and themes in terms of the accuracy, coherence and meaningfulness.

As for another strategy to increase the credibility of this study, member checking was utilized. Member check refers to making the participants of the study check the data, themes and interpretations (Yıldırım & Şimşek, 2018). As called by Lincoln and Guba (1985) it is the heart of credibility for it is a critical process to eliminate researcher bias. After I finalized the codebook upon the review of my

supervisor and colleague I translated it from English to Turkish and wrote a brief summary of the results. Then, I sent it to all participants including teachers, students and administrators via e-mail to get approval from the interviewees regarding the accuracy and validity of the results. I had collected e-mail addresses and cell phone numbers of participants while collecting data. The teachers except T3, T8, T9, T10, T11 and T14, and only A1 and A7 replied the email. The participants who replied my e-mail offered no changes and corrections on the findings. Upon the low number of replying participants, I visited the schools to have the participants check the results at face-to-face meetings toward the end of February, 2018. During my visits, I learned that the administrators at S1 and S8 working as assistant directors had position change; however, they were still teaching and working at a different position at the included school in the study. I contacted all the participant administrators (including two participants previously working as administrators) and teachers and had them review the summary of findings. I also accompanied them during the checking process in case of any questions they may ask. The review ended without any demands of changes and additions by administrators and teachers.

The challenging part of member checking was receiving reply from students. The only way of having students check the results was sending e-mails as all of them were second-grade students at the time of data collection and they graduated at the end of 2017-2018 academic year. Besides emailing, I sent text messages to students to make them check their emails. However, I could not get feedback from all students. None, one or two students from focus groups replied my email. I decided to make phone calls to the students I could not receive reply but they neither replied my call nor called back. The number of students from each focus group who were involved in member checking was on Table 3.13. The students I could reach, seventeen in total, reviewed the findings and confirmed that they would not make any additions and changes. Therefore, based on the validation and agreement of the informants, I proceeded to reporting phase without any modification on the findings.

Table 3.13 *Number of Students Involved/Not Involved in Member Checking*

Focus Group Code	*Number of Students Reached*	*Number of Students Unreached*
F1	1	3
F2	1	3
F3	2	2
F4	1	5
F5	0	5
F6	2	3
F7	1	3
F8	1	3
F9	1	3
F10	1	3
F11	2	2
F12	2	2
F13	0	4
F14	1	4
F15	0	5
F16	1	3
Total	17	53

In respect to prolonged engagement, this activity was defined by Lincoln and Guba (1985) as “the investment of sufficient time to achieve certain purposes: learning the "culture," testing for misinformation introduced by distortions either of the self or of the respondents, and building trust.” (p. 301). To this end, I spent quite long spans of time in each higher vocational school before and during data collection to build trust and rapport with the observees and interviewees, and to understand the language, views and culture at each school. Along with the periods I spent with informants to gather data, I went around the school buildings, facilities like library, conference hall, computer lab, etc. and school yard where students and teachers spend time, had drink and food at the student cafeteria and canteen, and chatted with the students, teachers other than the participants and administrative and support staff, which helped me obtain in-depth understanding of the context and reduce the prospective misinformation. Additionally, to strengthen the

credibility of data by reducing the observer effect I made visits to classrooms for a few times before I conducted the actual observations.

3.9.2 Transferability

Transferability, corresponding to external validity, is related to what extent the results can be generalized to different situations (Merriam, 2009). Although making generalizations is not the main purpose of the qualitative research, there are some strategies used to increase the transferability of a qualitative study, which are thick description and collecting data from many cases (Lincoln & Guba, 1985). In this study, transferability was ensured through rich and detailed descriptions of participants, context and data collection process and findings. The findings were also supplemented with authentic quotes of participants. Besides that, transferability was strengthened by using multiple data sources, herein teachers, students and administrators from distinct schools and departments who represent a variation of the phenomenon, thus allowing the application of results to similar situations (Merriam, 2009).

3.9.3 Dependability and Confirmability

Beside credibility and transferability, dependability and confirmability of the current study were established through several strategies. Dependability refers that the extent to which the results would be the same if repeated with a similar sample in a similar context while confirmability is the degree to which the findings come from the data rather than researcher bias (Creswell, 2007).

Dependability was ensured through detailed account of research context and changes that occur in the setting, and triangulation of data. In addition to that, auditing conducted by an external audit, namely my supervisor, ensured dependability and confirmability of the study (Creswell, 2007; Lincoln & Guba, 1985; Patton, 2002). My supervisor who is an expert in qualitative research provided guidance while designing the research and research questions, reviewed draft interview schedules and observation guide and made suggestions, was informed of the account of research process, data, findings, and he evaluated the accuracy and whether the findings and interpretations were supported by the data.

This auditing helped me ensure confirmability and dependability of the study and eliminate researcher bias (Creswell, 2007).

3.10 My Role as a Researcher

Conducting a qualitative research requires the researcher to acknowledge his/her biases, assumptions, expectations and experiences (Creswell, 2007) and undertake the process of bracketing by suspending the preconceptions (Moustakas, 1994) to have the full understanding of the phenomenon through the eyes of the participants.

My own experiences as an English teacher and as a department coordinator at a higher vocational school for the duration of 9 years and having been a lover of learning throughout my life led me to study effective teaching and learning. Till I started to work as a teacher in 2007, being on the other side of the stage as a student, I met exemplary teachers who I still remember with respect and gratitude who made me decide to become a teacher like them. Though I do not recall what they exactly did what I know is that they made a lasting impression on me.

When I consider all those years at primary, secondary and high school the idea I and my peers were imposed on was that learning was our own responsibility. Whether we were transmitted knowledge or not did not matter; we must have achieved what we needed to succeed. This idea of learning as a lonely process, dominated my opinions about learning till I started to study for earning master's and doctoral degree. I, then, realized learning could be collaborative and how my peers could contribute to and improve my learning. Learning collaboratively, we worked on the projects, conducted research, wrote academic papers and continuously provided feedback to each other, which made my learning process much more effective and enjoyable.

As for my experience as an English teacher at a higher vocational college, I had the advantage of my background since I completed my undergraduate education in English Language and Literature Department in addition to which I attended pedagogical formation courses. Owing to that, I enriched my teaching by including reading extracts from literature, and having conversations with my students on various topics. After a year, I started to study at Social Policy program because I

was interested in the skills needed for the employment of higher vocational education students as that was one of the most prominent concerns of the students, teachers and parents and administrators at the school I worked for. Focusing on this research problem, the results of the study I conducted proved that there was a gap between the skills needed and achieved at higher vocational education level according to the perceptions of students, graduates, teachers and employers. These results implied the need for me to further my research by focusing the in-classroom processes. In addition to that, due to the coordinator position I was assigned to, I listened to the complaints, demands and needs of both students and teachers to improve the education offered at the school and make teaching and learning more effective. However, the information given was superficial for I did not have in-depth knowledge to eliminate the root causes, therefore; I could only provide temporary solutions due to time constraints. The students, for example, demanded a teacher change for the reason of teacher ineffectiveness or improvement of learning materials or environment; however, I could not conduct an in-depth and comprehensive analysis to understand the underlying needs and reasons.

In summary, having this perspective on teaching and learning I am writing a dissertation to make my unknown known with the help of teachers and students to answer the critical question that occupies my mind: “What makes teaching and learning effective at higher vocational education level?”.

3.11 Ethical Issues

Deception of participants, protection of them from harm and confidentiality of data are three important points related to ethics in research (Frankel & Wallen, 2006). To consider ethical issues, firstly, official permission from HSEC at Middle East Technical University which provides approval on the use of human subjects for research purposes was taken after pilot testing in May, 2017. The interview schedules and observation guide, along with informed consent form and debriefing form were reviewed by the Ethics Committee and I received approval without any need for modification.

For confidentiality, the participants were ensured that no other person except the researcher would have access to the identity information about the participants,

and information about their identity would not be shared in the report, either. While reporting the results, anonymity of the participants was ensured by using pseudonyms and abbreviations, which concealed identities of the schools, herein called as S1, S2, S3, etc., teachers abbreviated as T1, T2, T3, etc., and focus groups abbreviated as F1, F2, F3, etc.

In addition to this, at the outset of both interviews and observation, permission from participants was taken and informed consent form was signed by each participant after informing them about the purpose of research and research questions in order to prevent deception. Besides, interviews were audiotaped upon the consent of the interviewees. At the situations when the participants did not want to be audiotaped I took extensive notes. Lastly, the interviewees and observees were also informed of their right to withdraw at any time in case they did not want to continue or felt irritated.

3.12 Limitations of the Study

In this study, it is aimed to contribute to the large body of research on effective teaching and learning and to gain a deeper understanding about effective higher vocational education; however, while evaluating the findings of the study there are some limitations to consider.

First and most important, the interviewees were limited to the present and former administrators and teachers at the higher vocational schools in Nevşehir and second-grade students who studied at those schools at the 2017-2018 academic year. Therefore, the findings revealed by this study are limited to the experiences and perceptions of sampled teachers, students and administrators who were interviewed and observed at the 2017-2018 academic year. So, the results cannot transferred to the other higher vocational school settings. Though generalization was not purposed in this qualitative research it was strengthened through thick description of data collection and analysis process, and including cases from different departments and schools. Therefore, rather than generalizing the results to the population the suggestions can be considered for similar contexts by being cautious about differing teacher and student profiles across settings, conditions and cultures at other higher vocational schools.

Additionally, lack of time served as another limitation to this study. Because of the insufficient time I could not apply for the approval of the draft interview schedules and observation guide by HSEC before the pilot study. Indeed, I was planning to begin data collection in the spring term of 2016-2017 academic year. Because of this fact, I directly proceeded to pilot testing of the instruments. Again, due to limited time, I did not pilot the draft observation guide. After completing pilot study, I applied to HSEC for the review of the instruments in April, 2017 and received permission for the study in May, 2017. However, the spring term was about to end, so I had to wait for the fall term of 2017-2018 academic year to interview teachers and students and observe classroom. I spent the summer term by contacting administrators and interviewing them.

Furthermore, snowball sampling strategy I utilized to reach teachers could be evaluated as a limitation. Teachers were selected through the recruitment of the preceding participant and the referral may be the result of favouritism.

Concerning the limitation regarding the process of establishing trustworthiness of the study, I could not have all students review the findings of the study. Only seventeen students out of seventy could be reached for member checking.

In addition to limitations**,** as a delimitation of this study, only vocational courses and teachers teaching those vocational courses were involved in this study. Courses of English Language, Turkish Language, Physical Education, Fine Arts, Atatürk's Principles and History of Revolution which are made compulsory by HEC in Turkey for higher education institutions were excluded due to the fact that it was aimed to explore effective vocational teaching and learning at tertiary level. Besides, I only included second-grade students rather than first year students as the first group spent more time at school, took more vocational courses and were more likely to have completed traineeship in the previous summer term, thus they would provide more information for the study.

Despite the abovementioned limitations and delimitations, this study with its qualitative nature would shed light on the factors and dimensions that make learning and teaching at higher vocational schools effective and the challenges hindering the effectiveness of these practices, hence would expectedly help

development of new perspectives on the planning, implementation and evaluation of instructional and learning processes by the teachers and how it is evaluated by their students, which would in turn inform practitioners, decision makers, researchers and relevant stakeholders.

CHAPTER 4

RESULTS

This chapter presents the results of interview and observation data analysis in an integrated way and in parallel with research questions under the following headings: conceptions of effective vocational teaching and learning, the challenges hindering effectiveness of vocational teaching and learning, teachers', students' and administrators' practices to cope with those challenges and recommendations made to ensure effectiveness of teaching and learning at higher vocational schools. At the end of each part, summary of the results is provided.

4.1 Conceptions of Effective Vocational Teaching and Learning

The first research question in this study sought to explore perceptions of teachers, students and administrators with regard to effective vocational teaching and learning.

Analysis of interview data revealed that teachers, students and administrators viewed effective vocational teaching and learning from two perspectives: product-oriented teaching versus process-oriented teaching, and product-oriented learning versus process-oriented learning. Beside, the perceptions of teachers, students and administrators with regard to the characteristics of effective vocational teachers and effective vocational learners, aim of higher vocational education and characteristics of an effective vocational program emerged from the analysis of interview data collected from administrators, students and teachers.

4.1.1 Conceptions of Effective Vocational Teaching

The definitions of effective teaching at higher vocational schools made by teachers, administrators and students featured two perspectives which were effective vocational teaching as a process and effective vocational teaching as a product.

Participants' definitions concerning effective vocational teaching were quite variable. Each participant, deriving from his/her own experience, proposed distinct conceptions by highlighting different dimensions of teaching. While most teachers and students defined effective vocational teaching as a process of students' gaining job skills and knowledge with the focus on *teacher role* in teaching-learning process, *teacher knowledge, curriculum design, content delivery* and arrangement of *learning environment* there were a few teachers and students defining effective vocational teaching as an output by relating it to *acquisition of job competences*. Figure 4.1 summarizes the interviewees' conceptions of effective vocational teaching revealed through data analysis:

Regarding the subtheme of *teacher role* within the process-oriented perspective, it was mostly the teachers who emphasized the roles they should take to lead to effective teaching at vocational classrooms. The definitions regarding the roles proposed by two teachers were correspondingly confirmed by their students. For these participants, effective vocational teaching had the same meaning with acting like a master (T1, T5, F5), acting like an employer (T4, F4) and to be a role-model (T7) for the students. Along with these roles, one teacher highlighted the importance of *teacher knowledge*, namely technological pedagogical content knowledge, for the effectiveness of teaching practices by marking effective teaching at higher vocational schools requires teachers "to be aware of what, how and with what to teach (T8)".

From a different angle, two administrators (A1, A7) associated effective vocational teaching with *curriculum design*. In other words, they equated effective vocational teaching with designing and following a sound curriculum step-by-step, and one of them explained his perspective as it follows: "Effective teaching depends on the curriculum quality, actually I mean, how robust it is. It does not matter how qualified the teacher is. If he/she does not implement a quality curriculum, the

product will not be the thing we desire (A1)". In addition to that, arranging the *learning environment* through equipping it with workplace materials and tools (T3, T11, T13, F3, F6, F14), creating conditions for students to experience and apply vocational knowledge (T5, F12) and teaching the job in the real-life context (T13) were considered by teachers and students critical for the effectiveness of vocational teaching.

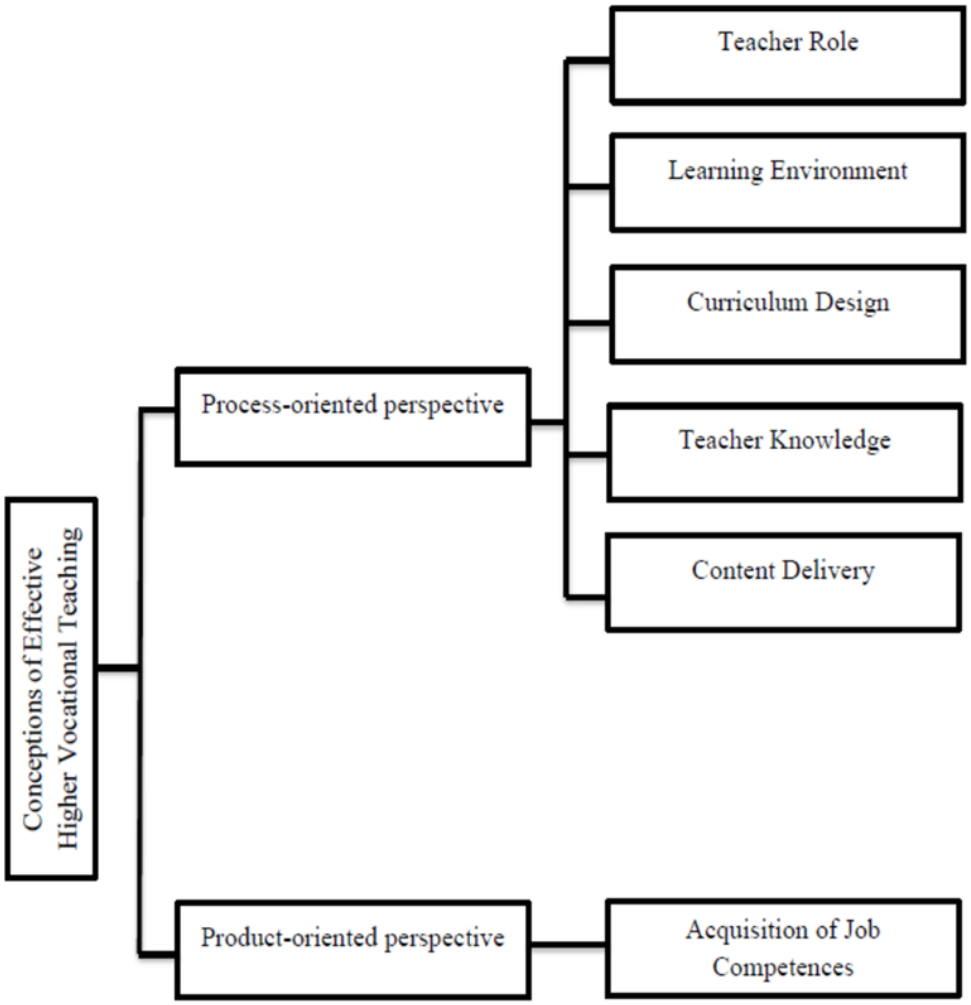

Figure 4.1 *Conceptions of Effective Higher Vocational Teaching*

The data also revealed that effective vocational teaching was perceived equal to effective *content delivery*. Once again, putting job knowledge into practice was emphasized by most teachers and students and administrators (T4, T5, T10, T11, T12, T14, T15, F1, F4, F5, F11, F12, F13, F15, A2, A3, A4, A5). They also

elaborated on how and when the practice should be accompanied with theoretical/conceptual knowledge. While two teachers (T3, T16) noted the need for simultaneous combination of theory, practice and field study, the other two (T2, T9) indicated that vocational teachers should teach the job knowledge and skills through practice after having delivered a basic level of theoretical knowledge. Moreover, it was proposed by some participants to teach theory through practice (F6, F14, A8, T6, T14). To them, this would help students concretize abstract knowledge underpinning job practices, and thus increase the effectiveness of teaching. On the other hand, two focus groups (F2, F10), by reminding the requirements of their jobs, marked that teachers should teach job procedures step-by-step because mastering the job knowledge and skills involves carrying out tasks by using the tools and technologies and following certain steps.

Unlike that perspective, one teacher (T4) used the metaphor of "fishing" to define effective vocational teaching. He resembled effective vocational teaching to "teaching to fish rather than to give fish". He asserted that teachers need to guide students to help them grasp the logic behind job practice and explained his view as: "I teach how to fish. I assign them research but prohibit memorization. What I do is teaching how to achieve knowledge and apply that knowledge (T4)".

Opposing the process-oriented views, few students and teachers defined effective vocational teaching as *acquisition of job competences*, that is, as an end for workplace preparation with emphasis on the requisites of employment. In other words, vocational teaching would not be considered effective if the students did not acquire job knowledge and skills. Among the teachers and students having this perspective, most of them and one administrator defined effective teaching as transmission of knowledge, skills, code of conduct, job ethics and attitude required at workplace (T8, T13, T14, F7, F8, F10, F13, F15, A6); hence, students would be ready to perform the job just after graduation. Another teacher opposed this perspective marking that teaching knowledge and skills at the entrance level to workplace (T3) could be considered for vocational teaching to be effective. He provided explanation to his definition: "Workplaces (employers) do not demand fully-equipped graduates, I assure you. They want staff who have the basic

knowledge and skills but that can be improved, is open to learning and motivated (T3)".

Finally, a student group (F7) asserted that effective vocational teaching led students to develop vision in relation to job. In this way, these students believed that they would be able to develop a deep understanding related to job and plan their future career accordingly.

4.1.2 Conceptions of Effective Vocational Learning

Similar to the conceptions of effective vocational teaching at tertiary level, the teachers, students and administrators provided definitions of effective vocational learning as well converging on two perspectives, which were found to be process-oriented effective vocational learning versus product-oriented effective vocational learning.

As presented in Figure 4.2, the views of learning as a process revealed the themes of *student traits* required to learn the job effectively and *learning strategies* students should adopt during the process. On the other side, effective vocational learning was also perceived as a product by a considerable number of interviewed teachers and students. They equated effective vocational learning with *acquisition of curriculum objectives* and *acquisition of job competences,* by mostly marking how the knowledge and skills acquired at the school would be demonstrated at workplace and/or during the recruitment process. In other words, according to this view, learning at vocational schools would not effective if the students were not able to transfer and demonstrate knowledge and skills at workplace.

Regarding the *student traits* required for effective learning, some students and teachers agreed on the fact that effective vocational learning required students to have curiosity (T5, T12, F12) and be eager and motivated to learn (T6, T7, F2, F8, F12, F13). These student traits were perceived necessary by teachers and students during both the job/school selection and learning processes. In addition to these traits, students studying at higher vocational schools also needed to adopt and use some certain *learning strategies* according to definitions of some students and teachers. Most of the participants defined effective vocational learning as putting knowledge into practice (T1, T2, T5, T8, T12, T13, T14, F5, F10, F11, F12, F13,

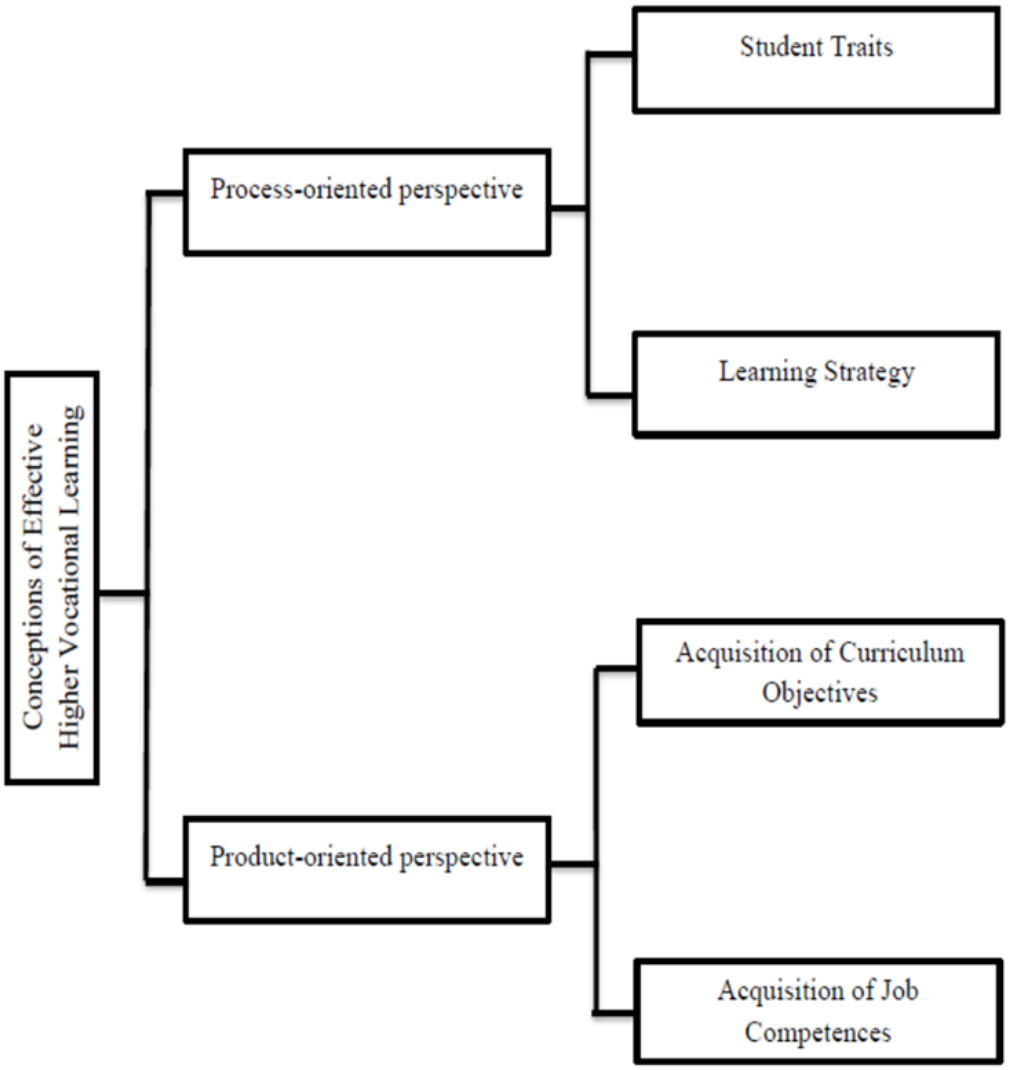

Figure 4.2 *Conceptions of Effective Higher Vocational Learning*

F14, F15). To support this view, one student from a focus group (F6) also gave example of how she did not forget any piece of knowledge after she had worked as trainee and had opportunity at the workplace to apply the knowledge she gained at school. She equated effective learning with retention as in the following:

> We know [learn] everything: tools, devices, theory etc. at school. But when we do not practise at school we cannot apply our knowledge at workplace. When I was a trainee in the summer, I worked with the devices, I started to understand what I know and what I should learn. I watched videos when I came home. And I started to love the job. I do not forget what I learned during my traineeship (F6).

Other definitions related to *learning strategies* were found to: (1) make research for more knowledge than instructed (T1, T6, T7, T12, F8, F12, F13), (2) learn by doing like an apprentice (T5, T1, T15, F5, F8, F13), and (3) acquire the knowledge from an expert through practice (F1, F3, F4, F5, F6, F9, F11).

Though the second and third definitions of effective vocational learning connoted that it was the students who should be using these strategies these definitions also implied the need for arrangement of learning environment and involvement of teachers with expertise in the learning process. Further, as the fourth definition, effective vocational learning was conceptualized by one teacher as deep learning by internalizing job-related knowledge (T4). To him, the students who understand the knowledge underpinning processes of job operations rather than memorize the knowledge would be able to perform the job at any conditions.

Contrary to the process-oriented perspective, some teachers and students focused on the outputs of learning indicating that *acquisition of job competences* was the indicator of effective learning. Three teachers focused on the knowledge and skills that would help students make informed decisions and judgments while performing the job and defined effective learning as reaching at the level of decision-making (T3, T4, T9). Put it another way, students who have mastered the content effectively at the school would be able to understand work processes, come up with solutions to problems and apply these solutions. Very similar to this view, two teachers defined effective learning as gaining insight of know-how and know why (T13, T16). One of them accounted for her definition saying:

> A job can be learned by doing, by applying, by transferring knowledge into practice. Trail-error is a primitive learning method. The learner should be equipped with the knowledge base required for practice. To me, learning via master-apprenticeship method does not comply with the requirements of our age. You can learn how to use a tool at workplace from anyone; however, learning when and why to use that tool and evaluating the product is the result of good learning at higher vocational schools (T13).

Likewise, one group of students confirmed this view by defining effective vocational learning as applying the knowledge through multi-dimensional perspective (F7), that is, by assessing the environment, materials and resources. While two focus groups considered effective learning as the application of

knowledge at workplace (F2, F16) in a general sense two teachers were more specific and viewed effective learning as gaining basic job-related knowledge to be improved at workplace (T3, T11) by putting emphasis on lifelong learning. From a different perspective, overcoming the fear of inability to do the job was considered as the result of effective learning by one focus group (F2). This group asserted that they gained self-confidence as long as they acquired job related knowledge, involved in practice and could apply what they have learned at workplace during traineeship.

Finally, one teacher associated effective learning with gaining the curriculum objectives (T10) without relating his definition to competences required at workplace. He believed that acquisition of curriculum objectives would make students successful both at school and at workplace.

4.1.3 Aim of Higher Vocational Education

In addition to conceptions of effective vocational teaching and learning, the data revealed aims of higher vocational education. Three themes in relation to aim of higher vocational education emerged from the data gathered through the interviews with the teachers and administrators and all of them generally agreed on that higher vocational education aimed at well-being of students. Specifically, teachers and administrators considered that higher vocational education aimed at *personal well-being*, *occupational well-being* and *intellectual well-being* of students.

Occupational well-being was the mostly referred aim of higher vocational education by the interviewees. All of the administrators and three teachers asserted that higher vocational education aimed to raise semi-skilled workers for the labour market (A1, A2, A3, A4, A5, A6, A7, A8, T1, T9, T10). This objective was also the most accepted and raised one on the policy documents and mission statements of vocational schools. According to this view, the graduates from higher vocational schools are expected to work as technicians/assistants of skilled employees and to monitor and perform concrete and repetitive tasks in a sequence. One administrator added another mission by noting that higher vocational schools aimed at upskilling (A1) the present labour force: “Though not too many, we have students who are

already working in the sector. They study [at relevant programs] to get promotion at workplace or have a job change (A1)". Besides that, another administrator and one teacher focused on teaching mission of higher vocational schools and maintained that the aim was to teach knowledge, skills and code of conduct required for a job (A4, T13). This perspective was also shared by two other teachers who viewed higher vocational schools as the provider of higher level of master-apprenticeship education (T4, T5). When compared to traditional master-apprentice knowledge exchange, these teachers discussed that higher vocational schools aimed at delivery of theoretical knowledge by experts and use of it for the practical ends.

Another aim of higher vocational schools was *personal well-being* of students. Concerning this theme, two administrators and one teacher highlighted that preparing young persons for life (A2, A7, T14) was what they aimed at these schools. To one teacher (T14), the aim was to have students gain a different perspective whether the students intend to perform the job or not.

Finally, higher vocational education aimed at *intellectual well-being of students* by compensating knowledge and skills not covered at vocational high schools (T2, T6) and improving the creativity of students (T3). Two teachers viewed higher vocational schools as continuation of vocational high schools and the mission of higher vocational schools was considered to close the knowledge and skills gap while the latter perspective was about gaining skills and applying them in a creative way. The teacher who believed in the role of higher vocational education to improve creativity of students explained his view as:

> Education and training include three dimensions: memorization, imitation and production. If you cannot add creativity to these [dimensions], you cannot reach at anywhere. The reason why we are dealing with numbers, calculations is this: I mean, to add creativity. The employees at workplaces are mostly lack of this. Because they lack the foundational knowledge and act by rote. Of course, what my students have learned here will not match with the procedures at workplace. Because they [employees] repeat the procedures rotely [without considering the contextual differences]. We, here, tell the situation-specific action and its effect; thus, they can formulate solutions creatively at workplace when they confront with different problems (T3).

It seemed that this teacher emphasized the role of higher vocational schools to promote deep learning and meaning-making, and how it would contribute to the intellectual development of students.

4.1.4 Characteristics of Effective Vocational Teacher

Teachers, students and administrators were specifically asked to list the characteristics of an effective vocational teacher during the interviews, and data analysis uncovered three main themes to define the required qualities of an effective vocational teacher: *teacher knowledge, teacher roles* and *teacher traits*. Figure 4.3, given in the following, presents all themes related to the characteristics of an effective vocational teacher.

Concerning the theme of *teacher knowledge*, the interviewees remarked that vocational teachers need to have content knowledge, pedagogical knowledge, knowledge of technology and contextual knowledge to be effective.

As to content knowledge, making a clear distinction between vocational knowledge and subject knowledge most students and teachers highlighted that teachers should establish connections between both knowledge sources to teach the job knowledge and skills effectively. With regard to vocational knowledge, what was emphasized nearly by all participants was the need for vocational teachers to have vocational (occupational) experience (T1, T2, T3, T4, T5, T7, T8, T9, T10, T11, T12, T14, T15, T16, F4, F5, F9, F11, F14, F15, F16, A1, A2, A3, A4, A5, A6, A7, A8).

Though having the knowledge of job (T1, T2, T3, T4, T5, T7, T8, T9, T10, T11, T12, T14, T15, T16, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16) was also proposed by most participants, it was expressed together with vocational experience. To this perspective, having job-related knowledge would not be considered sufficient if it was not substituted with job experience. For three teachers, having job experience led teachers' knowledge of tools and materials used at workplace (T1, T3, T11, T15), and therefore, these teachers could demonstrate how to use those materials and tools to their students.

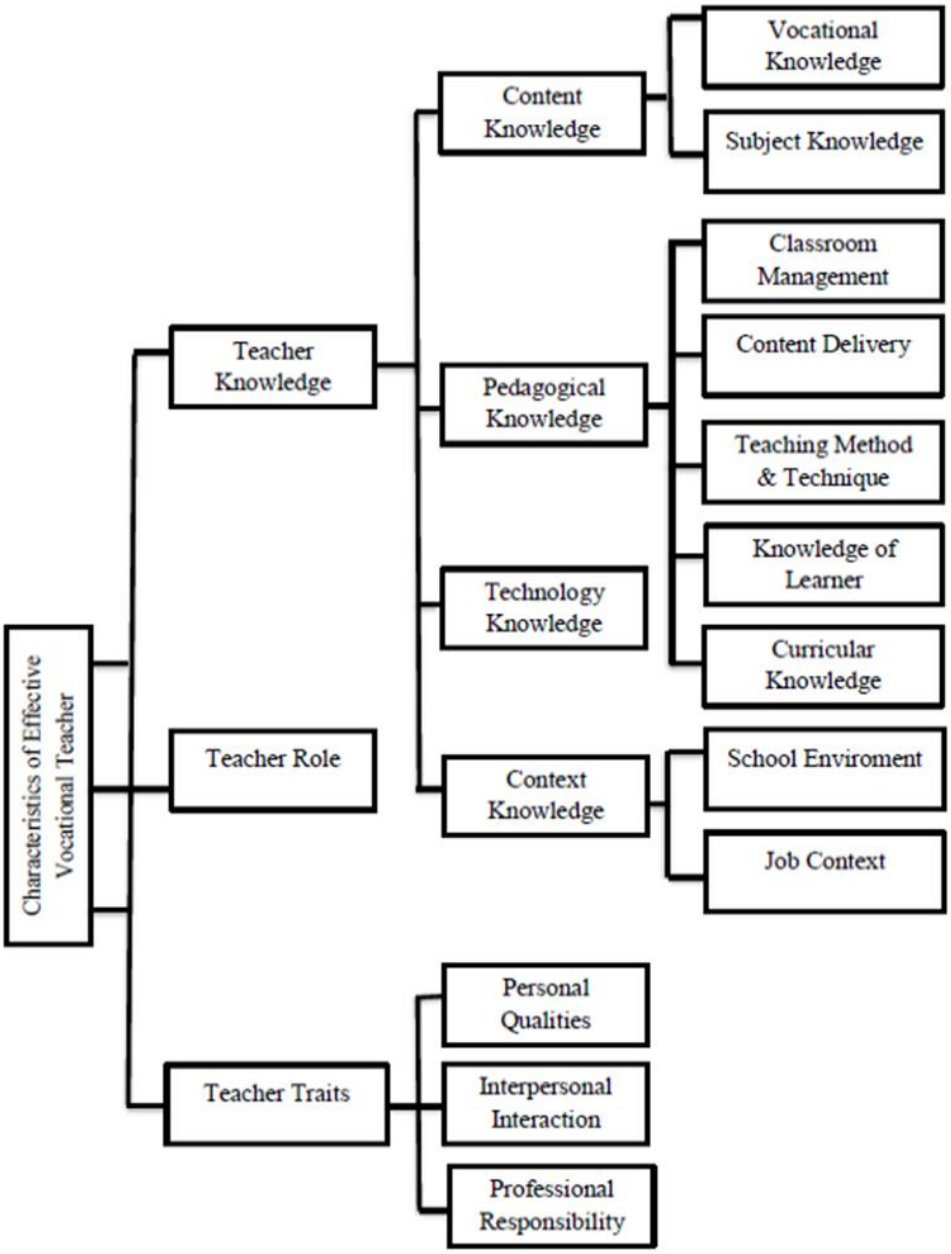

Figure 4.3 *Characteristics of Effective Vocational Teacher*

Beside, teachers' being informed of developments and changes in the sector (T1, T3, T4, T7, T10, T11, T12, T14, F5, F7, F8, A1, A5, A6, A7) was perceived necessary to be effective. One teacher summarized the abovementioned vocational qualities of effective teachers below:

> If we recall the aim of higher vocational education, it is to raise semi-skilled staff for the labour market. To do this, teachers should have vocational experience for at least 3-4 years along with graduation from the related department. Such teachers should be recruited to teach at higher vocational

> schools. Otherwise, higher vocational schools cannot move forward [develop] in the absence of experienced teachers. Also they should use the tools effectively [tools used to perform the job] (T1).

In addition to the year criteria this teacher proposed, there were other teachers who specified the required duration of experience. Three teachers noted that vocational teachers should have at least 5-year job experience (T5, T9, T16) while two teachers marked the need for at least 10-year experience (T11, T14).

Besides vocational knowledge, teachers, students and one administrator underlined that effectiveness of vocational teacher depended on the subject knowledge, as well. Having up-to-date subject knowledge (T2, T7,T8, T9, T13, F5, F8, F9, F13, F16, A5) and connecting that subject knowledge with vocational knowledge (T6 ,T8, F3, F5, F13, F14) were among the required characteristics of vocational teachers. Students in one focus group pointed out the need for integrating vocational and subject knowledge concluding from their experience:

> We have a course called "Business Management". It is a course related to our field [but] our teacher tells us what is written in management books: macro enterprise, micro enterprise etc. She needs to teach us how to start a business, what certificates we need, what the regulations tell us. Rather than delivering the content related to our job, she presents the content delivered at the faculties of economics at universities (F3).

Having a different viewpoint, two teachers emphasized the characteristics of subjects offered at programs and asserted that teachers need to present the content related to job by blending required knowledge of disciplines underpinning job knowledge and skills (T12, T13). One of them explained her perspective by giving examples from the program she teaches at: "The teacher [working at higher vocational schools] should have interdisciplinary knowledge like my field of teaching. It requires the knowledge of psychology, sociology, medicine, nursing etc. If you are working [to teach this job], you need to have knowledge of all those disciplines (T13)".

In addition to content knowledge, pedagogical knowledge was perceived an essential characteristic of effective vocational teachers by the interviewed teachers, students and administrators. The subthemes emerged within this theme were teachers' knowledge and practice of classroom management, content delivery,

teaching method and techniques utilized while presenting the content, knowledge of learner and curricular knowledge.

To start with, according to the view of interviewees, effective vocational teachers manage the classroom effectively by gaining and maintaining students' attention (T9, T14, T15, F2, F8, F9, F11,F13, F14, F15), treating students equally (F1, T8, T12), allowing students' questions (F2, F8, F9, F15, F16), creating collaborative learning environment (T12, F1, F12), and engaging all students (T4, T8, T12, F5, F7, F8, F9, F12). Concerning the practices of teachers with regard to classroom management in vocational classrooms, teachers were observed to employ some strategies to gain and maintain student attention by checking their attention through questioning, refocusing students with short breaks, increasing the voice volume according to students' attention level and using humour. As to student engagement, teachers asked questions to uninterested and inattentive students. Also, there were a few teachers who engaged students by matching students with no course materials with other students who had materials with them.

Perspectives regarding the required classroom management practices of vocational teachers seemed to be applicable to all teachers, whether vocational or not, but one teacher referred to workshop and laboratory instruction and alleged that it should be managed like a workplace (T4). To his perspective, students need to be treated like employees in the classroom while the teacher should act like an employer for the sake of effectiveness.

As to the second dimension of pedagogical knowledge, the interviewees described how the content should be presented by the teachers at vocational classrooms. Content delivery styles on which more participants agreed were transferring knowledge through plain language (T7, T8, T9, T14, F2, F8, F9, F12, F13, F14) and provision of practice opportunities to have students gain the job skills (T3, T8, T9, T14, T15, F8, F9, F11, F13, F15, F16). The language of instruction was noted to be highly important for the students. Plain language was equated by these students as minimum use of abstract concepts, terms and formulas. Also, students were observed to get distracted and inattentive during the courses when the teacher used too many terms and/or did not explain the lexical/operational meaning of those terms. On the other hand, students were observed to be more

engaged when the teachers instructed through daily language. In addition to that, simplifying the content (T5, T6, T8, T14, F6, F13, F16) was stated as another content delivery strategy used by effective vocational teachers. Simplifying the content meant for the participants to present the content as if students did not have prior knowledge. One teacher (T6) clarified his argument herein below:

> Our students fail [to comprehend the topics] when we ask them to make research [on the topic beforehand/after delivery] and give assignments. You have to present the topic one by one. And also, you have to focus your instruction on lower levels of knowledge and skills, and simplify some certain parts (T6).

Varying in their perspectives about simplification, some teachers stressed that students had lower cognitive abilities while some students considered that teachers assumed they had prior knowledge of the presented topic. Very close to this view, three participants underlined the need for moving from simple to complex (T13, F1, F6, F12). Other characteristics of effective vocational teachers in relation to pedagogical knowledge required teachers to inform students of the objectives of course and define expectations from them (T7, T8, T13, F8, F13), create opportunities for students to discover their capabilities (T4, T12, T14, F1), make connection among knowledge/courses (T4, T5, T11, T13), pace instruction according to needs (T13), provide feedback (T12, F8, F12), and instruct using the terms required at workplace (T4,T11,T13, F8, F12).

Thirdly, teaching methods and techniques used during content presentation were prescribed by teachers, students and administrators while defining the characteristics of an effective vocational teacher. What was critical for all participants was the delivery of content through hands-on experience (A1, A2, A3, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16). For all of them, teaching a job required application of conceptual/theoretical knowledge. One student from a focus group highlighted the importance of teaching method and experiential learning as follows:

> A job can be taught through hands-on experience, by putting knowledge into practice. You cannot teach it by lecturing. But we sit in the classroom, listen to the teacher and his/her lecture. We should be provided with practice

> opportunities, we need to be taken to workplaces and see, touch and experience it. Then, we can call it effective (F14).

Besides that, teachers were considered effective when they gave real-life examples related to job (T5, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, F4, F5, F7,F8, F9, F11, F12, F14, F15, F16, A6). During the sessions, I observed that these examples were teachers' own experiences at workplace and their warnings related to procedures, or what they observed or learnt from written or visual sources and examples from daily life. Also, during interviews, job-related examples were attached high importance by both students and teachers. These examples were considered effective to engage students and gain their attention. In addition, when teachers utilized questioning (T1, T2, T3, T4, T5, T9, T12, T13, T15, F5, F9, F12, F13) to increase retention it improved learning, thus felt as a characteristic of effective vocational teachers. In the classrooms observed, teachers utilized a variety of questioning techniques like asking display questions to check comprehension, asking students to comment /tell their opinions, asking other students to answer a student's question, and answering questions in case of irresponsiveness of the student.

Another method that was reported to be used by effective teachers was demonstration method (T1, T3, T4, T10, T11, T16, F8, F12). Most teachers thought that it was crucial to teach students how to perform the job and show students exemplary practices. Similarly, use of field trips (A2, T5, T14, F5, F13, F14), workplace simulation in the classroom (T4, T5, T8, T11, T14, T15, A1, A6, F11), use of research assignments (T4, T8, T11, T12, F5, F12, F13, F14), and use of role-play technique to teach workplace procedures (T8, T11, T12) were counted among the methods and techniques used by effective vocational teachers. Also, use of various techniques/methods to make learning happen (T1, T12, F1, F2, F6, F9, F13, A5) was found mostly by students as a significant aspect of effective teaching, and a student from one focus group gave example to this:

> When asked about an effective teacher, I can say Teacher One is the only example, to me. My friends will agree with me [other students nodded their heads]. Because he tries everything [every method and technique] to teach us. He lectures in a very enjoyable way. He resembles geometrical figures and patterns to the things we know and like. He makes powerpoint

> presentation, shows us visual materials, use drawings on board, use demonstration, give examples, etc. He also prepares 5-question test and administer it at the end of each lesson. He firstly asks us to answer the questions on our own, and then, discusses the questions one by one by writing on board. He motivates us all the time. He presents the topic again and again in a persistent manner (F1).

As the fourth subtheme of pedagogical knowledge, knowledge of learner that teachers should have to be effective emerged. To the interviewees, vocational teachers need to have the knowledge of vocational learner needs and interests (A1, A4, A7, T1, T2, T3, T4, T5, T6, T11, T13, T14, T15, F2, F7, F9, F12, F13, F15). Students' prior knowledge while presenting a new topic, their cognitive characteristics, the differences among students in terms readiness level were among the aspects teacher need to consider.

Supportively, teachers and students agreed on that effective vocational teachers should consider the individual differences (T2, T3, T4, T8, T9, T12, T13, T14, F1, F2, F5, F6, F14) by putting emphasis on differences regarding students' learning pace, learning styles, socio-economic status, and reasons to study at higher vocational schools. Therefore, teachers should be aware of students' capabilities (T3, T4, T8, T14, T15, F9, F11, F13), have expectations from students based on those capabilities, and select methods, techniques and activities accordingly. Lastly, some teachers and students highlighted the need for teachers to track students' progress on individual basis (T1, T2, F1, F2, F12) for the effectiveness of vocational teaching.

Finally, according the perceptions of interviewees effective vocational teachers need to have curricular knowledge and demonstrate that knowledge by planning courses according to the needs of labour market (A1, A4, A7, T1, T4, T9, T13, T15), updating curriculum in line with the developments concerning job (A4, A7, T5,T9, T12, T13, F10), having the knowledge of measurement and assessment methods and techniques (F5, F13, F14) and making changes on the lesson plan according to students' attention and interest (T15). One focus group (F7), especially mentioned the need for vocational teachers to be knowledgeable about assessment and measurement because students had problems with unfair grading, lack of criteria, and use of written exams to assess skills.

Along with content and pedagogical knowledge, a few teachers and one administrator indicated the need for technological knowledge of vocational teachers. They noted that effective vocational teachers have the knowledge of educational technologies (T10, A7) and use various technological resources and tools to teach the job (T4, T6, T13). During classroom observations, it was seen that teachers mostly made use of overhead projector and powerpoint presentation. There were some other resources and tools used during instruction, which were: job materials/tools/softwares, photos, videos, online resources, coursebook, and handouts.

Last but not the least, it was noted by many interviewees that *teacher knowledge* should also cover contextual knowledge. Teachers' effectiveness also depended on their knowledge about the school environment and job context. On the first place, effective vocational teachers were said to know the school environment and resources (T1, F7, A4), and observe and understand students' experience in that context (T5, T13, F6, F7, F15, F16). The participants interviewed stated that students had difficulty to supply their social and physical needs since higher vocational schools are mainly located in towns and far from the main campus. Therefore, according to the perceptions of participants, effective vocational teachers should either make reasonable demands or find solutions for those contextual problems. And what is more, some teachers and one focus group remarked that vocational teachers must be informed of job context and its requirements (T1, T3, T9, T11, T14, F14).

As the second theme, perceptions of interviewees in relation to the *roles of effective vocational teachers* emerged out of interview data analysis. The roles were stated by teachers, students and administrators to be acting as a coach (T1, T2, T4, T12, F9, F14, A5), mentor (F4, F7, F9, F13, F14, F15,T1, T2, T3, T4, T5, T8, T9, T10, T11, T15, A1, A2, A3, A4, A5, A6, A7), role-model (T1, T3, T7, T8, T12, T14, F7, F8, F12), leader (T12, F12), source of vocational knowledge (T3, T4, T10) and an employer/workplace manager (T4). The role of vocational teachers as a mentor was the most emphasized one among others. Some of the interviewees also proposed the required background for teachers and noted that discovery of students'

capabilities, having the job knowledge and experience, being informed of labour market were needed to provide mentoring.

The final theme under the characteristics of effective vocational teachers was *teacher traits*. Personal qualities, interpersonal communication skills and professional responsibility were the subthemes evolved. Concerning the personal qualities, effective vocational teachers need to be patient (T8, T10, T11, T13, T14,T15, T16, A6, A7, F13), fair (T3, T4, T10, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, A4), disciplined (T5, T8, T12, F8, F9, F15, F16), enthusiastic (F5, F8, F13, F14, A4), kind but firm (T3, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13), and have sense of humour (T1, T2, T4, T9, T13,T14, T16, F5, F7, F8, F9, A7, F14), love teaching (T1,T2, T5, T10, T12, T14, F14), and have teaching experience (F2, F3, F5,F12, F14, T10). These qualities put forward by teachers, students and administrator were found to be not only specific to vocational teachers but also applicable to all teachers teaching different levels and grades.

Together with personal qualities, some students, teachers and one administrator highlighted required communication skills and they stated that effective vocational teachers communicate/interact effectively with students (T2, T5, T7,T12, T13, F2, F5, F13, F14, F16, A7) and behave to earn students' confidence and respect (T4, T9, T15). Effective communication was equated with addressing students with respect and choosing the positive and encouraging statements. With regard to second code, one teacher (T9) provided explanation as follows:

> [An effective teacher] needs to know the students very well and earn their respect. Also, you should have your students trust you and your knowledge. None of students trusts the knowledge delivered by a teacher they do not trust (T9).

Effective vocational teachers also have the sense of professional responsibility as noted by the teachers, students and a few administrators. To them, vocational teachers come to class well prepared (F10, F12), start class on time (F10, F12, F16), involve in professional development (T1, T8, T13, T14, A1, A4, A7, F15, F16), be accessible outside of class (T5, F7, F9, F10, F16), be insistent on

learning (T3, T4) and plan extracurricular activities for students useful for job finding (A4, T8, T9, T12, F8, F9). Students who were interviewed especially listed the abovementioned characteristics related to professional responsibility based on their experiences and problems they faced. In other words, some teachers of the interviewed students do not arrive classroom on time, are not found in their offices or at school out of class hours and/or come to class unprepared for the lesson. Again, based on their experience, teachers, students and one administrator appreciated organization of extracurricular activities. During the interview, two teachers and their students (T8, T9, F8, F9) gave the example of the extracurricular activities conducted at school like mock interview, inviting employers to give talk to students, visits to workplaces etc. and how these activities contributed to student learning while students at the other focus groups noted they could not benefit from extracurricular activities which were mostly conducted in the main campus but those kind of activities would have improved the effectiveness of their teachers and hence, their learning.

4.1.5 Characteristics of Effective Vocational Learner

The analysis of data conducted to find out the characteristics of an effective vocational learner studying at higher vocational schools produced four themes, namely *entry characteristics, affective characteristics, cognitive characteristics* and *personal traits* (see Figure 4.4).

To start with, interviewees' perceptions with regard to *entry characteristics* of students were grouped under two subthemes: prior knowledge and eligibility of students to study at the selected program.

When asked about their definitions of effective learner characteristics during the interviews, mostly teachers and administrators together with a few students touched upon students' prior knowledge and its importance for effective vocational learning. According to the views of the interviewees, prior knowledge of students were formed by studying at the relevant department at high school, having basic level of knowledge of Turkish language, English language and Math, acquisition of general knowledge, and gaining preliminary knowledge of job and of the mission of higher vocational schools. While the first three characteristics were related to

students' acquisition of foundational knowledge to serve as base for knowledge to be acquired at higher vocational schools the other two characteristics are related to informed school selection.

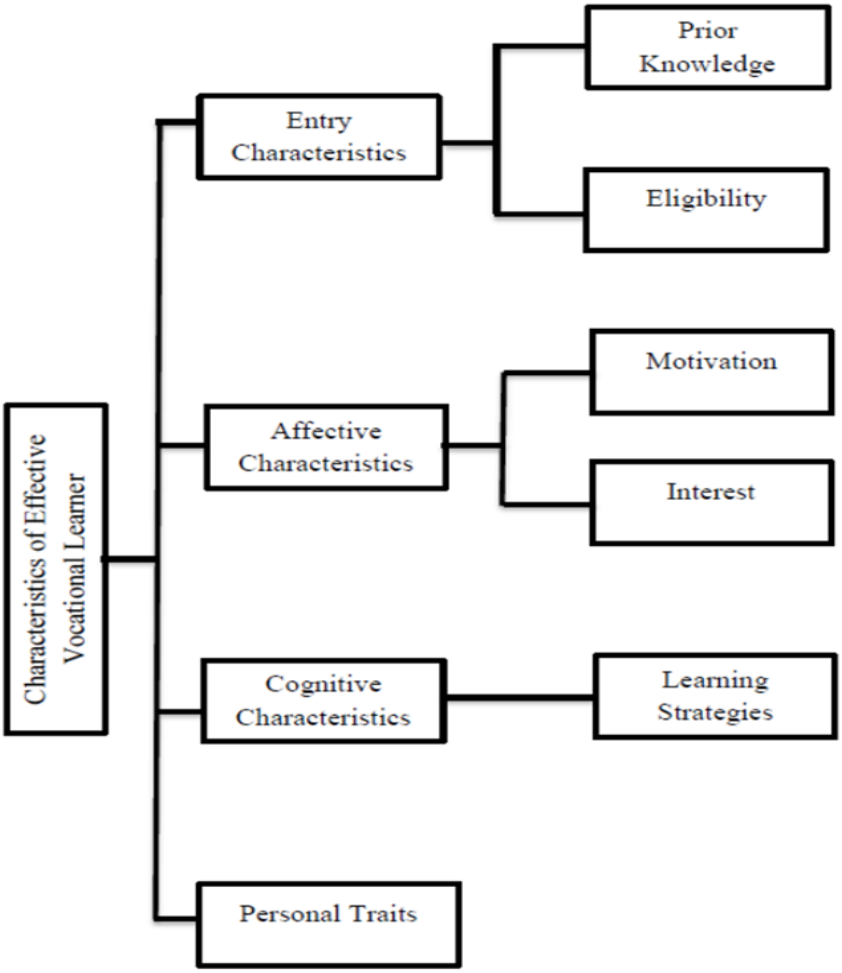

Figure 4.4 *Characteristics of Effective Vocational Learner*

First of all, studying at the relevant department at high school (T12, T13, F8, F12, F13, F15, A6, A7) was perceived as an advantage to learn the content delivered at higher vocational schools. In other words, graduating from relevant department at a vocational high school was equated with having prerequisite knowledge to study at the relevant higher education program. However, contrary to that view, most teachers and administrators perceived basic level of knowledge of Turkish language, English language and Math (T1, T2, T8, T9, T10, T12, T15, F8, F14, F15, A1, A3, A4, A5, A6, A7, A8) and acquisition of general knowledge (T4,

T5,T8, T12, T14, F5) as facilitators of effective learning at higher vocational schools. One student from a focus group (F1) discussed how prior job-related knowledge and general academic knowledge complement each other as given below:

> Our friends who graduated from vocational high schools are at both advantage and disadvantage. I am a graduate from general high school. I have the knowledge of Math. The ones who studied at the computer department at high school are good at computer knowledge and use. Actually, we are like a whole. We complete each other. But sometimes we cannot. For example, we have a course for which knowledge of chemistry is required. We [graduates of vocational high school and general high school] are both lack of that knowledge, but to speak for myself, I would be able to learn more effectively if I had prior knowledge of chemistry (F1).

Besides prior education, preliminary knowledge of job that students intend to study (T1, T3, T5, T14, F8, F12, F14, F16, A4, A8) and of the mission of higher vocational schools (A1, A4, T3, T8) were considered crucial to be an effective vocational learner, and to the interviewees with this perspective, set the base for motivation to learn the selected job.

Eligibility was the second dimension of *entry characteristics* of effective vocational learners described by the interviewees. All the teachers and administrators, and half of the focus groups put emphasis on the informed school selection (A1, A2, A3, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, F5, F8, F9, F12, F13, F14, F15, F16). According this view, when the students select the field of study in an informed way they make research about all aspects of the job, the requisite knowledge and skills and therefore, get motivated to learn. For some of the participants who had this perspective, informed school selection also included assessment of one's eligibility for the selected job. A few teachers agreed on that students, for the sake of effective learning, need to consider if they are eligible and have the required qualities and traits (T1, T3, T5, T8, T14, T15). One teacher elaborated on this perspective saying: "The students come here, get the first impression about program, its requirements, reach at judgment and mostly fail or drop out. Because they select the program by googling it to learn the salary paid, and they think they will earn too much money after graduation without considering their eligibility (T3)."

The data also revealed *affective characteristics* of effective vocational learners and these characteristics were found to be motivation and interest. In relation to motivation, the interviewees consisting of mostly teachers, indicated that effective vocational learners are motivated to learn the job (T1, T5, T10, F13, F15), have long-term objectives related to job (T3, T5, T10, T14, F9) and have love for the job (T1, T3). Indeed, most of the interviewees viewed affective characteristics, namely motivation and interest, as the most critical aspect of effective learning. With regard to interest, being interested in the job (T4, T5, T7, T10, T13, F5, F13, F14, F15, A4) and based on this interest, following the developments related to job (T1, T4, T13) were among the proposed characteristics of an effective vocational learner. During the interviews, teachers, students and one administrator used motivation and interest interchangeably. For example; one teacher highlighted how motivation and interest enable a student to learn: "Everyone can learn. You only need to be interested [motivated]. There is nothing like "I cannot do". If you are eager, maybe you will try hard, but you will learn. So, the teacher does not teach, it is the student who learns (T12)".

In addition to *affective characteristics*, interviewees also indicated the need for *cognitive characteristics* that a vocational student should have to learn effectively. Concerning *cognitive characteristics*, teachers, students and administrators mostly put emphasis on students' learning strategies. These strategies were making research to seek more knowledge than instructed (T1, T2, T4, T5, T8, T10, T13, T15, F5, F8, F9, F13, A4, A6), participation in classroom activities (T8, F8, F9, F13, F15), doing extra practice out-of-classroom (T1, T4, T8, T15, T16, F5, F8, F13, A1, A5, A7), beware of how to learn (T4, T13, F5, F14) and review the content before and after the class (F8, F9, F12). What the teachers mostly indicated was that students tended to memorize the content and recite. To them, students need to change their learning strategies to learn effectively. Some students, teachers and administrators also considered that students learn better when they spend more time practicing at the workshops and laboratories or work on part-time basis. Two focus groups (F1, F16) appreciated being allowed to enter the workshops out of class hours and at the weekends because they needed to do extra work to improve their practical skills and complete the assigned works.

Finally, *personal traits* of effective vocational learners emerged out of interview data. Vocational students who are creative (T1, T4, T12, F5), observant (T4, F5, A1, A6), curious (T5, F8, F13, A1, A2, A3, A7), patient (T1, F12, F14), self-regulative (F5, F9), eager to improve himself/herself (T3, T10, T13, T14, F12, F16, A2, A3, A4, A5, A6, A7, A8), have responsibility for his/her learning (T1, T8, F9, F13, A5) and have generic skills like problem solving and time management (T4) were considered as effective learners by the interviewees. It seemed that especially the teachers and students at the programs which require students to produce works focused on creativity, personal responsibility, generic skills and patience while other interviewees offered personal traits applicable to all students, whether vocational or not, like curiosity, eagerness to improve, and self-regulation.

4.1.6 Characteristics of Effective Vocational Program

As displayed on Figure 4.5, the data gathered through interviews also revealed characteristics of an effective vocational program producing three themes: person-related factors, school-related factors and system-related factors.

Regarding person-related factors, effectiveness of a vocational program offered at higher vocational schools depended on the *characteristics of students* and *characteristics of teachers* according to the perceptions of administrators and one teacher who were interviewed. To them, students studying at an effective vocational program have prior knowledge (A7), higher cognitive skills (A1, A6, A7) and career vision (A7) while the teachers working at these programs have job experience (A1, A6, A7), improve himself/herself through academic studies (A3, A4, A5, A6, A7, T8) and have teaching experience (A1, A2, A3, A4, A5, A6, A7, A8). With regard to students' characteristics, one administrator attached high importance to students' prior knowledge (A7) and explained why as follows: "We get successful in producing the graduates we desire if the students studied at the relevant program at high school. Otherwise, we tell, retell the content again and again to correct the deficiencies. Meanwhile, the students who have prior knowledge get bored and we lose them (A7)."

School-related factors highlighted by teachers, students and administrators were related to *curriculum* and *school context*. The curriculum delivered at an

effective vocational program included hands-on experiences (A1, A2, A3, A4, A5, A6, A7, A8, T16, F13) and more practice-based courses (T4, T5, A6) than theory-based courses. It was also asserted by the interviewees that a curriculum designed in line with the demands of labour market (A1, A4, T4, T5) would help graduates to find job with less effort. Additionally, use of authentic materials and tools (A4, A6, F13) were an essential characteristic of the curriculum delivered at an effective vocational program. One administrator discussed that a vocational program needs to provide opportunities for students to use the materials and tools required at workplace: "We offer Program A here at this school. Our teachers are qualified, students are eager but we are lack of software. I wish we could afford to buy them. Then, that program would be very effective (A4)".

School context was another subtheme evolved under school-related factors. On the condition that schools are equipped with workshops and laboratories (A1, A2, A3, A4, A5, A6, A7, A8, F8, F13, F16), where teachers would conduct hands-on activities and students would be delivered applied courses, the teaching and learning processes at these schools would be more effective and the students at these programs would be more successful in achieving the objectives.

Additionally, establishment of schools in sites with relevant industries (T6, T7, T12, A2, A6, F7, F16), and close to workplaces (A6, A7) was a crucial factor for workplace learning. One administrator mentioned the advantage of having workplaces around the school setting as follows: "We have a few workplaces around and very close to the school. We send our students [to those workplaces] and they see the devices and learn procedures we cannot simulate here at school. Most importantly, we do not need to provide transportation, students can go on foot (A7)". This condition also helped administrators contact the employers easily and receive their support. Two administrators specifically marked that effective programs were assisted by employers (A1, A4) by their informative talks to students, recruiting trainees and teaching at the school on part-time basis.

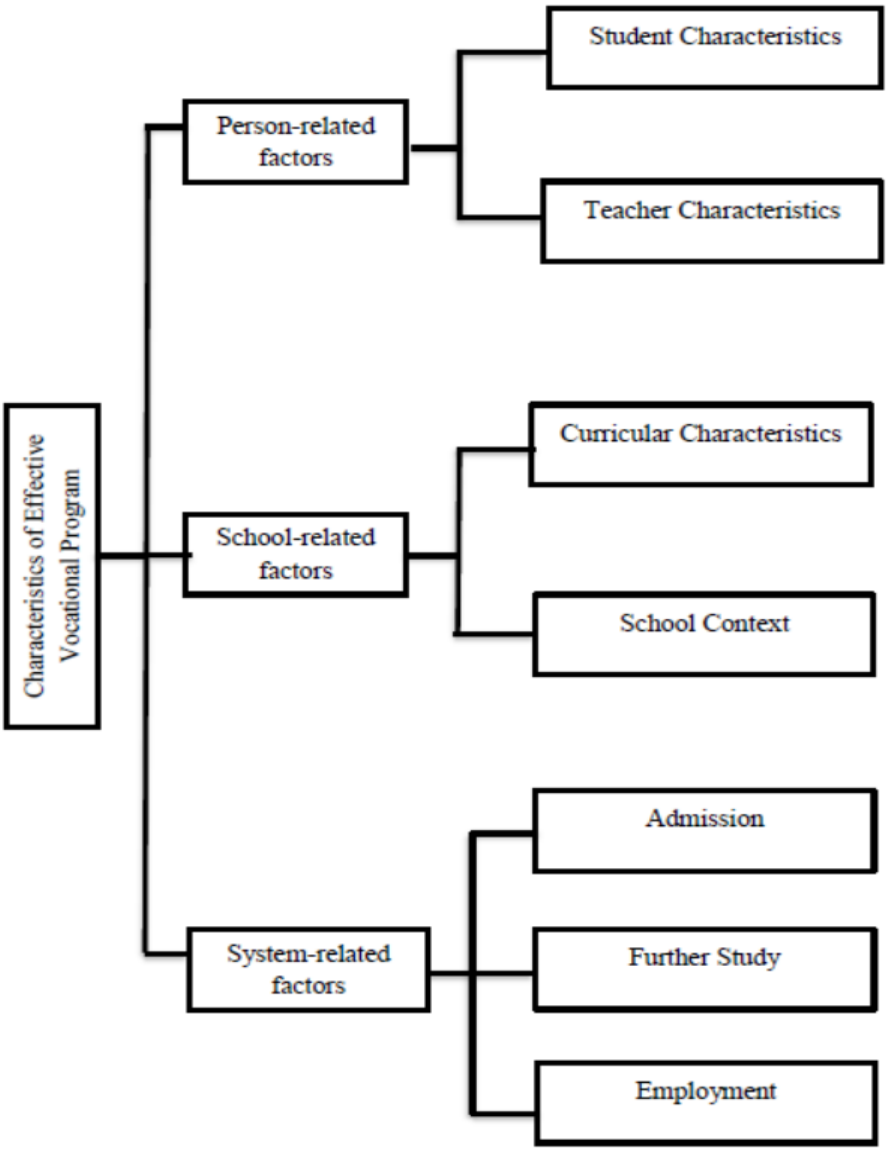

Figure 4.5 *Characteristics of Effective Higher Vocational Program*

The last but not the least, system-related factors were considered by the teachers, students and administrators to contribute to the effectiveness of vocational programs. These factors were related to the *admission* of students to higher vocational schools, opportunities students are provided with for *further study* and *employment*.

With regard to the contribution of *admission* to program effectiveness, half of the administrators highlighted that admission of students with higher points at university entrance exam (A1, A4, A6, A7) was a prerequisite for the effectiveness

of the program. They thought that those students who got higher scores were likely to have higher level of cognitive abilities and academic performance. Likewise, the students who enrolled the program through informed selection (A1, A5, A7) were perceived by three administrators to be more motivated to learn the job, and hence, improve the effectiveness of the program. Another factor put forward by one administrator and one teacher was the admission of students according to pre-determined criteria (A1, T5). Clearly, program effectiveness was facilitated through the readiness level of students. The teacher having this view indicated:

> Our program needs to enroll students who have the knowledge of history, foreign language, general knowledge of cultures etc. I cannot teach the job together with them. Tell me which one to cover during my courses. Basic knowledge or job content? There are students who have not been to another city of Turkey. If we enroll students with the prerequisite knowledge, then we can attain our goals (T5).

Additionally, variety of options for *further study* was associated with program effectiveness by two administrators (A4, A6). These administrators agreed on the fact that most students prefer studying at higher vocational schools due to the low points they scored at the university entrance exam, and they enroll these schools to transfer at 4-year programs after graduation. Therefore, as stated by two administrators, students consider higher vocational schools as a step to 4-year faculty programs and aim to take Vertical Transfer Test upon graduation. Those students study hard at the program to get high marks and contribute to the effectiveness of the vocational program. Besides, one teacher highlighted that the curriculum offered at higher vocational programs should be congruent with the one at the relevant 4-year programs for course substitution (T15). In that case, like the teacher said, students who want to continue their education by enrolling 4-year programs would be able to start the third grade without losing time by taking some courses again.

The last system-related factor that contributed to the effectiveness of a vocational program was *employment* opportunities graduates are provided with. For three administrators, collaboration between employers and administrative/teaching staff (A1, A2, A4) in the form of mutual agreement and protocols for the recruitment of graduates was of great importance for program effectiveness. During

the interview, one administrator (A1) showed the examples of agreements and marked that these kinds of collaborative actions motivated students as students felt safe and less anxious about unemployment. Similarly, a vocational program was considered effective when it provided wider employment opportunities for graduates (A4, A6, F13); therefore, students were less anxious about job finding. One administrator said that any vocational program would be preferred by more students if graduates were employed at a variety of workplaces, both public and private. In parallel to that, effectiveness of vocational program depended on the employment opportunities in a wide range of sectors (A1, A4, A7, T11), as well. To make it clear, one teacher gave an example during the interview: "Vocational programs should equip students with multidimensional knowledge and skills. So, students can find job at various sectors. For example, if you teach them all procedures at the hotel they can work at all departments rather than limiting themselves to one position (T11)". Therefore, production of multi-skilled graduates were among the characteristics of an effective vocational program.

4.1.7 Summary of Conceptions of Effective Vocational Teaching and Learning

The analysis of data indicated that teachers, administrators and students viewed effective vocational teaching and learning from two perspectives: process-oriented teaching versus product-oriented teaching, and process-oriented learning versus product-oriented learning.

Most of the teachers and students, and a few administrators defined effective vocational teaching as a process in which students gain job skills and knowledge. In this process, *teacher roles, teacher knowledge, curriculum design* and *content delivery* and arrangement of *learning environment* were considered to contribute to the effectiveness of teaching practices. According to the perceptions of teachers, administrators and students, effective vocational teaching was related to the *roles* adopted by the vocational teachers, and teachers needed to act like a master, like an employer or be a role model for the students to lead effective teaching. And concerned with *teacher knowledge*, one teacher equated effective teaching with technological pedagogical content knowledge and stated teachers need to be aware of what, how and with what to teach. Furthermore, effective teaching meant

designing a sound curriculum and implementing it faithfully for two administrators. Additionally, to some students and teachers, effective learning meant equipping the *learning environment* with job materials and tools and designing it appropriate for hands-on experience and use of real-life context.

Teaching methods and techniques used by the teachers while *delivering the content* were also associated with effective vocational teaching by some teachers and students. The method which the interviewees mostly agreed on was the use of hands-on experience, however, their perceptions with regard to delivery of theoretical/abstract knowledge varied. While some of the teachers and students thought that theoretical/abstract knowledge should accompany hands-on experience some others proposed that it should be delivered before the application.

As for the perspectives with regard to effective vocational teaching as a product, most teachers and students equated it with *the acquisition of job competences* by gaining job knowledge, skills, code of conduct and ethics, gaining vision about job and entry level job knowledge and skills. In other words, vocational teaching would not be considered effective if the students did not achieve job-related outcomes.

Similarly, perceptions of teachers and students about effective vocational learning were reflected in two perspectives: effective vocational learning as a process and effective vocational learning as a product. Most teachers and students viewed effective vocational learning as a product by equating it with *the acquisition of job competences* and *curriculum objectives* while there were teachers and students who thought that effective learning was a process of gaining job skills and knowledge by adopting appropriate *learning strategies* and having required *personal traits*. *Acquisition of job knowledge*, which was perceived as the product of effective vocational learning, was ensured through putting theory into practice, gaining knowledge and skills to be applied or to be improved at workplace, overcoming the fear of inability to do job and gaining the required knowledge to make decisions/judgments about job. Also, *acquisition of curriculum objectives* was perceived by one teacher as effective vocational learning.

Besides conceptions of effective vocational teaching and learning, the aim of higher vocational education which is promoting *personal, occupational and*

intellectual well-being of students emerged from data. Most of the administrators and teachers agreed that higher vocational education aimed to improve occupational well-being of the students. All of the administrators and three teachers asserted that higher vocational education aimed to raise semi-skilled workers for the labour market. Apart from this view, perceptions of administrators and teachers varied and they reflected distinct definitions.

First of all, higher vocational schools aimed at *occupational well-being* of students by providing higher-level master-apprentice education, and basic level of job knowledge and skills to enter the labour market, by teaching knowledge, skills and code of conduct to perform a job, upskilling and presenting combination of theory, practice and field study. Concerning the *intellectual well-being* of students, two teachers considered that higher vocational schools aimed to correct the learning deficiencies experienced at vocational high schools while other two teachers discussed that the objective was to improve creativity of students. Finally, to two administrators and one teacher, preparing young persons for life was aimed in order to contribute to the *personal well-being* of students.

With regard to the characteristics of effective vocational teacher, emerging themes were *teacher knowledge, teacher role* and *teacher traits*.

Interviewees' descriptions of effective vocational teacher revealed four types of *teacher knowledge*: content knowledge, pedagogical knowledge, technology knowledge and contextual knowledge. Among all, characteristics related to teacher knowledge were what teachers, students and administrators mostly touched upon, valued and provided definitions for.

Under the theme of content knowledge, two subthemes evolved: subject knowledge and vocational knowledge. According to the views of teachers, students and administrators in relation to vocational knowledge, effective vocational teachers need to have job experience, job knowledge, knowledge of tools and materials used at workplace and be informed of developments and changes concerning the job. Job experience was perceived to be the most critical of all as it set the base for any kind of vocational knowledge. As for subject knowledge, vocational teachers were supposed to have up-to-date subject knowledge, integrate subject knowledge with vocational knowledge and have the knowledge of

disciplines underpinning job practices. Within this subtheme, nearly all of the interviewees put high value on job experience and job knowledge and how subject knowledge should underpin vocational knowledge.

Pedagogical knowledge of effective vocational teachers required effective practices of classroom management, presentation of content, use of appropriate teaching methods and techniques, adequate knowledge of learners and curricular knowledge. Most of the students and some teachers agreed on the fact that effective vocational teachers manage the classroom effectively by gaining and maintaining attention, treating every students equally, engaging all students, allowing students' questions and creating a collaborative learning environment. One teacher resembled the classroom to a workplace and to him, effective classroom management required managing it like a workplace. In addition to classroom management, many teachers and students and one administrator defined effective presentation of content as a characteristic of effective vocational teachers. According to this view, effective vocational teachers are required to start the lesson informing students of the objectives of course and defining expectations from them. Following those steps, they need to move from simple to complex, simplify the content, make connection among knowledge/courses, transfer knowledge through plain language but use the technical terms needed at workplace, and arrange pacing according to students' needs, create opportunities for hands-on experience, create opportunities for students to discover their capabilities and provide constant feedback. Among all, presenting the content and transferring knowledge through plain language by minimum use of abstract terms and concepts, and providing practice opportunities were the most valued teaching styles for the teachers and students. Confirming these characteristics, teachers and students interviewed also proposed the methods and techniques used by effective vocational teachers. Use of demonstration method, workplace simulation, use of field trips, hands-on experience, use of role-plays, use of questioning, use of real-life examples and use of a variety of techniques and methods to improve learning were among the teaching methods and techniques utilized by effective vocational teachers. Again, hands-on experience and use of real life examples were the most appreciated and demanded techniques specified by teachers and students.

Furthermore, effective vocational teachers were said to need the knowledge of learners. A good number of administrators, students and teachers highlighted that vocational teachers need the knowledge of vocational learners' needs and interests, consider individual differences, beware of their capabilities and track their progress on individual basis. Some of the students alleged that teachers mostly considered vocational students equal to the students studying for bachelor's degree and demanded higher-level skills which were not appropriate for their needs and interests.

As a final subtheme of pedagogical knowledge, a few interviewees came up with the view that curricular knowledge was an essential characteristic of effective vocational teachers. Effective vocational teachers with the requisite curricular knowledge plan courses according to the needs of labour market, update curriculum in line with the developments concerning job, make changes on the lesson plan according to student attention and interest, and have the knowledge of assessment and measurement methods and techniques. The last item was agreed upon by three focus groups as these students noted that due to lack of teachers' knowledge of assessment and measurement methods and techniques they experience unfair grading and they are frequently tested through questions which required memorization of the content.

In addition to content and pedagogical knowledge, knowledge of technology was noted as a requisite characteristic of effective vocational teachers. Four teachers and one administrator remarked that vocational teachers need to have the knowledge of educational technologies and use various technological tools to teach the job.

Also, contextual knowledge was perceived necessary by nearly half of teachers and students. Contextual knowledge covered the knowledge of school environment and job context. To one teacher, one focus group and one administrator, effective vocational teachers know the school environment and resources and make demands from students accordingly. Also, two teachers and a few students maintained vocational teachers should understand students' experience in the school context as these schools are mostly located in towns, far from the main campus and city center. Moreover, being aware of job context and

its requirements, vocational teachers were expected to train their students according to demands of that context as stated by a few teachers and one focus group.

Interviewees also brought forward *the roles* required from effective vocational teachers. Mentoring, coaching and role-modeling were highlighted by most of the teachers, students and administrators while these roles were followed by being a leader, acting as vocational knowledge source and employer/workplace manager.

Finally, *traits* of effective vocational teachers emerged from the data by producing three subthemes: personal qualities, interpersonal interaction and professional responsibility.

With regard to the personal qualities, effective vocational teachers were supposed to be patient, fair, disciplined, enthusiastic, kind but firm and have sense of humour, teaching experience and love for teaching. These qualities were mostly agreed upon by most interviewees but more value was put on patience and being kind but firm by most interviewees.

Additionally, data revealed that interpersonal interaction was of high importance for the nearly half of teachers and students and one administrator. To them, vocational teachers should have effective communication skills and communicate clearly and effectively with the students. Also, three teachers thought that teachers should behave to earn students' confidence and respect; in this way, as one teacher stated, students would be more attentive and interested.

As to professional responsibilities of the effective vocational teachers, effective vocational teachers start class on time, come to class well-prepared, are accessible out of class hours, are insistent and inspired about student learning, improve himself/herself professionally and do extracurricular activities useful for job finding. It was students who wanted teachers to start class on time and come to class well-prepared as these students had problems hindering their learning due to some misbehaving teachers. Moreover, professional development was equated with postgraduate studies and valued by most interviewees.

Likewise, themes regarding effective vocational learner characteristics evolved from data and these characteristics were grouped under *entry*

characteristics, affective characteristics, cognitive characteristics and *personal traits*.

With regard to *entry characteristics*, students were required to have prior knowledge and meet the eligibility criteria for the sake of effective learning. Prior knowledge involved students to study at the relevant department at high school, have general knowledge and basic level knowledge of Turkish language, English language and Math. Prior knowledge was attached high importance by the interviewees consisting of mostly teachers and administrators because lack of prior knowledge hindered the learning process at higher vocational schools and led to loss of time as teachers had to compensate knowledge deficiencies. Additionally, vocational students need to have conducted research and get informed about the job and program they intend to study at and the higher vocational school where they would study, its location and resources before they make selection and are placed. In parallel to that, according to the views of most teachers, students and administrators, eligibility of students to study at the vocational programs need to be considered while describing the effective vocational learner. It was noted by nearly all interviewees that students must select the program through informed choice as it indicated that students were interested and motivated to learn that job. And furthermore, to five teachers, students need to consider their eligibility for the selected job: if they are physically, affectively and cognitively appropriate for that job. Also, for a few teachers and students, students are required to have personality traits to be eligible for the selected job and some of them asserted that some jobs require patience, versatility, effective time management and communication skills, and so on.

Affective characteristics of effective vocational learners included motivation and interest. It was mostly teachers and administrators together with a few students who highlighted the significance of motivation and interest of students for effective learning. They indicated that vocational learners should be motivated to learn the job and have job-related objectives. Further, two teachers asserted love for the job led to motivation and hence, effective learning. Beside, as stated by many interviewees, when students are interested in the occupation and as a result of this interest, follow the developments concerning the occupation, they learn effectively.

In respect to the *cognitive characteristics* of effective vocational learners, most teachers and students felt that effective vocational students adopted appropriate learning strategies like being research-oriented by making research for deep learning and doing extra practice out of classroom by working on part-time basis or spending more time in laboratories and workshops. For two teachers and two focus groups, learning to learn was needed for vocational students to learn effectively. More specifically, nearly one third of student groups and two teachers focused on the in-classroom learning strategies of students and thought that effective learners participated in classroom activities and reviewed the content before and after class.

Finally, *personal traits* of effective vocational learners were brought forward by the interviewees. Eagerness to learn and improve himself/herself was the most expressed personal traits while other qualities were perceived to be creative, observant, curious, patient, self-regulative, responsible, and have generic skills like problem solving and time management.

In addition to characteristics of effective vocational teachers and students, the characteristics of effective vocational program emerged from data gathered mostly from the administrators revealing three themes of person-related factors, school-related factors, and system-related factors.

Person-related factors covered *student characteristics* and *teacher characteristics*. According to the view of one administrator, an effective vocational program offered at higher vocational schools enrolls students with prior knowledge, preferably knowledge acquired at a vocational high school. He also asserted that those students studying at effective programs also have a vision about their careers, indicating that they have developed job-related long-term objectives. Also, three administrators agreed that students who enrolled and studied at such programs have higher cognitive abilities.

As for the *teachers' characteristics* working at effective vocational programs, as noted by nearly all administrators, they contribute to the program effectiveness through their job experience and teaching experience. Administrators mostly gave examples of the programs they considered effective and described the characteristics of the teachers at those programs. Additionally, to five

administrators and one teacher, when teachers improved themselves professionally through academic studies they improved the effectiveness of their teaching and thereafter, the effectiveness of the program.

Likewise, school-related factors which are the *curriculum* and *school context* played important roles for the effectiveness of vocational programs. Based on the experiences of teachers, students and administrators, curriculum, implemented at effective vocational programs, is designed according to the needs of labour market, involves hands-on experience for students, and is delivered through authentic materials and tools and offers more practice-based hours than theory-based courses. Hands-on learning, again, was the common view of administrators, and one teacher and one focus group agreed with them. While explaining how *school context* contributed to program effectiveness, all interviewees highlighted the advantage of having space and support for hands-on experience. All administrators and three focus groups expressed the need for workshops and laboratories to conduct hands-on activities and deliver practice-based courses. Also, when schools are established in sites where local industries are present and close to workplaces students could utilize workplace learning. In this way, as two administrators put forward, schools could receive employer support for teaching and extracurricular activities.

Lastly, a few administrators, one teacher and one focus group expressed their opinions with regard to student *admission*, *further study* and *employment opportunities* and these perspectives were grouped under the theme of system-related factors.

According to the views of a few administrators, program effectiveness depended on the *admission* of more successful students to the program who obtained higher scores at the university entrance exam and who selected the program through informed choice. One administrator also noted that programs need to enroll students through pre-determined criteria as studying at some programs require prior knowledge, specific physical characteristics and personality traits.

As the second subtheme of system related factors, *further study* options were discussed by two administrators and one teacher, and administrators asserted that

at the programs offering wider further study options for selection at Vertical Transfer Test are enrolled more oriented and interested students, and this leads to program effectiveness. What is more, to one teacher, implementation of the *curriculum* which is congruent with the relevant 4-year programs is required for program effectiveness because students who pass Vertical Transfer Test continue their studies at 4-year programs and congruent curriculum enables them to substitute the credits they earned at higher vocational schools.

Besides *further study* options, *employment* opportunities graduates are provided with were considered as an indicator of effectiveness of a vocational program by most administrators and one focus group. While studying at the program, as highlighted by three administrators, students' learning must be supported through collaborative agreements between employers and administrative and teaching staff. Thereby, employers contribute to learning activities by providing resources and part-time and full-time employment opportunities. Furthermore, effectiveness of a vocational program also required wider employment options for graduates. Two administrators and one focus group alleged that employment opportunities provided at both public and private institutions and companies motivated students and helped them overcome the fear of unemployment. Very similar to that view, three administrators and one teacher believed that equipping students with broad level of knowledge and skills would help them find jobs in a wide range of sectors. Therefore, to them, vocational programs should focus on general knowledge of jobs rather than knowledge for specialization.

4.2 Challenges Hindering Effectiveness of Vocational Teaching and Learning

It is sought through the second research question to find out the challenges faced by teachers, students and administrators at higher vocational schools during the teaching and learning processes, teachers', students' and administrators' perceptions about these challenges, and their feelings and perspectives regarding the underlying reasons behind those challenges. In line with that, data gathered through the interviews with the teachers, students and administrators were analyzed and seven themes emerged out of data, namely teacher-related challenges, student-

related challenges, curricular challenges, system-related challenges, contextual challenges, employer-related challenges and parent-related challenges.

4.2.1 Teacher-related Challenges Hindering Effectiveness of Vocational Teaching and Learning

Data analysis with regard to teacher-related challenges hindering the effectiveness of vocational teaching and learning revealed two themes: challenges arising from teachers' (lack of) knowledge and challenges related to teacher traits. Figure 4.6 summarizing all themes evolved within teacher-related challenges hindering the vocational teaching and learning was presented in the following.

In respect to the challenges derived from teachers' (lack of) knowledge, a *teacher's (lack of) content knowledge, (lack of) pedagogical knowledge* and *(lack of) technological knowledge* were perceived by the teachers, students and administrators as factors inhibiting effective vocational teaching and learning.

Challenges related to a *teacher's (lack of) content knowledge* resulted from their (lack of) vocational knowledge and (lack of) subject knowledge according to the perceptions of nearly half of teachers, one administrator and a few student focus groups.

With regard to (lack of) vocational knowledge, some interviewees asserted that adequate level of vocational knowledge required teachers to have up-to-date job knowledge and job experience. Likewise, most teachers and one administrator highlighted the importance of job experience for the sake of effectiveness of teaching and most of them expressed that it was their job experience they utilized to keep the students interested, to enrich teaching through examples of workplace and their own experiences and to present more than covered in the books. Despite the importance of job experience for effectiveness of vocational teaching and learning, most teachers and one administrator considered that most vocational teachers were lack of job experience (A1, T1, T4, T5, T9, T10, T11, T12, T13, T14, T15).

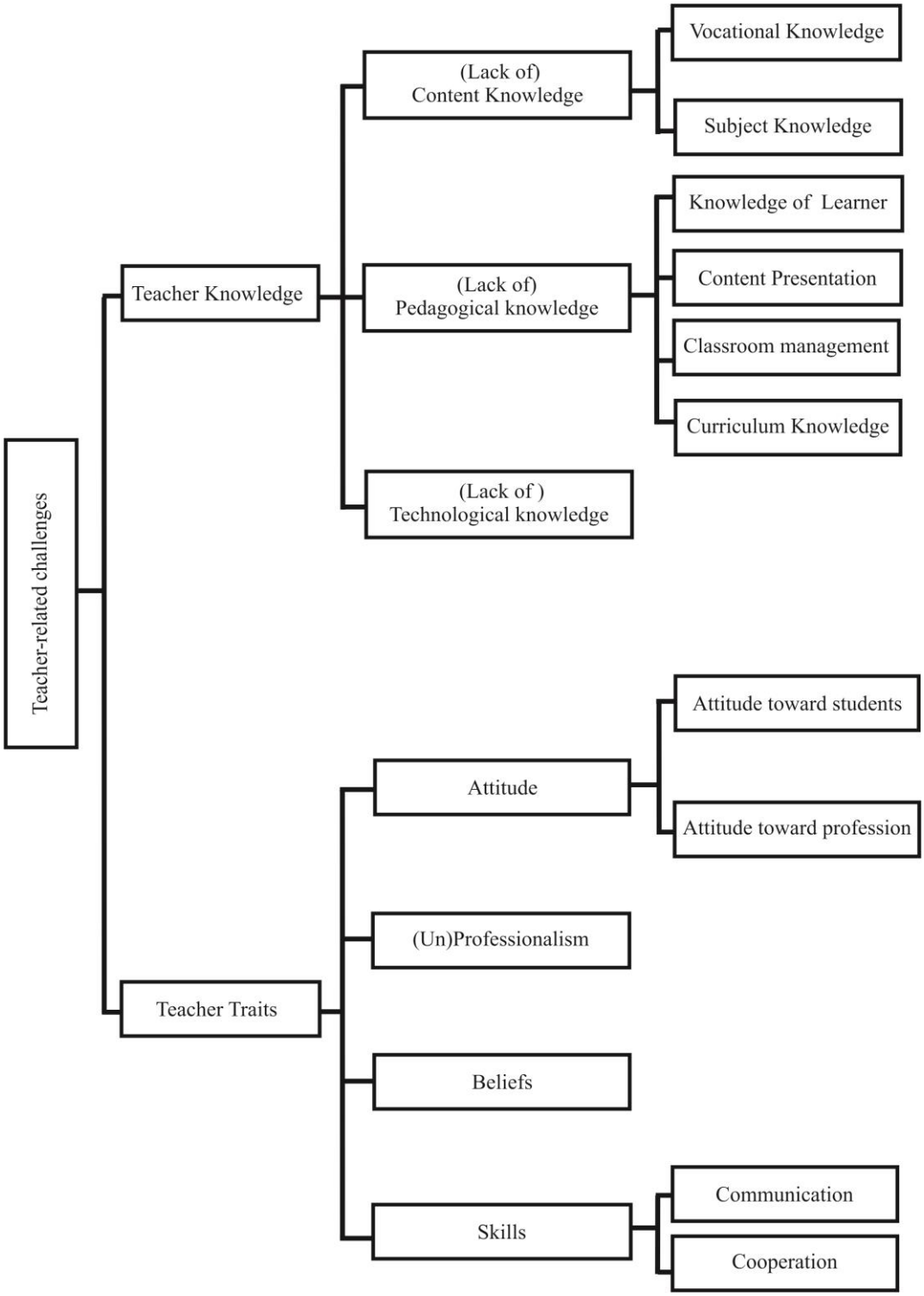

Figure 4.6 *Teacher-related Challenges Hindering Vocational Teaching and Learning*

One administrator stated that he could observe the difference between a teacher with job experience and another with no or limited experience and said: "Teachers with job experience satisfy their students. Even being lack of materials and laboratories does not come to their students' attention. However, teachers with no experience bore students by lecturing even in the laboratories (A1)". Correspondingly, some students and one teacher considered that some teachers lacked job knowledge (T11, F3, F4, F11, F12) and could not deliver the knowledge of job and workplaces as it was practiced in real life.

Likewise, expressed in parallel to each other, some students in three focus groups asserted that teaching and learning became ineffective when the vocational teachers stayed unaware of the developments regarding job (F6, F10, F14) while one student focus group considered that some teachers' vocational knowledge was outdated (F10). One student from a focus group elaborated on this challenges as follows:

> Teachers must teach us according to the practices in real life. But they tell us that life after school will be very different. Very conflicting, is not it? Then teach us that way. Teach us what we need in real life. For example, after I returned from traineeship I reported what I did there. The teacher said that he did not know about those [the tools used and procedures followed at the workplace]. Of course he does not. Because the software and procedures at the workplace were different from what we learn here. If he had job experience and spent some time at workplaces he could have known. Indeed, the teachers with job experience does not transfer up-to-date knowledge, either. They only have the knowledge of the tools used at their time. We are not told by the teachers what we will come across when we graduate (F10).

Like vocational knowledge, teachers' being (lack of) subject knowledge was considered as challenge for effective vocational teaching and learning. Mostly agreed challenge in relation to (lack of) subject knowledge was that teachers delivered the courses out-of-field/expertise (T8, T10, T15, F3, F5, F6, F11). Both teachers and students defined out-of-field teaching ineffective and most students specifically noted that they could not learn the course content delivered by such teachers but memorized the information provided on the books or study notes to pass the tests. One student indicated how sharply a teacher's performance differed at two courses as follows: "We had a teacher last year. He taught computing course

in the fall term. I loved that course and learned thanks to him. The same teacher delivered another course in the second term. He grossed me out. It happened like that [I could not learn anything] as he taught a course out of his field (F6)". Similar to students, teachers also had difficulty due to out-of-field teaching and expressed that she got very anxious while teaching out-of-field and she had to spend long hours to get familiarized with the content (T8).

Beside, teachers' lack of *content knowledge* required for job (F3, F4) was a challenge raised by students. To them, some teachers tend to deliver the whole content of a subject without considering the usability and relevancy to job and selecting and sorting the topics according to the needs. Lastly, one teacher claimed that teachers lacked interdisciplinary approach to vocational teaching (T13). According to her view, vocational programs, as required by jobs, recruit teachers from different disciplines; however, these teachers fail to integrate these disciplines and present it to students in a holistic way.

With regard to teachers' *(lack of) pedagogical knowledge*, the challenges were found to be related to teachers' (lack of) knowledge of learner, (lack of) curricular knowledge, (ineffective) classroom management and (ineffective) presentation of content. It was only students who believed that their teachers mostly lacked the knowledge of learners' needs and interests. Specifically, a group of students marked that some teachers remained indifferent to their learning needs (F2, F7, F11, F12, F13) as they were not concerned with their progress, they ignored students' level of understanding and learning styles and presented the content in a standard manner. Putting emphasis on theory-based courses, some students complained about teachers' recitation of slides like reading a book. During the non-participant observations, some teachers were observed to use powerpoint presentation and project the slides on the screen. As students also remarked during the interviews, these teachers started and ended the lesson by reading the slides and checked students' understanding saying "Any questions?". Students were observed in such sessions to remain mostly unresponsive to that question and the teachers continued conveying the content on the slides without asking further questions. During these presentations, students displayed off-task behaviours by looking out

of window, making drawings not related to course on notebooks and chatting with peers by whispering while a few students took photo of the slides.

In correlation with that, many students thought teachers neglected the differing group characteristics (F1, F2, F5, F6, F12, F13, F15, F16) resulted from differences of prior knowledge, in all phases of teaching including planning, implementing and evaluating. The students were said to vary in terms of prior knowledge due to the type of high schools they graduated from. Students themselves also noted that graduates of general high schools were good at Math and other quantitative courses while the students who studied at the relevant programs at vocational high schools had basic level knowledge of the job. According to the views of students, teachers either considered students to have prior knowledge disregarding the needs of general high school graduates, or recovered the content delivered at vocational high schools leading to boredom for the graduates from vocational high schools, heading no improvement in learning. One student from a focus group (F8) explained how she got bored during the courses: "I studied at a relevant vocational program at high school. I took similar courses there. When teachers here retell I ask myself: "How come? Are they telling this [covering this topic]?". I really get bored. Sometimes, I feel I know more than teachers (F8)".

In addition to that, students from two focus groups believed that teachers did not care about their socio-economic status (F1, F7). These students expressed that it was unaffordable to buy all materials. A students said: "Every week, we are supposed to buy materials costing 50-60 Turkish lira. This is just for one course. Teachers just demand. They do not care if we can afford or not (F7)". It was observed that the programs these students studied at required them to buy course materials to study on/with. On the condition that some students lacked these materials some teachers reacted verbally to those students and neglected them while some engaged those students by matching them with the students who had materials.

Furthermore, a considerable number of students felt that teachers did not consider the individual differences among students (F1, F3, F5, F7, F10). To these students, cognitive abilities and characteristics of vocational students varied; however, teachers predicated their teaching on the learning pace of high performing

students and made discrimination against low performing students. In connection to the views acquired through interviews, some teachers were observed to ask questions and receive answers from specific students, communicate only with those students answering questions, arrange pacing according to these students, remain uninterested to indifferent students and lack engaging all students. Moreover, a few students in two focus groups (F7, F10) talked about the different personality traits and called for the need for teachers to be sensitive and responsive to these traits. One student asserted: "I get demoralized when I cannot understand a topic. When a topic is not understood like a chain, others cannot be learned, either. But I hesitate to say that I have not understood. I wish teachers understood our conditions (F10)".

Regarding (ineffective) presentation of content, some teachers, students and one administrator presented opinion. To start with, nearly half of students indicated teachers' focus on memorization rather than meaning-making (F2, F5, F10, F12, F13, F14, F16). As evidence to this view, all of them stated that teachers asked questions in the exams that required memorization of content. Furthermore, to some of them, teachers did not require students to make comments and express their opinions but rather, teachers transferred the content and formulas in the books as it is, leading students to memorize. Another challenge on which most students agreed was that some teachers delivered course content in a complicated way (F1, F2, F6, F7, F10, F11, F13, F14). One student from F11, for example, indicated how teachers confused them due to lack of sound organization of content:

> We have such teachers [delivering content complicatedly] at the program. They present the content in such a way that it makes no sense. What the teacher says and what the topic is gets unclear. However, when I study with my peers, I understand (F11).

Besides that, six teachers criticized their colleagues for having academic focus rather than vocational one (T3, T4, T5, T8, T9, T11). Except one, all of the teachers with this view had job experience ranging from 10 to 30 years and they considered vocational teachers need to present content useful for job practice. However, to them, some teachers tended to present the content they acquired during their undergraduate and postgraduate without making any adaptation and adjustment. One of them criticized his colleagues with academic titles as follows: "At the school

most of the teachers are doing doctorate or getting prepared for it. Good for them but they transfer the content of their doctoral courses to the students here (T9)." Another teacher assessed the academic focus at higher vocational schools as follows: "I observe the teachers here. They are all trying to earn postgraduate degrees. Actually, it is a matter of the program you teach at. Some programs does not require academic degrees but expertise (T3)".

Finally, two teachers marked that teachers lacked using various instructional methods (T8, T10) and they mostly based their teaching on standard instructional methods like lecturing and materials like powerpoint slides. This view was also verified through observations and most of the teachers were observed to give lecture in theory-based courses. It was also witnessed that teachers supported lectures by giving examples from daily life, from workplace and from their job experience. In addition to the examples used while lecturing, some teachers used white boards by writing important points on it, underlying important points on the board, drawing diagrams on board to show relations and dictating and having students take notes. Unlike them, a few teachers used demonstration, some utilized student presentations while a considerable number of teachers gave step-by-step directions to students to teach the procedures in practice-based courses.

Concerned with challenges experienced in relation to (ineffective) classroom management, a few student focus groups mentioned teachers' lack of engaging all students (F5, F13, F14) and limited or no interaction with students (F13). One student described an ineffective classroom from a multidimensional perspective as given below:

> Everybody [teacher] is teaching as if they were supposed to give a seminar. If teacher does not communicate with the class [students], if the students are scared to ask questions how and why do the students get attentive? Student cannot say that he/she did not understand. … This is a matter of personality. I believe, pedagogical formation would not help (F13).

Similar teacher-student interaction was observed in one of the classes. In that class, the teacher asked calculation questions to students. The teacher was standing and looked very serious. Students were observed to be very hesitant to answer the questions and remained unresponsive. Therefore, the teacher selected

the students to answer his questions; however, these students gave wrong answers. The teacher reacted to these students verbally in a resentful manner. Students mostly nodded their heads and stayed silent.

Lastly, four administrators perceived that lack of teaching experience (A1, A4, A7, A8) hindered the effectiveness of teaching and learning. To these administrators, since most teachers working at higher vocational schools are newly graduated young persons they lacked teaching experience and learned classroom management, how to interact with students and the code of conduct through trial and error.

The fourth subtheme with regard *to (lack of) pedagogical knowledge* was found to be (lack of) curricular knowledge. Within that, the challenges evolved were related to planning, content selection, materials and assessment and measurement. First of all, according to the perceptions of the interviewees, teachers were said to be ineffective in course planning, revealing challenge against teaching and learning. For three teachers and students in one focus group, most teachers do not design courses according to job needs (T9, T11, T15, F14). Since these teachers having this view had job experience they had the knowledge of job requisites and therefore, could plan their courses accordingly; however, some teachers utilized their theoretical knowledge for course planning, so they failed to deliver required content. This view was supported by two teachers who remarked that teachers planned courses according to their knowledge (T3, T11). In other words, in case of the absence of a sample curriculum to model and a curriculum team, teachers' knowledge of content, derived from study field, was utilized while designing curriculum and courses. Similar to that, three focus groups complained about limited options for elective courses and irrelevancy of those courses with the job requirements. They alleged that elective courses were planned according to teachers' field of study (F5, F8, F14). Likewise, a group of teachers and two focus groups asserted a very similar view indicating that some teachers used course books as syllabus/lesson plan (T4, T9, T11, T13, F5, F8) while three other teachers perceived no or rare lesson planning as a teacher-related challenge. Though only three teachers touched upon that all of the teachers stated during the interviews that they did not have a written lesson plan but they envisioned the plan before they

entered the classroom. Additionally, as put forward by three focus groups, teachers did not inform the students of the objectives and course content (F1, F2, F14). Teachers were observed to mostly inform their students about the topics covered previously and to be covered during the session and next sessions. Only one teacher was observed to inform students about the outcomes of the session. In the classroom, specifically, half of the teachers informed about the content to be covered during the session and most of these teachers also reminded the previously covered content. Additionally, three teachers were observed to inform about the order of topics to be followed at the course while most of the observed teachers reminded students the importance of topic either for learning or for the job. Besides giving information about the content to be covered in the next session, nearly half of teachers also talked about the topics to be covered in the prospective exams. It was seen during observations that teachers used the exam-related information as a strategy to gain attention and as reinforcement. And once again, teachers' lack of assessment and measurement knowledge (F1, F5, F7, F11, F12, F13) as the last factor related to curriculum knowledge was argued by a considerable number of students and they criticized vocational teachers for being unfair and testing the knowledge of uncovered content in the exams.

Like (lack of) content knowledge and (lack of) pedagogical knowledge, a few teachers and some student focus groups proposed *(lack of) technological knowledge* as a challenge that inhibits effective vocational teaching and learning. Two teachers and five focus groups highlighted teachers used powerpoint presentation very frequently and they generally prepared verbose presentation with the use of limited visuals. It was found out through observations and interviews, teachers also read the text on the slides and in most classes students were required to write down the content on the slides as it was reported by students that teachers did not share the notes with students. In other words, the presentation material and the way teachers used these materials were found ineffective by the interviewees. Moreover, one teacher thought that teachers lacked the knowledge of educational technologies (T10) and insisted on using projector and powerpoint presentation as instructional tools.

The interview data also revealed that *teacher traits* produced some challenges against effective vocational teaching and learning. *Teacher traits* hindering effectiveness were found to be teachers' attitude, (un)professionalism, beliefs and skills.

First of all, attitude of vocational teachers toward students and toward the profession of teaching had a negative influence on their teaching and students' learning according to the perceptions of most students, one teacher and two administrators. Concerning the attitude of teachers toward the students, students in five focus groups believed that teachers demeaned students studying at higher vocational schools (F2, F5, F6, F7, F10). Though such attitude was not observed during the classes, a few teachers interviewed seemed to be biased toward students and used some humiliating words to define students. One student from F2 told her experience as in the following: "We cannot ask Teacher X questions about the topic we have not understood. He immediately gets pissed off. If we dare and ask questions he insults us (F2)". Additionally, during the interviews, a few students marked that teachers put the blame on students when they could not comprehend the content (F5, F14). Moreover, some teachers were reported by many students in the focus groups to block students' questions during classes (F1, F3, F10, F13, F14). Students expressed that they were afraid of asking questions to some teachers as teachers either humiliated them for asking such questions or got angry.

Beside, a few interviewees brought forward teachers' attitude toward profession as challenge. Among them, two focus groups noted that some teachers' attitude toward teaching profession was negative and they lacked the love for their job (F2, F7). Also, one administrator highlighted teachers' attitude toward higher vocational schools and stated that teachers perceived higher vocational schools as a step to faculty (A7). In other words, some vocational teachers viewed higher vocational schools as temporary workplace to work at during their postgraduate studies. And for two administrators, vocational teachers lacked the motivation for professional development (A7, A8) because it was not required for vocational teachers to be involved in academic studies and vocational development courses. Furthermore, they asserted teachers conducting studies for professional

development were not provided incentives or rewards, and so, teachers did not feel obliged to go into such developmental activities.

As to teacher (un)professionalism evolved under the subtheme of *teacher traits*, to some students, some teachers arrive late to class on a regular basis (F10, F13), finish classes earlier than the scheduled time (F2, F10, F11), cancel classes for personal reasons (F2, F6, F7, F10, F12, F13) and threaten students with low marks and difficult tests (F10, F13). Moreover, two focus groups marked that teachers did not make up the cancelled classes (F2, F6, F10) while it was stated by the students from one focus group that teachers did not share course materials and notes (F13). Additionally, lack of office hours set by the teachers (F7, F13) served as a challenge for students as they could not reach them in case of need.

I, as a non-participant observer, also witnessed some of these unprofessional demeanors during observations. Except two, all of the teachers arrived late to class, left the classroom earlier and did not stick to the break times. Moreover, in one of the classrooms I observed, the teacher arrived late to the classroom, fifteen minutes later after the class started, took a back row seat and asked students to start their presentations. During the presentations, the teacher looked uninterested as he was reading some notes. Two students performed their presentations and the teacher asked if there were any other students to make presentation. Having learnt no students would present, the teacher said that he would see them next week and left the classroom. Checking the time, I saw that the teacher stayed in the classroom for twenty minutes. During the interviews, the students of this teacher also alleged that their teacher never attended the classes regularly.

As for the beliefs of teachers, a few teachers had remarks about how teachers beliefs challenged the teaching and learning at higher vocational schools. One teacher highlighted that teachers had misconceptions about learner-centered teaching (T12) by viewing learning merely as a student responsibility and disregarding their facilitative role. She noted that teachers left students alone rather than facilitating learning on behalf of learner-centered teaching. In addition to that, three teachers emphasized the belief of teachers in lower level of cognitive abilities (T4, T12, T14). Since students enrolled at higher vocational schools generally get lower scores at the university entrance exam, as mostly emphasized by the teachers

during interviews, students were considered to have lower cognitive abilities. That teacher reported his view and other teachers' and students' perceptions saying:

> Contrary to what is believed by most of my colleagues, students do not have problems pertaining to their intelligence. At most, they are lazy. They do not know how to acquire knowledge [learn] or do not know his/her learning style or how to utilize the system. I never say "You are the students studying at two-year programs, Know your place". I always motivate and encourage them. But I observe my colleagues behaving students as if they were mentally retarded. They believe that students would not learn whatever they do and they do not [do anything to have them learn] (T14).

As the final dimension of *teacher traits*, challenges related to (lack of) teachers' skills came up. These challenges were found to be teachers' being lack of communication and cooperation skills. The very first skill that only students underlined was related to ineffective communication of teachers with students (F2, F3, F10, F14) while it was a few teachers who thought most vocational teachers lacked communication with employers (T9, T11, T14, T15, T16). With regard to teacher-student communication, students from four focus groups alleged that they had no or limited contact with their teachers both inside and outside the classroom. They hesitated to ask and answer questions due to teacher behavior and their way of communicating with students. During the observations, teacher-student interaction was observed in the form of teacher questioning, behavior control, praising and empowering students while student-teacher interaction occurred when some students were on-task and actively/passively engaged. Teachers were observed to mostly use questioning to communicate with students, and to make verbal reactions to control student misbehaviours. However, most teachers interacted only with students who were attentive and interested in the presented topic while their interaction with uninterested students was through verbal reactions to their behaviours and inattentiveness. Teacher praising was observed mostly in the form of teachers' thanking to students who made presentations. Finally, for the sake of student empowerment, one teacher asked students to decide the order of topics to be covered while three teachers allowed students to choose the group members they would work with. Concerning on-task student-teacher interaction, most students were observed to answer teacher questions timidly and unconfidently,

ask questions to confirm/make additions, hesitate to declare lack of comprehension, make comments on the teacher remarks, communicate with teacher without hesitation, ask teacher to redictate to catch up, have difficulty to write down the content on slides due to fast move. In nearly all classrooms, the number of actively engaged students outnumbered the students who were passively engaged. When passively engaged, students were observed to ask questions about the content to be covered in the exam nearly in all classrooms, and to ask for extension of due date for assignment in some sessions.

Secondly, cooperation among vocational teachers and employers was perceived critical by five teachers to involve employers in the teaching and learning process and receive their support. However, to one of them, teachers limited their teaching to the school context by disregarding the need for connections with the world of work. From a similar perspective, lack of cooperation/collaboration among teachers (T8, T10, T13, T15, F10) was considered to hinder effectiveness of teaching and learning. While one teacher proposed the need for cooperation for the sake of interdisciplinary approach (T13) other teachers indicated that teachers acted alone in planning and conducting their courses without any exchange of knowledge and experience with other teachers. Moreover, this led to the absence of integration among courses and holistic approach according to the views of a focus group. One of them indicated: “Each teacher presents what he/she considers important. But are they going to be useful for us? We want them to deliver job knowledge in an integrated way. They break the job knowledge into pieces and ask us to assemble (F10)”. Therefore, when teachers acted independently and isolated way students had difficulty to draw connections between knowledge and develop a holistic view.

4.2.2 Student-related Challenges Hindering Effectiveness of Vocational Teaching and Learning

A student’s entry characteristics, (lack of) affective behaviours and (lack of) cognitive behaviours were indicated by teachers, students and administrators at higher vocational schools as factors that inhibit teaching and learning effectiveness. Figure 4.7, given below, displays the summary of student-related challenges.

Interview data analysis revealed that entry characteristics of vocational students were associated with *(lack of) prior knowledge, program selection* and their *(low level of) socioeconomic status*.

In respect to *(lack of) prior knowledge,* the interviewees asserted that vocational students lacked basic general and academic knowledge along with prerequisite knowledge of job. Nearly all administrators and half of teachers and a few students put emphasis on the students' being lack of basic knowledge of Math, Computing and Turkish language (T1, T2, T8, T9, T10, T11, T12, T15, F8, F14, F15, A1, A3, A4, A5, A6, A7, A8) while a few students and teachers highlighted that students lacked English language skills (T5, T14, T15, F5, F14, F15) and were prejudiced toward learning a foreign language. Students' lack of prior knowledge was viewed by the most interviewees to be one of the most frequent challenges they encountered, and teachers and administrators found it very demanding to teach a job to the students with limited or no prior knowledge.

Furthermore, to some interviewees, students' prior education and basic knowledge level differed due to the variance among high school types students graduated from (A6, A7, A8, T1, T7, T10, T12, T13, T16, F8, F11, F12, F13) and these students lacked pre-requisite vocational knowledge required for higher level learning teachers had difficulty to accommodate their teaching to students' varying prior knowledge types and levels.

In addition to *(lack of) prior knowledge*, *program selection* also evolved among the entry characteristics as another student-related challenge based on the views of teachers, administrators and students.

All teachers, administrators and a considerable number of students asserted that students made uninformed school/program selection (A1, A2, A3, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, F1, F2, F5, F6, F14, F16). As a result of this choice, they lacked interest and motivation to study harder to learn the job.

Additionally, most administrators and teachers together with a few students also indicated the reasons of uninformed program selection based on their experience. To them, students made random program selection for the sake of diploma (A3, A4, A6, A7, A8, T1, T2, T5, T6, T7, T8, T9, T10, T13, F2, F5, F8,

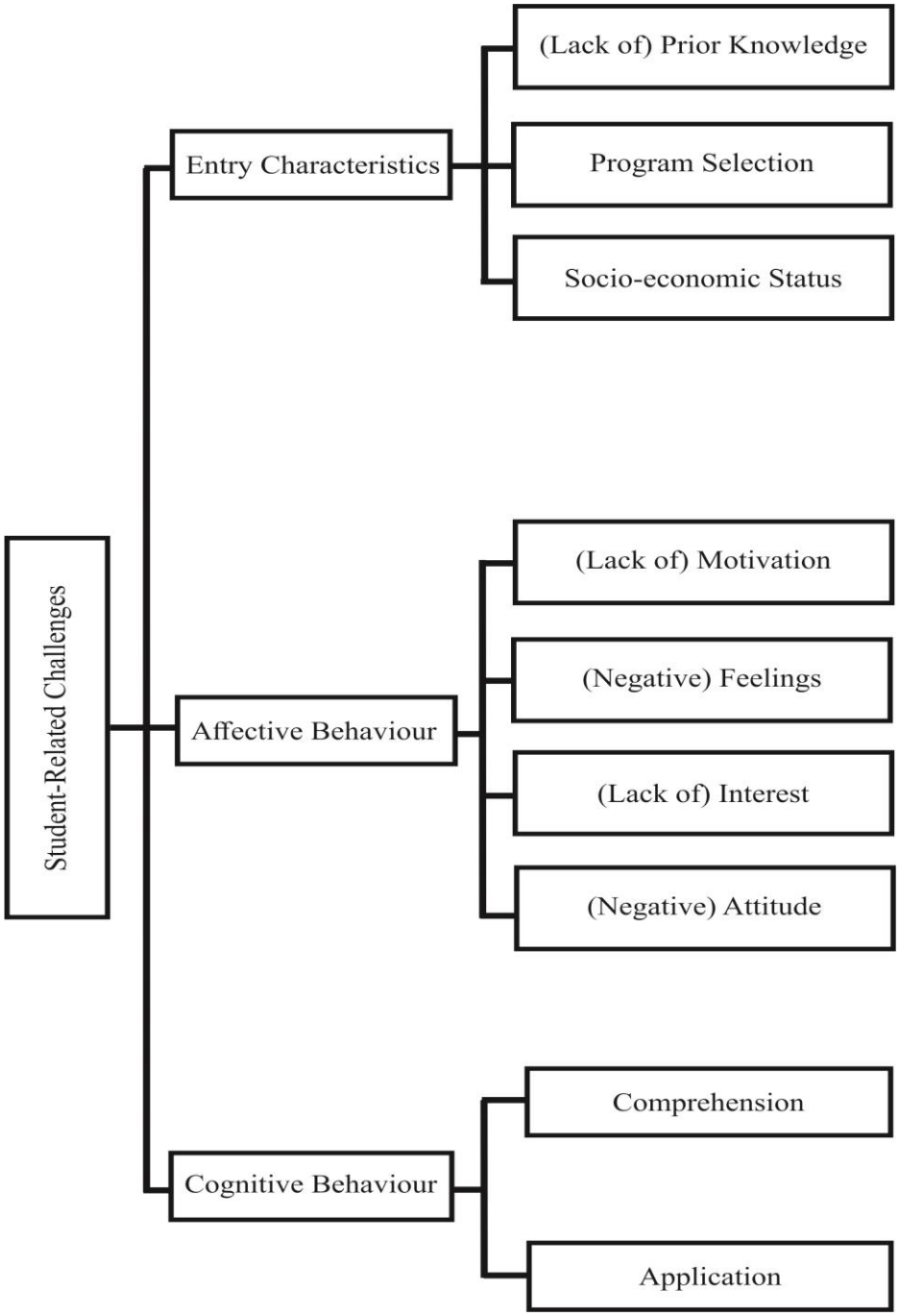

Figure 4.7 *Student-related Challenges Hindering Vocational Teaching and Learning*

F14). While making selection, students rank the higher education programs they wish to study for to a maximum of twenty-four according to the scores they get on the first stage of university entrance test, and the interviewees alleged that students made use of preference tools and websites and copied the suggested ranking as it is

because the aim was to earn associate's degree rather than learning a job. Moreover, a few administrators and one focus group highlighted that students selected specific programs due to high employment rate they offer (A1, A6, A7, F8). It was specified by some of them that high rates of assignment to public institutions meant high employment rate for the students and their parents and whether they were interested or not they preferred or were made to prefer those programs by their parents.

Also, students enrolled at higher vocational schools had misconceptions about job and its requisites (T4, T5). To two teachers, students mostly gain information from television and internet about the wages paid and they select the programs through these misconceptions without considering their eligibility and labour market conditions.

In addition to the abovementioned factors, program selection included lack of information about the school setting and location (A2, A3, A4, A5, A6, T1, T2, T5, T6, T7, T8, T9, T14, T16). Most administrators and teachers criticized students for being that uninformed about the school they preferred. One administrator gave the example of a student: "One student came to school after being enrolled in the main campus. I accompanied her and showed around. She was about to cry. She thought she would be [study] in the main campus. I did not see her again. I think she dropped out (A2)". According to the views gathered during interviews, students do not conduct comprehensive research about the location of higher vocational schools, and figure out where they were going to study during or after enrollment. Likewise, four teachers and one focus group marked that students had limited information about the curriculum delivered at the program (F1, T1, T2, T13, T16). As students were unaware the requisites of the job they mostly reacted to delivery of some courses, namely quantitative ones. It was stated by the students in one focus group themselves: "We are oblivious of what is written in curriculum. We count what our teachers tell us as curriculum (F1)". As noted by a few administrators and teachers, this is the result of inadequate information about the job selected (A1, A4, A8, T1, T6) and lack of job-related knowledge.

Most administrators and teachers referred to *socioeconomic status* of students and their parents, as well, while evaluating the student-related challenges. They related students' low level of achievement to their low family income (A1,

A2, A3, A4, A7, T8) and their parents' low educational background (A4, T6, T8). The parents and their guidance played important role while selecting the program and future planning. One administrator discussed how uninformed the parents were and the impact of their misguidance on students as follows:

> What can I say to students? [It is all about] the parents' perspectives. Generally, they are from rural regions. Their income level is below the average. The parents are happy as their children are studying at university but they are not informed enough. The informed ones are already looking for reference to find positions for their children. To speak about my own experience, my father learned what department I was studying at when I was on the fourth grade. …Their children are at higher vocational school and they need to behave accordingly. Maybe we will get more informed as the new generations replace the old ones (A4).

In addition to economic status, being e member of different ethnic group (A1, T3) was reflected as a challenge by one administrator and one teacher. Due to their ethnicity, some students did not speak Turkish very well and had difficulty to understand the content delivered.

The second subtheme emerged out of interview data was related to the (lack of) affective characteristics. Affective characteristics of students were found to be *(lack of) motivation, (negative) feelings, (lack of) interest* and *(negative) attitude.*

Motivation of students who study at higher vocational schools were stated to be very low by most teachers and administrators. All of the teachers agreed on that students lacked motivation to learn the job (T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16) because of the uninformed program selection or pressure of their parents to select that program. Additionally, all teachers indicated that students were reluctant to overstudy due to their learning habits (T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16). To them, students memorize the content just before the exam and forget it immediately because they attach no value to the content covered (T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16). Students were also observed to be too exam-oriented during classes as they insistently asked questions about the content to be covered in the exam at nearly half of classes. Correspondingly, most teachers were observed to utilize exam content as a strategy to attract students, and made reference to exams and content to be tested while informing about the

objectives/content, recalling prior knowledge and in order to gain students' attention when they were distracted and inattentive. A few teachers and administrators stated that it was mostly male students who lacked motivation because male students mostly preferred studying at higher vocational schools not to do military service. In their words, obligatory military service is postponed in case male students study at a higher education program; therefore, considered as the easiest way, they take the first stage of university entrance exam, are placed to one out of twenty-four programs they have preferred and extend the study duration as much as possible.

Finally, students from three focus groups asserted that though they were motivated at the beginning they lost their motivation due to uninterested peers (F5, F12, F14). This was mostly observed in the classrooms which were characterized with high level of variety with regard to prior knowledge and readiness for learning. While a few students were observed to be actively engaged and work on the assigned task most of students were observed to be passively engaged by taking notes, writing down the dictated knowledge, following the content on the book/powerpoint slides/videos, listening to the teacher attentively and watching teachers while demonstrating. Students were also observed to demonstrate some off-task behaviours in the classrooms. Most students were observed during class to display verbal misbehaviours like chatting with peers, making comments or remarks though they were not authorized, and interrupting teacher talk through jokes. Due to these verbal behaviours, one classroom got very noisy and a group of students had difficulty to hear the teacher talk. They reacted to their peers verbally and tried to silence them through repetitive warnings. Beside, a considerable number of students showed inattentiveness during classes as they were observed to play with cell phones, lie on desk, turn body back to the teacher and disregard teacher warning to be quiet.

A vocational student's *(lack of) interest* was another factor that hindered effective teaching and learning. Most teachers believed that students showed mere interest in getting diploma (A4, T2, T6, T7, T8, T10). In line with this interest, half of the teachers interviewed felt that students were only motivated to pass the tests (T1, T2, T5, T6, T7, T8, T9, T10) as most of them aimed to transit to 4-year

programs (T7, T13, T16, F6, F12) and take Public Personnel Selection Test upon graduation (T8, F2, F8, F9).

In addition to students' *(lack of) motivation* and *(lack of) interest*, their *(negative) feelings* were counted as challenge against effectiveness of vocational teaching and learning. All of the teachers marked that students adopted learned helplessness (T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16) and believed that they would not be able to master the knowledge and skills required for job due to their previous learning experiences and habits, and as a result, they lacked confidence in their abilities (T8, T14). Moreover, most students themselves reported that they felt unsuccessful for studying at higher vocational school (A1, A4, T15, F1, F2, F5, F6, F7, F8, F9, F10, F12, F13). The reasons behind these feelings were found to be related to the public status of higher vocational schools since these schools were regarded as the schools where low performing students studied. One student from a focus group talked about his situation like in the following: "My parents still keep it as a secret and do not tell our relatives that I study at a higher vocational school. They only share the name of my program saying "He studies at a medical program at university (F16)". It was understood through this quote that some parents accepted the inferior position of higher vocational schools. Likewise, some students used the metaphor "step-child" for higher vocational schools while they thought that 4-year programs at the faculties were like the biological children of the higher education system. Due to the marginalized position of higher vocational schools in the society students felt marginalized, too (F1, F2, F6, F7, F8, F12). What is more, as indicated by two teachers and one administrator, students were anxious due to the fear of unemployment (T3, T8, A8). To these teachers and administrator, students were pessimistic about their future and believed that they would not find job unless they found a reference.

As the last factor, *(negative) attitude* of students toward courses was considered by the interviewees to have a negative impact on vocational teaching and learning. First of all, most teachers stated that students viewed theory as useless (T1, T2, T3, T5, T6, T7, T8, T10, T12, T13) because students believed that knowledge of procedures and persistent practice would be sufficient to perform the

job. Similarly, a few students, teachers and administrators highlighted students' prejudice and negative attitude toward quantitative courses (A3, A4, A8, T6, T9, F1, F6, F10). Students themselves reported that they had difficulty to comprehend the logic behind formulas and interpret quantitative data. This was also confirmed by one teacher as follows: "They [students] are scared of Math and whatever quantitative. When Math is involved they hesitate and act in fear. Even if you ask them to perform four basic mathematical operations they get scared." (T6). Whether quantitative or not, nearly half of teachers thought that students were prejudiced toward all courses (T1, T2, T5, T6, T8, T10, T16). Teachers tried to persuade students about the necessity of courses and it took a few weeks for some teachers to adapt students to the classes. One teacher told her experience as given below:

> …There are some student groups who consider them [the courses] useless even if they are vocational courses. Course X is one of them. Whatever I try I cannot take a step further. I cannot teach. They pass this course by the skin of their teeth. Because they think this course is not related to their field of study though I explained [its relevance] many times. That is, if the students are not eager we cannot reach at the expected performance level. It [their negative attitude] may result from their lack of comprehension (T13).

While interviewing, students also gave examples of courses they considered irrelevant and unnecessary and they stated that they preferred more vocational courses delivered through practice. Supportively, four teachers noted students showed negative attitude toward courses other than vocational ones (T2, T5, T6, T8). General courses like Turkish Language and Basic Information Technologies and subsidiary courses like Business Management and Quality Management were counted among non-vocational courses and considered unnecessary by students.

As discussed by two teachers, negative attitude toward courses resulted in students' lack of reviewing the content and getting prepared for the course beforehand (T5, T10). Moreover, some administrators and students in one focus group observed that students with negative attitude toward the program and courses finally drop out (A3, A4, F14) as they have difficulty in learning.

Apart from affective behaviours, students' cognitive behaviours, categorized as (lack of) *comprehension* and (lack of) *application*, were proposed by

the interviewees among the student-related factors inhibiting effective vocational teaching and learning.

Most teachers, together with some students, considered that vocational students were mostly involved in surface learning as they had limited ability to make meaning (T5, T6, T8, T10) and to relate ideas to prior knowledge (T4, T5). As featured by surface learning, students tended to memorize and concentrate on assessment requirements rather than meaning making according to teacher views. Furthermore, while two teachers underlined lack of comprehension of abstract topics (T5, T8) more teachers and students highlighted lack of comprehension of quantitative courses (T1,T2,T6,T9,T10, F1, F2, F3, F4, F6, F9, F10). According to the views of two teachers, the students who have limited abstract and conceptual thinking skills have difficulty in acquiring the knowledge presented in theory-based courses due to their learning habits at previous levels of education and therefore, memorize the content not to fail the courses without critical interaction with it. Students themselves also asserted that their failure in quantitative courses depended on the limited prior knowledge of Math. Based on these challenges related to comprehension, there arose problems pertaining to application of knowledge; as stated by some teachers, students were unable to transfer knowledge into practice (T1, T2, T10, T12) since they even memorized the steps followed during application. However, teachers considered that mastery of knowledge and skills was revealed by applying it in different contexts like a different course and assignment. Besides that, students were considered by some teachers to lack critical thinking skills required to interpret the knowledge (T2, T5, T6, T8). One of the teachers marked that students could not recognize the variations of knowledge due to rote memorization and said: “I give examples of formula in the classroom. In the exam, I only change the numbers in the same formula but students cannot answer that question. Moreover, there are students who think I asked questions about uncovered content (T2)”. It seemed that vocational students’ previous learning experiences and habits had a negative impact on the learning processes at higher vocational schools.

4.2.3 Curricular Challenges Hindering Effectiveness of Vocational Teaching and Learning

Another main theme emerged after the analysis of interview data, namely curricular challenges. Curricular challenges which hindered the effectiveness of vocational teaching and learning were found to include the themes of curriculum development, content selection, teaching-learning process, assessment, resources and evaluation (see Figure 4.8).

Challenges related to curriculum development were found to be *(lack of) needs assessment, (non)inclusion of stakeholders* and *time allocation*. In relation to *(lack of) needs assessment*, a few interviewees put emphasis on the needs of labour market and indicated that there was mismatch between curriculum and labour market needs (A3, A4, T3, T6, T11). While one teacher (T3) defined this gap as overskilling other teachers (T6, T11) and administrators (A3, A4) highlighted that the curricula led to underskilling due to lack of resources and hands-on activities. In correlation to this view, most students viewed inclusion of irrelevant courses in the curriculum (A8, T8, T10, F3, F5, F6, F10, F11, F14, F15) as a challenge and they believed that they were delivered less vocational and practice-based courses as the curriculum was mostly occupied by courses not related to the job. Their view was also confirmed by two teachers (T8, T10) who alleged that some irrelevant courses were included in the curriculum to complete the required workload and credits. As reported by these teachers and one administrator, it seemed that European Credit Transfer System was misapplied and perceived as assigning random credits to courses. Finally in relation to this main theme, two teachers and students in one focus group indicated the need for specialization courses and sub-branches within the program (T3, T7, F2) and criticized the existing curriculum for its general focus. For these interviewees, there must have been elective courses students could select to gain expertise in a sub-branch or the program should have provided options for students according to their talents and interests.

Another challenging factor with regard to *curriculum* development was related to *(non)inclusion of stakeholders* in the curriculum development process. During the interviews with the administrators and teachers, it was discovered at all higher vocational schools except one that teachers developed the curriculum

implemented at the program they teach at either mostly on their own or rarely with colleagues. That teachers acted as the sole decision makers in the curriculum development process (A2, A3, A8) was perceived as challenge by three administrators, and one of them presented his concerns about the teachers' roles in the curriculum development process as given in the following:

> Curriculum is on the hands of teachers. We do not intervene in their decisions. We especially trust our teachers with job experience as they have the knowledge of sector but sometimes I get suspicious if their experience is trustworthy enough [to meet the needs of labour market] (A3).

In other words, to this administrator, teachers' workplace experience and job knowledge may not correspond to the recent needs of labour market. Furthermore, two teachers criticized that curriculum was based on the knowledge of the teacher (T3, T11) as the mere source. One of them told his experience as follows:

> Since our program was a newly founded one in Turkey, there was not any curricula to implement [take as an example]. There were not qualified teachers in this field to recruit, either. Because none knew how to teach the job as they were all job performers. An expert who had the knowledge of a sub-branch of this field was recruited as the teacher and he designed the curriculum according to his knowledge. [As a result], the name of the program and the content told different stories (T3).

In addition to abovementioned ones, other challenges were perceived by some teachers and administrators to occur as the result of noninvolvement of other stakeholders. Lack of involvement of graduates (A4, T3, T9) and employers (A2, A3, A6, A8) reduced the responsiveness of curricula implemented at higher vocational schools as views of graduates were perceived crucial to evaluate the effectiveness of curriculum while views of employers were needed to determine the compliance of curriculum with labour market demands.

Challenges arising from the amount of *time* allotted to courses were also indicated by students to hinder vocational teaching and learning processes. During the interviews, most students complained about unequal weekly distribution of course hours (F5, F6, F7, F8, F10, F11, F12, F13, F14, F16). Due to the uneven course hours, students stated that they were either too busy taking eight-hour classes a day or came to school for one-hour session. Due to the busy schedule, students

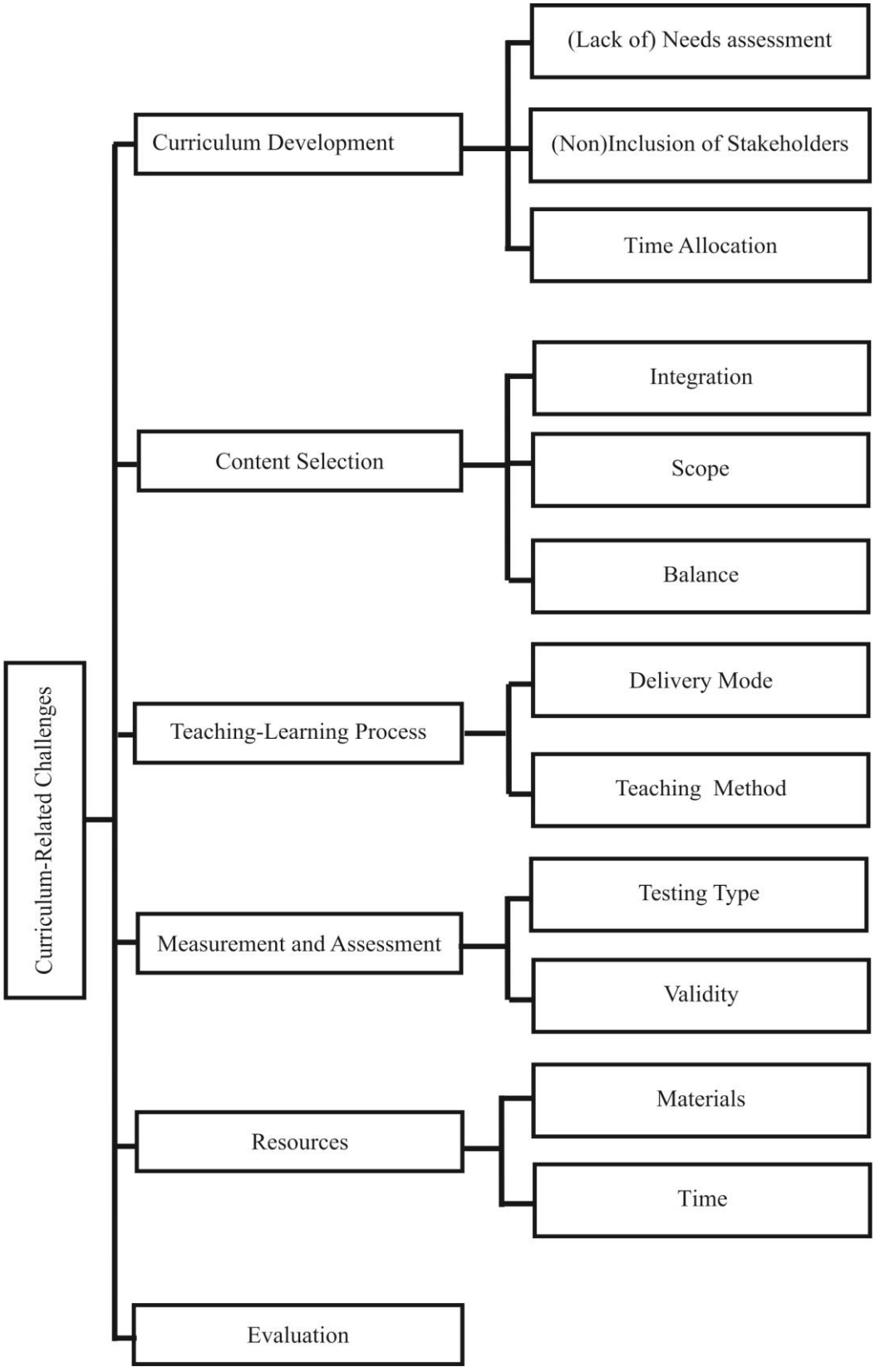

Figure 4.8 *Curricular Challenges Hindering Vocational Teaching and Learning*

asserted that they could not find time for non-academic socio-cultural activities. This view was also confirmed by some students who criticized arrangement of course hours according to teachers' agenda (F2, F6, F7, F12, F13).

In other words, due to the absence of teachers for some days led to incoherent course distribution as stated by some students in F13: “Teachers are taking leave for their postgraduate studies. They are not here [at school] for two days. So, they are offering all of the courses in just three days. We get overwhelmed with classes. (F13)”. Furthermore, five student focus groups asserted that courses were allotted inappropriate hours (F6, F7, F10, F12, F13). Putting emphasis on the content to be covered, students felt that the content of some courses required less time while they needed more hours allocated for practice-based courses (F1, F3, F7, F12, F13, F16). One student gave the example of a course saying:

> …The teacher presented the content in two hours though it was scheduled four hours [per week]. Moreover, she covered the whole content in three weeks and nothing was left for the remaining weeks. So, she reviewed that content again and again for the remaining ten weeks (F7).

As was revealed during the interviews, students considered that some courses like practice based ones required more time than allocated; however, stealing time from these courses, teachers allotted that time to some other courses, and because of that students could not improve their practical skills as much as they wanted. One student mentioned how they had difficulty in mastering job skills as follows:

> The hours allotted to practice-based courses are insufficient. We work at the laboratories/workshops at the weekend to close the gap. Fortunately, they allow us to do so. If they removed the unnecessary courses and add those hours to practice-based courses we would not have such problems (F16).

The second subtheme revealed by interview data was related to challenges derived from (inappropriate) content selection. Concerning the content selection, the interviewees highlighted that they encountered some challenges with regard to the *integration, the scope* and *balance of curricula*.

According to the views of some student focus groups and a few administrators and one teacher, the curriculum implemented at higher vocational schools lacked integrated curriculum approach. The problem of (lack) integration

with labour market was put forward by one focus group who believed that course contents were outdated (F10) and did not reflect the up-to-date requirements of workplaces and demands of employers. Beside, lack of integration between the curricula at higher vocational schools and vocational high schools (A7, A8, F11, F12, F13) posed a problem for two administrators and three focus groups. Students with this view believed that vocational education delivered at vocational high schools was more effective and one student compared the curricula delivered at both levels as in the following:

> We were delivered more comprehensive knowledge and skills at [vocational] high school both during traineeship and at courses. We thought that we would have been provided higher level training here but confronted with lower level [training]. I learned nothing here apart from the certificate given. [Moreover] I forgot what I already knew (F11).

While these students felt that education and training at higher vocational schools were at lower level a few focus groups asserted that the curricula at vocational high schools were repeated at higher vocational schools (F2, F12, F13) without introducing any additional knowledge and skills. Apart from this comparative view, one teacher focused on the curriculum offered at higher vocational schools and criticized lack of integration among the courses (T13) delivered at the program. To her, the courses were not connected and related to each other as each teacher acted independently while developing and implementing the curriculum. She said:

> This is what I observed and realized during the process. There are eleven different teachers delivering eleven different courses. When you look into the contents you see that they are not connected with each other though the courses [are supposed to] complete each other. The teachers delivering these courses must be in touch with each other and design the curriculum together. We do not integrate courses. I believe there is integration problem at all higher vocational schools. Because of that, students feel as if each course was independent from each other and each teacher was presenting another course from a different field. However, they all have the same objective: to raise graduates who would perform the job. [To do that] we must integrate the courses with each other. [It is] like constructing a wall. Unless you put the bricks in harmony the wall will be curved. And we see our [the conditions of] graduates act as the proof [of this lack of integration] (T13).

In addition to *integration* problems, challenges with regard to the *scope* of curricula were discussed during the interviews by some teachers, students and

administrators. First of all, two administrators and students from two focus groups addressed to the breadth and depth of curriculum by marking that the curricula at higher vocational schools were the copies of the content of relevant 4-year programs (A7, A8, F2, F12). Using a metaphor, one student from F2 resembled the curriculum to "zipped file" and marked that their curriculum was the zipped version of the curriculum delivered at faculties. Because of this reason, two administrators sharing this perspective thought that the curriculum included too many courses (A3, A8), resulting in too busy weekly schedules and presentation of more knowledge than needed (T3, T4). What is more, some interviewees criticized limited space left for vocational courses in the first year (A1, A8, T8, F1, F16) due to the inclusion of general courses made compulsory for all higher education programs by Higher Education Council. Among these courses were Turkish Language, Atatürk's Principles and History of Revolution, Basic Information Technologies and Fine Arts. These courses were reported to be delivered both in the fall term and spring terms by leaving no space for vocational courses in the first year.

Lack of a *balanced* curriculum was another factor evolved under the theme of content selection. The imbalance between theory-based courses and practice-based ones was the most criticized characteristic of curriculum by most students. Nearly half of the students highlighted that the number of hours allotted for applied courses were not at the required level (F2, F7, F8, F10, F11, F12, F13, F16) because of too much emphasis on theory-based courses (F5, F6, F10, F11, F13, F16, T11). Some of them noted that lack of materials and laboratories, teachers' lack of job experience and their academic approach to vocational education led to the academic focus at higher vocational schools. Additionally, students from four focus groups specifically noted how important English courses were for job finding and complained about the focus on grammar at these courses (F3, F4, F5, F14). Rather than improving students' receptive and productive skills, students were taught grammatical rules which were considered of no use to find and perform a job.

The third subtheme was found to be related to the challenges encountered during teaching and learning process and included *delivery mode* and *teaching method* within.

As stated by the students, General English courses were delivered online at all higher vocational schools involved in the study, and all of the students found this delivery mode ineffective (F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16). Students believed that they could not learn English in this way and due to this fact they mostly failed these courses and had to take resit exams. Apart from that, one teacher voiced another challenge and criticized delivery of applied and theoretical hours by distinct teachers (T4). Some courses were stated to be delivered in two sections: in the first of which the teacher delivers theoretical background while the aim is on the application of that abstract knowledge in the second section. This teacher explained his view as follows:

> Theory-based and practice-based hours [of a course] must be delivered by the same teacher to keep them coherent. You cannot have students practise what is not told in theory-based course because you tell the method and how it would be applied then. And you put knowledge into practice because you know what you delivered. However, [when courses are delivered by distinct teachers] I am trying to have students apply the knowledge someone else provided. If that teacher missed a point you would not be able to integrate and relate them to each other (T4).

To him, despite the apparent need for coherence and unity between theory-based and practice-based courses, different teachers were assigned to these courses by administrators, leading ineffective teaching and learning.

Besides *delivery mode*, *teaching methods* imposed in the curriculum were reported to pose challenges for some students. They criticized teachers for not including variety of teaching methods (F5, F12, F13, F15) in the curriculum and using lecture as the sole teaching method (F5, F6, F7, F14) to teach a job.

In addition, another component of curriculum, namely measurement and assessment, posed challenges for the students and teachers at higher vocational schools. Concerning measurement and assessment, *testing types* and *validity* of measurement tools were revealed by mostly students and teachers to be challenges hindering effectiveness of vocational teaching and learning. Testing vocational learning through written exams (T3, T5, T13, F5, F14), use of assessment methods leading to memorization (F1, F2, F5, F6, F7, F8, F10, F11, F13, F14, F15, F16), lack of use of rubrics/evaluation criteria (F7, F12, F14) and lack of a variety of

assessment methods (A2, T7, T8) were counted among the challenges encountered by the interviewees. Moreover, nearly half of students questioned the validity of measurement and assessment as some of them indicated that teachers tested the knowledge of uncovered content in the exams (F1, F5, F6, F10, F13) while the students from three focus groups felt the grading was unfair because teachers did not make use any criteria to assess students' work and adopted discriminative attitude toward some students.

Lack of resources for curriculum led to other challenges for the students and teachers, as well. One of the resource-related challenges was found to be concerned with the amount of *time* devoted to the curriculum. While some administrators and teachers found two-year time inadequate to cover the whole content (A6, A7, A8, T1, T5, T7, T13, T16) students from two focus groups asserted that there was no need for two-year time to cover the content (F8, F10). Because of the scope of curriculum implemented at some programs, especially medical programs, there was need for more time to have students gain the requisite job knowledge and skills. On the contrary, the content delivered at some programs would require less time than two years as the graduates from higher vocational schools and any attendees rewarded with certificates at intensive courses gain same level knowledge and skills and treated equally in the labour market. Moreover, inappropriate pacing (F5, F7, F12, F13, F16) resulted from inappropriate organization of content and scope was stated by some students to hinder their learning because teachers did not move at the right speed required by the amount of content to be covered. While some of these students thought that teachers adopted slower pace of teaching as they covered limited content for the whole term or fast pacing due to huge bulk of content to be delivered.

Beside, inadequate supply of course *materials* inhibited vocational teaching and learning. Firstly, lack of materials and tools used at practice-based courses (A4, T6, T8, T12, F6, F7, F8, F12) was considered as a critical challenge by a considerable number of interviewees as this condition hindered the conduct of hands-on activities and thus, teaching and learning practical knowledge and skills. It was also observed that laboratories were equipped with limited materials used in turn by students divided into groups at practice-based courses while there were no

laboratories for some programs due to the high cost of needed tools and materials. During the sessions of two courses conducted in computer lab, students were observed to complain about broken computers and had to change seats to find working computers. One administrator and students from one focus group also highlighted the equipment at the laboratories was outdated (A3, F10) which challenged the conduct of courses effectively.

As the final subtheme of curricular challenges, (lack of) curriculum evaluation was proposed as a threat to the effectiveness of teaching and learning processes by nearly all administrators. Except one, all administrators and two teachers stated that curricula at those higher vocational schools were not evaluated neither internally nor externally (A2, A3, A4, A5, A6, A7, A8); therefore, it depended on the teachers' will to evaluate the curriculum and take action. However, as stated by two teachers, it required too much effort and paperwork on the part of teachers (F11, F14) and therefore, teachers made unofficial changes and adjustments not to deal with paperwork and procedures. In addition to that, it was found out that end-term student course evaluation questionnaire was administered at all higher vocational schools and one administrator and one teacher marked that they were not informed about the results as findings were disregarded (A2, T6) by the senior administrators.

4.2.4 System-related Challenges Hindering Effectiveness of Vocational Teaching and Learning

System-related challenges were also among the problems that administrators, students and teachers at higher vocational schools experienced. As a result of interview data analysis, themes emerged under the main theme of system-related challenges were found to be related to prior education, student admission, planning, implementation, resources and policy making as was displayed on Figure 4.9.

During the interviews, nearly all of the teachers and administrators emphasized the challenges they encountered due to students' prior education, namely *primary-level education* and *secondary-level education*. All administrators and teachers except two thought that students failed to gain basic knowledge and

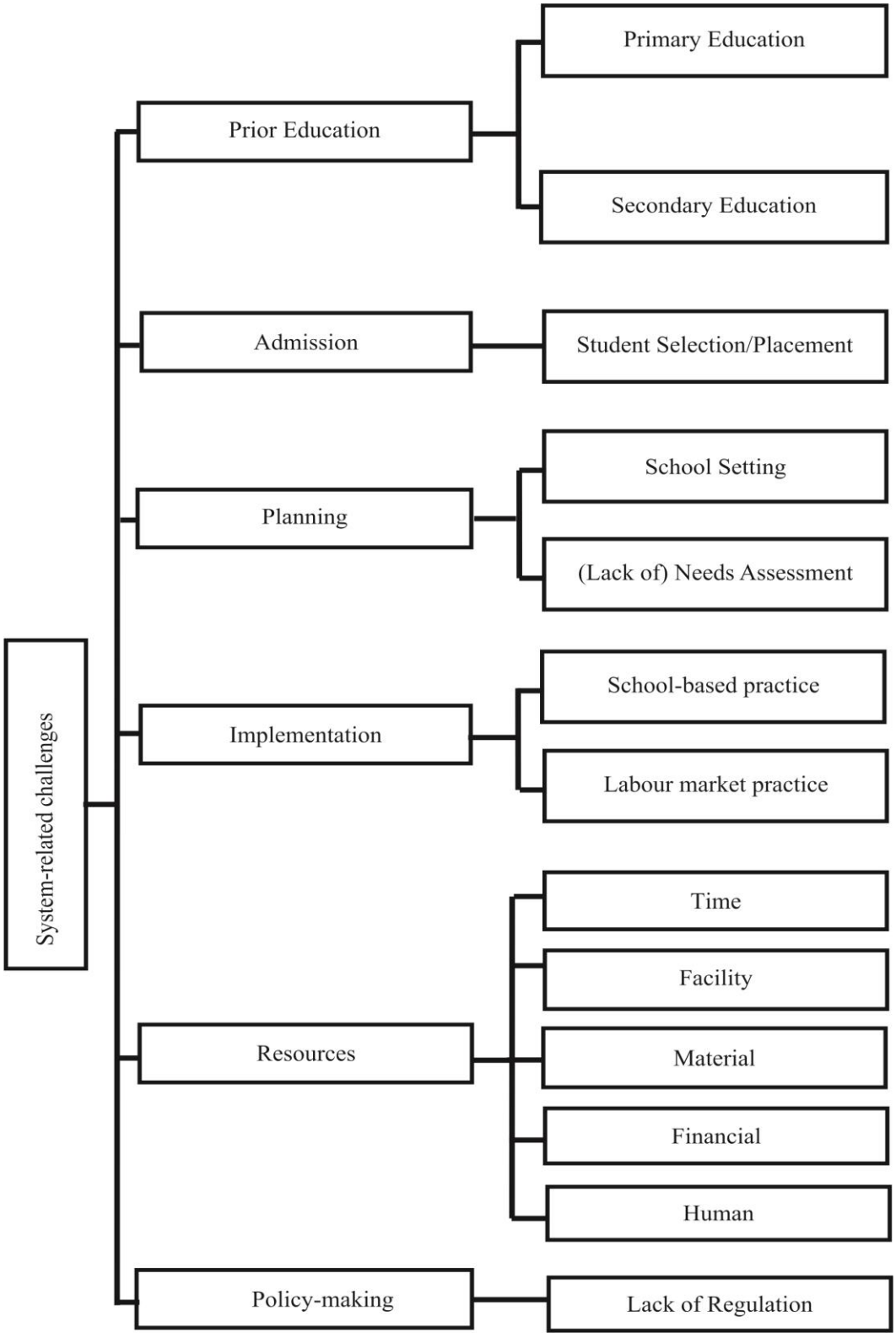

Figure 4.9 *System-related Challenges Hindering Vocational Teaching and Learning*

skills during their education at primary schools (A1, A2, A3, A4, A5, A6, A7, A8, T2, T3, T4, T5, T6, T8, T10, T11, T12, T13, T14, T15, T16). To some teachers, the fact that students studying at higher vocational schools had limited literacy and numeracy skills resulted from the failure of primary education to deliver these skills effectively. One teacher especially noted that she had difficulty to read the exam papers due to the illegible and ambiguous hand-writing of students (T8). Another teacher also added that students could not communicate their opinions clearly in Turkish both in a written and spoken way (T15).

Beside, all of the administrators and teachers highlighted lack of guidance and counselling at early ages (A1, A2, A3, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T8, T9, T10, T11, T12, T13, T14, T15, T16). They thought that uninformed school choice was the result of lack of guidance and counseling according to students' interests and talents at primary schools. One of the teachers marked that due to lack of professional counseling services parents took the place of educational counsellors and guided their children according to their interests rather than the students' (T12). From a different perspective, one teacher underlined the importance of counseling at early ages to determine the special learning needs of students. She said:

> We have students who indeed need special education. These students should not be studying here. Learning disability, concentration problems, obsessive compulsive disorder etc. These students must be diagnosed and be educated accordingly. These students do not communicate, answer your questions. There are students who cannot tell their names when I ask. I understand that there is a problem but there is nothing I can do (T8).

Like *primary-level education*, all administrators and most teachers mentioned about the challenges derived from *secondary-level education*. Lack of vocational guidance at high schools (A1, A2, A3, A4, A5, A6, A7, A8, T2, T5, T6, T7, T8, T10, T12, T13, T14, T15, T16) was indicated as a challenge by all administrators and most teachers. They all asserted that students would have been more motivated and interested if they had been guided about the occupations they would be more successful at. Moreover, most administrators and teachers referred to vocational high schools and criticized these schools for lack of teaching academic knowledge and skills (A1, A2, A3, A4, A7, A8, T1, T2, T6, T9, T10, T12, T13).

As a result of that, students lacked prior knowledge on which teachers would construct vocational knowledge and skills and therefore, had difficulty to comprehend the content delivered at higher vocational schools.

Another factor hindering effectiveness of vocational teaching and learning was related to the admission of students to higher vocational schools inappropriately. This theme revealed challenges related to *student selection and placement* through university entrance exam. Rather than an eligibility test, selection of the students through a general test was perceived as a challenge by most interviewees (A5, A7, T1, T2, T3, T4, T5, T6, T7, T8,T9, T10, T11, T12, T13, T14, T15, T16, F2, F4, F7, F8, F14). Teachers and administrators with this view thought that such an eligibility test would help them test students' interest, motivation, prior knowledge and skills while students believed that this type of admission would remove differences among students with regard to prior knowledge and as a result, they would be in more harmonious classes and would not have been distracted by uninterested peers. Furthermore, abolition of direct transfer of vocational high school students to higher vocational schools (A1, A2, A3, A6, A7, A8, T2, T6, T16) was considered by most administrators and a few teachers as another factor. Formerly, students from vocational high schools could be placed to higher vocational schools based on their study fields without taking university entrance exam. However, the right of direct transfer was abolished in 2017 and vocational high school graduates had to take the entrance exam and get the minimum score to study at higher vocational schools. As one administrator indicated this amendment of law resulted in less number of graduates from vocational high schools placed to higher vocational schools and they, as teachers and administrators, had to try delivering job knowledge and skills to students with no prior knowledge. In addition to that, students from inappropriate study fields were placed to the programs (A1, A7, T1, T5, T6) offered at higher vocational schools. In other words, programs at higher vocational schools required knowledge of different fields (verbal or quantitative); however, as indicated by a few teachers and administrators, there were programs which enrolled students from inappropriate knowledge fields. On teacher highlighted:

> Our program is considered to require verbal knowledge as its name includes the word "art" rather than "technology". Contrary to what is believed, there are many courses at the program based on quantitative knowledge. …They [students] do not know what a millimeter corresponds to. They cannot even use ruler to measure. …It is because students are recruited from irrelevant knowledge fields (T1)".

This challenge was found to be highly related to uninformed school choice and lack of prior knowledge by these teachers. However, to one of these teachers, it was also Student Selection and Placement Center leading this problem by setting mistaken criteria for programs and defining irrelevant knowledge field requirements.

In addition to (lack of) prior education and inappropriate admission, poor educational planning caused problems for the interviewees. Selection of unfavorable *school setting* for higher vocational schools and *(lack of) needs assessment* were considered by nearly all teachers, students and administrators among the factors leading ineffective teaching and learning.

During the interviews, all of the teachers and students complained about establishment of higher vocational schools at towns (A2, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12). According to their perceptions, the reasons for selecting towns were to develop them, increase the income of local people and population of towns. One teacher summarized the view as follows:

> …I think this is a critical mistake. Every student wants to go through campus life. They [decision makers] should not exploit higher vocational schools to develop underdeveloped regions. It is a false notion to support the tradesmen and storekeepers and increase the population through higher education institutions because you take away these students' right to experience university life at a campus. Higher education institutions should not be used as a political tool (T12).

Similarly, one administrator marked that it was actually mayors and local people who demanded higher vocational schools be established in their town. He said: "Each town wants a higher vocational school. The mayor assigns the land or donates a building. Fait accompli! No dormitory, no facility, no teaching staff…Nobody cares (A7)". Moreover, due to being located in towns higher vocational schools remained very far from the main campus (A2, A3, A4, A5, A6,

A7, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16). However, both students and teachers believed that it was significant to be within the borders of the main campus for motivating both teachers and students through extracurricular activities and socio-cultural events. Moreover, it was difficult and unaffordable for students, as one teacher asserted, to frequently go to main campus due to local bus timetable and financial constraints (T9).

Establishment of higher vocational schools in areas where relevant sector is absent (A1, A2, A3, A4, A5, A6, A7, A8, T2, T3, T4, T6, T7, T8,T9, T10, T12, T13, T16, F2, F3, F4, F6, F7, F8, F9, F10, F13, F16) was also considered as a problem by most interviewees. This condition inhibited workplace learning which all of the teachers and students interviewed attached high importance. There were also many teachers who questioned the reasons for launching programs irrelevant to the sectors serving in the city. For example, one of the teachers specifically marked that he could not understand why a technology program was being offered in a town whose economy was based on agriculture (T6). Even if the sector was present transportation to the workplaces was found challenging as higher vocational schools were mostly located in the outer suburbs of the town far from the workplaces (A3, A4, T3, T6, T7, T8, T13, T16). As transferring students to those workplaces on a regular basis was found costly students had to cover transportation expenses on their own. Finally, lack of campus-wide activities (A2, A4, F1, F2, F3, F4, F5, F6, F7, F8, F9, F14, F15, F16) posed problems for most students and two administrators interviewed. They indicated that all activities and events were organized in the main campus and they could not join them due to the distance and transportation problems. Moreover, those students asserted that teachers and administrators at higher vocational schools failed to organize extracurricular activities which would contribute to their learning (F1, F2, F3, F4, F5, F6, F7, F8, F9, F14, F15, F16). Expressing her displeasure due to lack of socio-cultural activities, one student from F2 visualized their condition by resembling students to officers working between 8 am and 5 pm.

As to the challenges related to planning higher vocational education, *(lack of) needs assessment* was the other subtheme evolved based on the perceptions of

the administrators and teachers. All of the administrators and teachers agreed that lack of needs assessment had a negative impact on both inputs and outputs of higher vocational schools. Launch of programs without assessing the nationwide need (A1, A2, A3, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16) was considered to affect the current and future performance of higher vocational schools adversely. According to this view, study fields, programs and number of graduates needed by the labour market must be determined according to the national needs, however, as they all asserted, higher vocational schools produced graduates above the need of labour market (A1, A2, A3, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16) due to lack of needs assessment. According to perceptions of some teachers and one administrator, this was also caused by offering same study programs at most higher vocational schools, faculties and through intensive certificate courses (A1, T7, T9, T14). Based on that, the administrator called for a sound educational planning as follows: "Which one really meets the need [of labour market]? Higher vocational schools, universities or certificate programs? If you allow all of them to teach the same job and recognize its validity you will create chaos (A1)".

In correlation to those problems, all of teachers and administrators made criticism of irrational capacity increase conducted by Higher Education Council (A1, A2, A3, A4, A5, A6, A7, A8, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16). They noted that intake capacities of programs were increased without assessing the physical needs and resources at schools. One teacher gave the example of her experience noting that program capacity was increased though they informed the Council about the unavailability of facilities, resources and physical conditions (T7). She believed that it did not matter what they reported because the Council automatically increased intake capacity when the programs enrolled students in full capacity.

In addition, new programs were launched without assessing the physical needs at the schools (A3, A4, A6, A7, T3, T4, T6, T7, T8, T10, T11, T12, T13, T14, T15, T16) and before recruiting required number of teachers (T3, T16). As learned from interviewed teachers, teaching staff and materials were supplied in the course of time after students were placed and enrolled. Lastly, two teachers touched upon

lack of graduate follow-up (T3, T14) which was perceived of high importance to evaluate the needs and identify the discrepancies of program.

As to the challenges related to implementation of educational policies, data revealed that the participants faced problems due to *school-based practices* and *labour market practices*.

Challenges derived from *school-based practices* included the development and implementation of curriculum, remedial actions taken in case of low enrollment rates and delivery modes. First of all, two administrators and two student focus groups highlighted lack of curricular unity among programs nationwide (A1, A7, F7, F12). Two administrators noted that courses, credits allocated to these courses, course contents and pacing showed high variation among the same study fields, leading to differing graduate qualifications. Similarly, some students referred to the challenges they faced when they attempted to make lateral transfer to another higher vocational school due to the variations between curricula (F7, F12). Additionally, students from another focus group criticized inconsistency between program title and curriculum (F1). These students thought that assigning titles of popular study fields to programs was a strategy to attract students and have them prefer those programs. Likewise, two administrators and one teacher added that program titles were altered in case of low enrollment rate (A2, A4, T1) and replaced by more appealing titles derived from the study fields most preferred; however, the curriculum was kept as it was without any changes.

Besides all, among the *school-based practices* that posed challenges for teaching and learning was online delivery of vocational programs (T5, T12, F5, F8). These teachers and students believed that vocational teaching and learning was not appropriate for online education as it required hands-on activities under the guidance of teachers.

In addition to abovementioned challenges, *practices in the labour market* paved way for employment problems concerning the graduates of higher vocational schools. Provision of same-level education through certificate programs and by workplaces (A1, A4, T2, T5, T7, T8, T9, T10, F2, F5, F8) and equal treatment to those certificates and diplomas of higher vocational schools by employers in the labour market (F2, F8) devalued higher vocational education and graduates'

qualifications. Students in a focus group discussed disadvantages of studying at higher vocational schools as follows:

> We spent nearly two years here taking many courses and exams. Yet, employers mostly recruit the people who have attended certificate programs as they do not waste so much time like we do. They get certified in a few months and get the job (F8).

Another system-related challenge was found to be (lack of) resources. These challenges revealed through data analysis were related to *time, facility, material, financial* and *human resources.*

Regarding *time* constraints, some interviewees asserted their views about allocation of two years for higher vocational education. Nearly half of teachers and administrators and two focus groups argued about the allotment of standard study duration for all programs at higher vocational schools (A1, A4, A6, A7, T1, T3, T5, T7, T10, T13, F3, F14). While most of them believed inadequacy of two-year time for some programs to deliver the requisite knowledge and skills one administrator and two teachers felt that there was no need for two-year time (A1, T1, T10). Students from F14, who were already performing the job in the sector, asserted that "Two-year time is sufficient for the ones who already have job experience and still work in the sector but it is like an intensive course for new graduates because it includes both high school and higher vocational school education (F14)". Similarly, one teacher said: "Whole content can be covered in six-month time. To extend it to two years we include many irrelevant courses for credit completion (T10)." In other words, it was believed by these interviewees that time needed to complete education and training at higher vocational schools depended on the field of study and prior knowledge of students; however, standardization of duration for all programs posed problems for teaching and learning. Additionally, two teachers and one administrator complained about long summer holidays (A3, T6, T16) as students lose significant amount of earned knowledge and skills over summer due to this long break lasting nearly four months.

Concerned with *material* shortages, a few administrators and teachers thought that lack of tools used for practice-based courses (A3, A5, A7, T6, T12, T13) proved challenging for teaching and learning processes. As they all indicated,

these tools and materials could not be supplied due to budgetary constraints. Lack of job-specific teaching and learning materials (T3, T6, T8, T13, T16, F6) was also considered as a challenge by some teachers and one focus group. Those teachers noted that they had difficulty to find published and visual sources to base and enrich their teaching while students in that focus group marked they had to rely on study notes prepared by their teachers and could not support their learning through extra sources.

Lack of *financial resources* was another factor having a negative impact on vocational teaching and learning. As a result of budgetary constraints and high costs, laboratories used for practice-based courses could not be set up (A3, A7) and therefore, teachers failed to conduct hands-on activities which would help students gain practical skills. What is more, all of the teachers indicated the difficulty to audit traineeships conducted at hometowns and other cities as it was not included in the budget category (T1, T2, T3, T4, T5, T6, T7, T8,T9, T10, T11, T12, T13, T14, T15, T16). As higher vocational schools did not determine the workplaces where students would do traineeship students found the workplaces on their own in their hometowns to spend that time with their parents, and had their choices approved by their teachers. Therefore, teachers could not make sure if students were doing traineeship in a relevant workplace by performing required job procedures rather than being involved in fake traineeship. Similarly, limited financial support for field trips (A2, A3, T3, T5, T6, T11, T14, T15, F5, F14) inhibited workplace learning opportunities for students. These interviewees attached high importance to field trips as these activities provided situated learning opportunities in real-life contexts. Especially, some students (F5, F14) marked that field trips were the sole way of putting job-related knowledge into practice for their study fields, however, transportation to workplaces by bus was unaffordable as reported to students by the school administration.

According to the perceptions of some teachers and one administrator, it was constrained to supply required *human resources*, namely qualified teaching staff, due to the salary amounts paid to the teachers (A1, T5, T11, T14) because they believed that job experts were paid higher wages in the sector and these experts did not prefer teaching at higher vocational schools for financial concerns. Similar to

that view, four teachers, who formerly had job experience, criticized higher vocational schools for recruiting academicians rather than job experts (T3, T4, T9, T11).

As the last factor, *lack of facilities* was mentioned by three administrators to inhibit effectiveness of higher vocational teaching and learning. They asserted that the capacity of dormitories were not sufficient (A3, A4, A6) to provide accommodation for all students. As a result, students had to rent flat/house or reside in private dormitories, which proved more costly for students and their parents.

Lastly, data analysis produced challenges related to policy-making which were reported by the interviewees to derive from *(lack of) regulations*. Among all, lack of collaboration between higher vocational schools, workplaces and public institutions (A1, A2, A3, A4, A5, A6, A7, A8, T2, T6, T10, T11, T14, T16, F5, F8, F11) was the most referred problem by all administrators, some teachers and a few students. While administrators asserted that lack of collaboration between stakeholders resulted in insufficient support for teaching and learning processes at higher vocational schools some students criticized that disconnection by focusing on ignorance of stakeholders and said: "The ministry is not informed of the education we were delivered. Or the school is not aware of what the ministry required from us. Each of them is acting independently by being blind to what they are doing to us (F5)". In other words, these institutions were uninformed about the practices involved by each and this led to inappropriate regulations on both sides. These students also added that: "The ministry launches intensive courses in the same field. Then, [it should] close all the programs at higher vocational schools if you [the ministry] will do that. Why are you still letting schools to run? (F5)".

Furthermore, higher vocational schools were prohibited to run businesses and be involved in trade (A1, A5, T11, T14, T15) and that prevented teachers to run a workplace where students would perform job skills and conduct hands-on activities in real-life context. One teacher narrated his experience as follows:

> We were running the practice hotel located in school yard with students. They were working at all departments in turn…at reception, kitchen, restaurant etc. They were practicing everything [knowledge and skills] they learned in the classroom in its context with real customers and authentic materials. They [students] were very enthusiastic to work there. They were

> also paid salaries, as well. How good it was! But we had to quit it because we were accused of making money illegally. Inspectors came to school and we [teachers] were questioned for hours as if we were guilty. We gave the account for every action we took. Since we did not aim to make profit we were absolved but could not run the hotel again (T14).

Similarly, another teacher (T11) stated that they stopped organizing tours for local people as the travel agencies in the region lodged complaint against that student-led organization, removing the only opportunity for students to gain experience.

From a different point of view, two administrators and two teachers made the criticism of the availability of same programs at open universities (A1, A4, T8, T12) due to impolitic actions taken by decision makers and educational planners. These interviewees believed that none of jobs can be taught and learned through correspondence education. Some of them also felt that delivery of higher vocational education programs at open universities with very high intake capacities led to the high number of graduates, who studied the published materials on their own during the course of study, and those graduates competed with the graduates from higher vocational schools delivering face-to-face education through hands-on activities. Concerned with lack of regulations with regard to job descriptions, one administrator indicated the ambiguity about job titles assigned to graduates (A7). He asserted that there were a few job titles used for those graduates such as technician, technical staff, assistant etc. and he found it critical to identify job titles along with job descriptions specific to graduates from higher vocational education programs to resolve the disagreements in the labour market.

Finally, a few teachers and one administrator expressed their views about policies pertinent to teacher development. Those teachers complained about lack of incentives for professional development of teachers (T8, T13, T16). As they stated, earning master's or doctoral degrees, and participating in professional development courses did provide teachers with neither financial nor academic benefits as higher vocational schools did not require teachers to be involved in post-graduate studies. Addressing to the same topic, one administrator criticized equation of postgraduate studies of teachers with job experience (A8) while recruiting teachers as he believed that having a postgraduate degree did not qualify teachers to teach at higher

vocational schools as these schools were believed to deliver vocational knowledge and skills rather than academic ones.

4.2.5 Contextual Challenges Hindering Effectiveness of Vocational Teaching and Learning

Contextual challenges revealed by data analysis produced three themes: challenges related to school environment, resources and school administration. Figure 4.10 visually presents the challenges related to school context in relation to each other.

According to the perceptions of the interviewees, challenges related to school environment originated from the *physical environment* and *socio-cultural environment* which higher vocational schools involved in the study were located in.

Concerning *physical environment* of higher vocational schools, the interviewees came up with problems related to infrastructure and facilities. With regard to infrastructure at the schools, three administrators and three teachers criticized the use of buildings constructed for other purposes for vocational education (A2, A3, A4, T4, T6, T7). It was found out during the interviews that buildings of four schools were originally constructed for facilities like hotel, high school and nursing home. Moreover, it was observed in one of the classrooms that there was a TV rather than a projector screen as the wall had an arched structure. As a result of that, students had difficulty to see what was written on powerpoint slides due to the small size of TV screen. Additionally, there was a toilet, a shower bath and balcony in each classroom at another school as it was originally designed to serve as rooms for aged people.

The interviewees also complained about dirty toilets at schools (T7, T8, F1, F2, F3, F5, F6, F7, F8, F9, F10, F11, F12), small size of classrooms (T5, T7, T12, T13, F7, F12), narrow school buildings (A3, T6, T7, T8, T12), low lighting in the classrooms (T7, F7), heating problems in the classrooms ((T7, F7) and classrooms furnished with fixed tables and benches (T8, T12). These problems reported during the interviews were also confirmed through observations. As was complained by most students, toilets were dirty, cold and lacked toilet paper and soap. Similarly, in one classroom observed it was cold and dark, and students kept wearing their

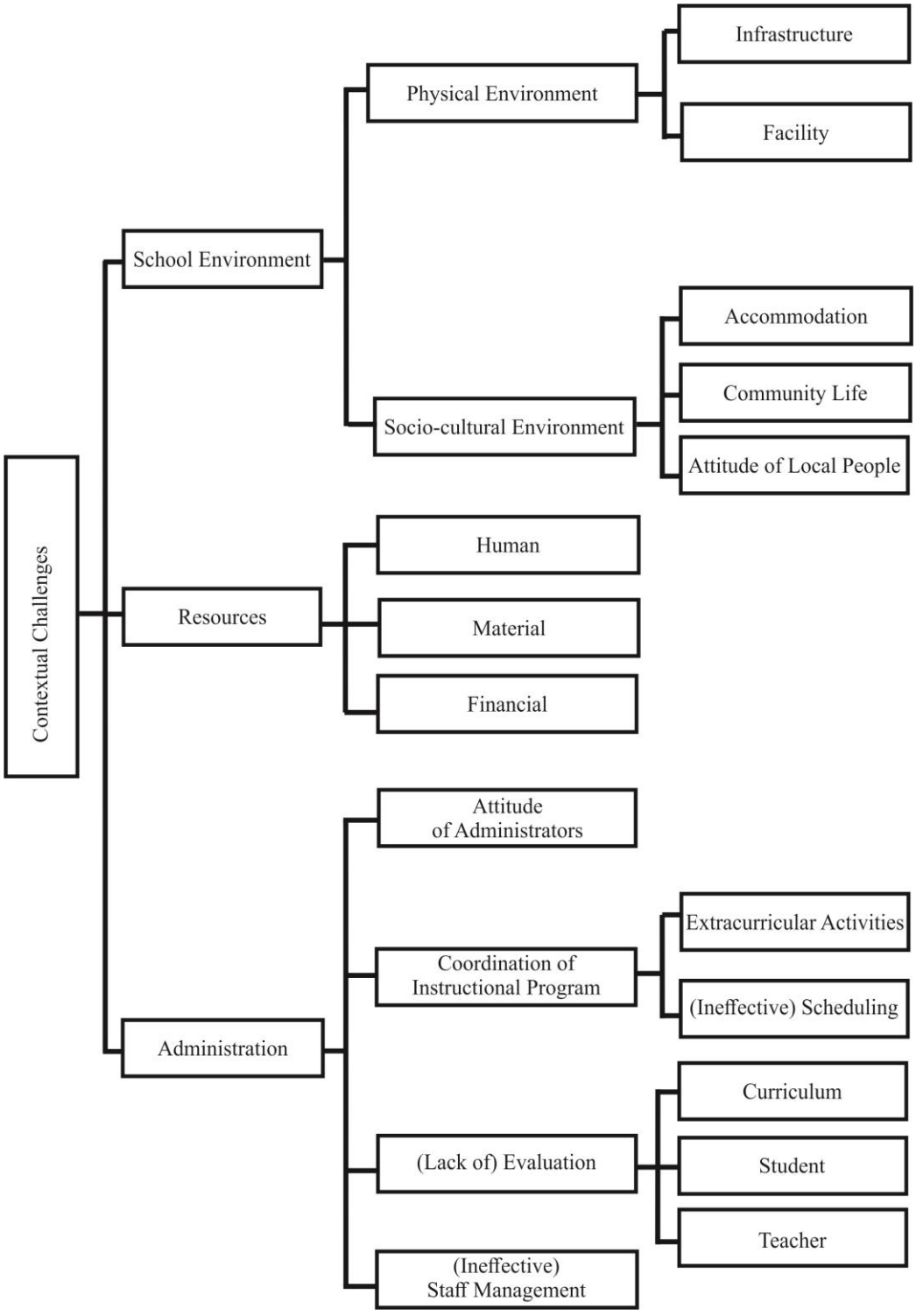

Figure 4.10 *Contextual Challenges Hindering Vocational Teaching and Learning*

coats during the session. There was an electrical heater hanged on the wall but it failed to warm the classroom. As to the size of classrooms, their size proved narrow

due to the high number of students. In one of the classroom observed, the classroom was so narrow that there was no space left for the teacher to move in. The teachers also marked that though the size of classrooms was somehow adequate they got narrow due to the increasing capacities led by Higher Education Council without considering the physical conditions.

Beside, lack of facilities posed challenges for the interviewees. Some teachers, students and administrators considered limited options for workplace learning (A6, A7, T2, T3, T6,T7, T8,T12, T13, T16, F7, F12, F13, F16) and insufficient capacity of workplaces for trainees (A1, A2, A3, A4, A6, A7, T2, T6, T8, T9, T12, T13, T16) among the critical challenges they faced. One of the administrators and one teacher stated that there were only two workplaces in the town which were supposed recruit nearly two hundred students as trainees; however, these workplaces had intake capacity for nearly fifty students. Moreover, employers at these workplaces were noted to be reluctant to recruit trainees not to disturb their customers and not to have students work on expensive devices. Other problems concerning facilities were found to be lack of cafes around school where students would spend time and socialize (A3, A4, T6, T7, T8, T9, F6, F7, F8, F9, F15, F16), dirty and expensive canteens (F1, F2, F6, F7, F8, F9, F10, F11, F12, F13, F15, F16), limited food options at school cafeteria (F1, F2, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16) and lack of shops to buy course materials (T7, F7). Since I spent prolonged times at each school including canteens and cafeterias, I both observed the conditions at these facilities and listened to views of students other than the ones who participated in the study. The canteens were mostly located on the ground floor and equipped with old and worn chairs and tables. The food options at the canteens included toast, sandwiches, pastry and hot and cold drinks. While I was in one of canteens inspectors from the local authority arrived for hygiene audit. They warned the canteen owner severely to ensure cleanliness and hygiene of the equipment and utensils, and inspectors marked that they would close down the canteen in case the hygiene standards were not met. Besides that, there was no canteen at one school and students supplied drinks from an automatic beverage vending machine. During the interview, students from another school (F6, F7) also told a challenging experience they had during the opening weeks. They

stated that canteen was closed for nearly two months and they had no market around school to buy food and drinks, therefore, they had to supply their basic needs by going to the town center. In addition, as far as it was observed, there was no cafes around the schools as the schools were mostly isolated for being located in suburban regions of towns; therefore, these canteens were the only options where students could meet and socialize.

Likewise, higher vocational education was influenced negatively due to the *socio-cultural environment* of school settings, which created challenges with regard to accommodation, community life and attitude of local people. Among the problems related to socio-cultural environment, accommodation was the most underlined one. All administrators and student focus groups interviewed mentioned the inadequate capacity of dormitories and expensive house rents (A1, A2, A3, A4, A5, A6, A7, A8, F1, F2, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F15, F16). Most of them also highlighted that local people acted as opportunists and asked students to pay two and three times more rents.

(Negative) attitude of local community was another challenge experienced by some students and observed by a few administrators and one teacher. Three administrators, three focus groups and one teacher thought that students were treated as income source by local people (A3, A4, A6, F8, F9, F16, T16). In other words, shopkeepers and house owners were considered to raise the prices constantly to make profit. Additionally, one administrator and two focus groups highlighted that students were socially excluded by local people (A4, F8, F9). Moreover, the administrator with this view marked that there was an observable tension between local people and students.

Lastly, in relation to this subtheme, one teacher and four student focus groups also mentioned community life and lack of sociocultural events in towns (T7, F7, F8, F9, F16). It was reported by some of them that students studying at higher vocational schools located in towns could not participate in the events and activities organized in the main campus; furthermore, there was no activities organized in towns.

Resources was the second theme of contextual challenges that data analysis produced, and these resources which posed challenges for teachers, students and

administrators at higher vocational schools were found to be *(lack of) human resources, (lack of) teaching materials* and *(lack of) financial resources*.

Lack of technical staff (A6, T16) and inadequate number of teaching staff (A1, A2, A3, A4, A5, A6, A7, A8, T1, T3, T4, T6, T8, T10, T11, T13, T14) were viewed as the challenges related to *(lack of) human resources*. Regarding the former challenge, one administrator and one teacher noted that they could not solve technical problems in time due to absence of technical staff at the school, and they had to take technical support from the main campus. However, this support was provided late due to the distance between the school and main campus, leading disruptions in teaching and learning processes. What was more significant for all administrators and most teachers was shortage of teaching staff. To them, as required by national policy, at least three teachers must be recruited to teach at a higher vocational program; however, more teachers could not recruited by the schools as national personnel agency limited recruitment due to financial constraints and therefore, total course load was shared among a few teachers. Moreover, some teachers were also assigned to teach some irrelevant courses at other programs than they were recruited to teach at. One of the administrator summarized the results of this shortage as follows:

> This year, I can say, course load of teachers is at an acceptable level, around 25-26 hours per week. Last year, there were teachers assigned with 38-40 hours [per week]. The number of teachers at the programs is not sufficient. As a result of that, teachers get robotized, telling the content like a robot with no use of humour. Sometimes, one teacher delivers eight hours a day along with a few evening classes, rushing from one classroom to the other. That requires superhuman performance. However, for the sake of effectiveness, teachers should not be concerned with other issues other than courses.

Regarding *(lack of) teaching materials*, five student groups and one teacher mentioned the problems caused by broken technological devices (F1, F2, F6, F10, F13, T13) while some interviewees including a few teachers, administrators and one student focus group referred to the inadequacy of tools in proportion to student number (T4, T8, T16, F6,A4, A6, A7). In line with this shortage, students spent less time working with tools as they shared and used the materials in turn. Beside those, *(lack of) financial resources* revealed some contextual challenges like budget

constraints to buy tools and materials (A2, A3, A4, A5, A6, A7, A8, T2, T7, T11, T12, T14, T15, T16), inadequate support for field trips (T5, T11, T14, T15, F5, F11, F14) and lack of ring services between town center and school (F6, F7, F14).

The last theme of contextual challenges was related to the school administration. Within that, data analysis revealed problems that the interviewees encountered due to the *attitude of administrators, (inefficient) coordination of instructional program, (lack of) evaluation* and *(ineffective) staff management*.

Negative *attitude of administrators* towards students was highly criticized by students as most of them found administrators uncaring, prejudiced and negligent. Nearly half of students noted that there was observably lack of communication among students and administrators (F1, F2, F4, F5, F10, F11, F12). Some students asserted that they did not know who the administrators were as these administrators never contacted them. Also, a few students believed that administrators were prejudiced toward students (F1, F2, F5). They thought that administrators underestimated their abilities, looked down on their attitudes and did not communicate with them both formally and informally. Moreover, most students felt that administrators adopted discriminative attitude toward some programs (F1, F2, F3, F5, F7, F10, F11, F12, F13). To them, administrators favored some programs offered at the school as these programs were successful for they enrolled more successful students, offered more employment opportunities or administrators were in close relationship with the teachers at those programs. Moreover, some students (F2, F5, F11) believed in discrimination among programs as more extracurricular activities and field trips were organized at some programs due to allocation of more funds from budget for them. Further, nearly half of students voiced administrators' negligence toward student complaints (F2, F5, F7, F8, F10, F11, F12). As understood from the views of students during the interviews, administrators at higher vocational schools failed to be responsive to students' needs as they did not regularly communicate with students to check their expectations.

Apart from their (negative) attitude, teachers, students and some administrators highlighted the problems related to the *coordination of instructional programs*. Based on the perceptions of the interviewees, challenges were derived

from (lack of) extracurricular activities and (ineffective) scheduling. Most of the students, some teachers and administrators criticized lack of extracurricular activities (A2, A3, T2, T6, T7, T8, T9, T16, F1, F2, F3, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16) while nearly all students also complained about the lack of variety of extracurricular activities (F1, F2, F3, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16). Same type of extracurricular activities like seminars were perceived by students to be less effective than field trips and workplace learning. In line with this view, three focus groups criticized paid professional development courses offered at university (F5, F10, F11) like English Speaking Course, Advanced Computing Course, Effective Communication and Articulation, etc. as they could not attend these courses because of financial constraints. As to final factor among extracurricular activities, lack of orientation course/seminar was perceived as a challenge (T5, T6). As a result, it was believed by these teachers that students were left uninformed about the school, the program and the curriculum and their future career although this kind of information was required to adapt students who made uninformed choice to the school and job.

Teachers and administrators interviewed also indicated problems they faced due to (ineffective) scheduling. All of the teachers criticized assignment of too much courses to them (A3, A4, A6, A7, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16) and most believed that such a workload reduced the effectiveness of courses since they underperformed toward the end of day and week. Moreover, concerned with academic calendar, two teachers and two administrators mentioned that they could accomplish very little during the opening weeks (A2, A3, T8, T15) due to ineffective scheduling of the academic term. According to what they stated, students dealt with registration during the first weeks of academic term and settlement in the dormitories or houses; however, teachers were supposed to start delivering content in the first week. Therefore, they had to move at a fast pace in the remaining weeks.

Another factor revealed by data analysis was *(lack of) curriculum evaluation*. As reported by administrators and teachers, there was lack of external program evaluation (A2, A3, A4, A5, A6, A7, A8, T6, T13) and internal program evaluation (A2, A3, A4, A5, A6, A7, A8) at higher vocational schools. In other

words, effectiveness of the curricula implemented at these schools were evaluated neither by the teachers and administrators working at the school or external experts. Likewise, lack of evaluation of student progress (A5, T6) was considered as a challenge by one administrator and teacher for they believed that having a tracking system and diagnosis of student progress was essential to respond students' learning needs and plan the teaching accordingly. Also, to them, knowledge of student progress would provide invaluable data for the evaluation of effectiveness of curriculum and teachers. In correlation to that view, nearly all administrators, one teacher and one focus group made criticism on lack of evaluation of teacher effectiveness (A2, A3, A4, A5, A6, A7, A8, T6, F10). Clearly, teachers were independent actors in designing and implementing the courses but as stated by some administrators, they were evaluated on paper, not on practice. One of the administrators also marked that teachers' course outlines were checked to comply with the standard forms and no one questioned if the content was appropriate.

And finally, administrators' *(ineffective) staff management* posed challenges according to the perceptions of two teachers. These teachers believed that there was tension between academic and vocational staff (T8, T9); however, this tension was not dissolved but disregarded by the administrators. Also, although this challenge was voiced only by two teachers, it was viewed during the interviews that teachers who were involved in post-graduate studies criticized the disintegration of academic knowledge in vocational subjects while teachers with job experience undermined academic knowledge and perceived it as the knowledge in books (T4, T11, T14).

4.2.6 Employer-related Challenges Hindering Effectiveness of Vocational Teaching and Learning

The teachers, students and administrators who were interviewed also put forward some more challenges related to employers and data analysis revealed that these challenges originated from workplace learning, characteristics of workplace and personnel selection (see Figure 4.11).

In respect to workplace learning, the interviewees believed that employers' *attitude toward students* and traineeship, and challenges deriving from the *training*

process itself hindered the effectiveness of workplace learning, which was perceived to be highly important pillar of vocational education.

Nearly half of students, a few teachers and one administrator were concerned with *employers' attitude* toward students and they felt that employers considered students as free labour force (T4, T11, T15, A1, F1, F10, F11, F12, F13, F15, F16) while some of the interviewees believed that students were perceived as burden at workplaces (A3, A4, A6, A7, T2, T6, T7, T16, F6, F12, F13, F16). It seemed that workplaces varied in their perspective toward students according to the sector they served in because, as it was marked by some interviewees, in the sectors like tourism and child care, trainees were recruited temporarily in place of full-time employees or as assistants. On the contrary, employers serving the sectors like healthcare and medical services were not eager to recruit trainees as they had busy working schedule and could not spare time for trainees.

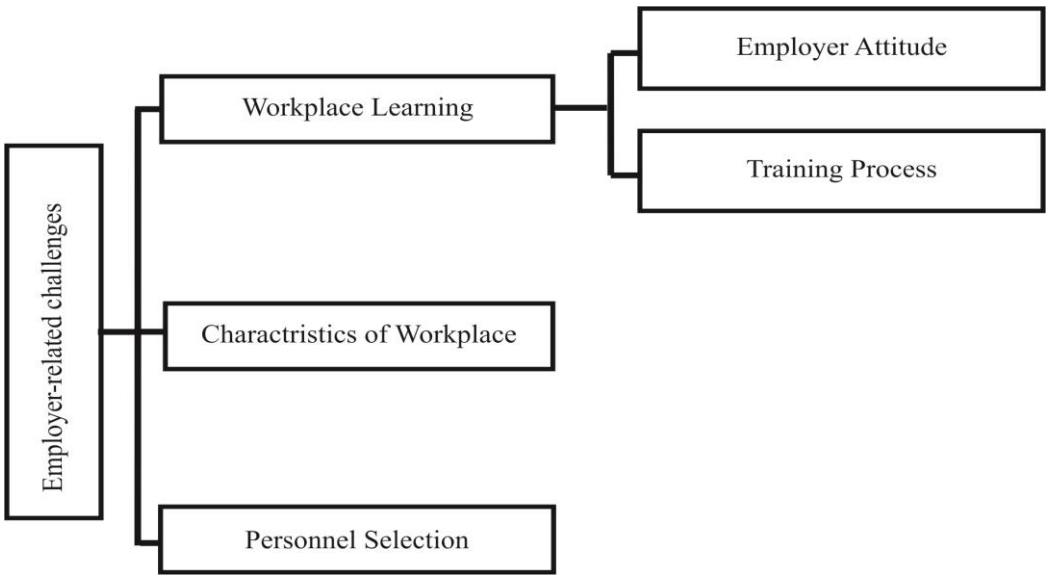

Figure 4.11 *Employer-related Challenges Hindering Vocational Teaching and Learning*

Moreover, one teacher marked that there were too many trainees to recruit (T16) which made it very challenging for the workplace trainers to deliver job knowledge and skills to such crowded groups. In relation to those, there were some interviewees who considered employers reluctant to pay salary to trainees (A1, A6,

A7, T11, T12, T16, F1, F12). It was made binding for employers by law to pay salary to trainees; however, they were reported by the interviewees to use every trick in order not to pay salaries. Students from one focus group talked about their experience as follows:

> We faced too many problems while seeking a workplace to work as trainees. They [employers] were supposed to pay us 350 Turkish Lira but they did not want to pay that amount and asked us to sign a blank sheet. Moreover, they tried to deceive us by saying we were legally required to sign it. A blank sheet! We don't know what they are going to write on it. They aimed not to pay salary but deceive the official authorities with a blank sheet on which they would write that we were paid that amount of money. We applied to other workplaces but they all employed the same strategy. We mentioned the program head about this problem but she only suggested we find another workplace. Since we run out of time we finally signed that blank sheet. They [employers] did not pay our salaries although they were paid by the state. They pocketed our money. We received no help from our school. I wish workplaces were determined and qualified by our school (F12).

In addition to those problems, most administrators and teachers criticized employers for fake traineeship (A2, A3, A4, A5, A6, A7, A8, T1, T2, T6, T7, T8,T9, T10). They indicated that there have been many cases in which both students and employers agreed on fake traineeship as a result of which employers completed the required sections on the training record book though the students did not work at the workplace for thirty working days.

Along with their attitude, employers led to some more problems during the workplace *training process* according to perceptions of teachers and students. To four student groups, employers failed to provide effective traineeship as they had trainees do errands (F2, F6, F10, F15) rather than perform job procedures because students believed that employers did not trust their knowledge and skills. What is more, students in three focus groups noted that they were not allowed to use the machines at workplace (F6, F7, F16) because employers were afraid of damage students could cause. Moreover, due to the employers' reluctance to have students work at the workplace there was lack of knowledge exchange between employers, employees and students (T1, T3, T4, T11, F3, F10). These interviewees believed that employees kept job secrets and did not want to share them with students.

Characteristics of workplace was another dimension of employer-related challenges and it was revealed within this theme that there was tension between students and graduates of higher vocational schools and self-educated staff (T1, T3, T4, T11, T15). Especially, some teachers highlighted the negative attitude of self-educated staff toward students at the workplace as these employees considered themselves more experienced and qualified than students. One teacher explained why as given below:

> Self-educated staff at the workplace underestimate our students and tease them. If you [schools and workplaces] do not act like hands in glove and collaborate with the sector your students cannot use the knowledge you delivered here at the workplace. They [students] mostly start over learning at the workplace. Self-educated staff, yes, are likely to be primary school graduates but they have been working in the sector for more than twenty years. Their knowledge is not equal to the knowledge of our students. Our students' knowledge is certainly at lower levels. The result is that they mock the students as long as our students relied on their diploma (T14).

Similarly, a few teachers and students focused on the mismatch between the knowledge learnt at the school and required at the workplace (T3, T4, T11, F3, F10). While two teachers asserted that students got over-skilled as the result of their education at higher vocational school (T3, T4), one teacher and two focus groups believed that graduates were underqualified as they were not provided with requisite knowledge and skills at the school (T11, F3, F10). Presenting the reasons for over-skilling, three teachers noted that workplaces were run through misconceptions and habits (T1, T3, T4) rather than scientific knowledge; therefore, students' knowledge and skills were regarded useless.

Last but not the least, employers' preferences for personnel selection caused problems for some teachers, students and administrators. While selecting and recruiting personnel, one teacher believed that employers preferred 4-year program graduates rather than graduates of higher vocational schools (T7) as employers considered that students who earned bachelor's degree were more knowledgeable and qualified. She asserted that when a program was offered at both levels, namely at university and higher vocational school, employers tended to recruit university graduates as it would make no difference in the amount of salary. Very similar to this view, three administrators and one teacher underlined employers'

unwillingness to recruit new graduates from higher vocational schools (A4, A6, A7, T16) due to their lack of experience. Likewise, employers recruited graduates from relevant departments without seeking job-specific training and skills (T3, T4, T8, T9, F3, F8) according to the perceptions of four teachers and two focus groups. In one teacher's words:

> Any graduates, whether from university or higher vocational school, can work at banks, call centers, hotels etc. They [employers] are not interested in study field but concerned with the qualities and abilities of graduates (T9).

Additionally, some students (F8) criticized decision makers for not regulating the labour market through legislative acts but leaving their future in the hands of employers. In other words, both students and teachers believed in the need for recruitment of graduates who received job-specific training rather than employment of graduates from relevant or irrelevant programs.

4.2.7 Parental Challenges Hindering Effectiveness of Vocational Teaching and Learning

Data analysis produced parental challenges as the final category of factors that have a negative impact on the teaching and learning processes at higher vocational schools and these challenges derived from parental approach to vocational education and higher vocational schools and parental involvement in students' career decisions. Figure 4.12, given below, displays the summary of findings related to parental challenges.

Approach of parents were found to include their *attitude* and *interest* pertaining to higher vocational education. More specifically, as one administrator assumed, parents' attitude toward higher vocational education was not positive as they were prejudiced toward higher vocational schools (A4). These schools were perceived by parents as the educational institutions where relatively low-achieving students, who did not score high at the university entrance exam, studied and therefore, had the position of inferior status in the society and labour market.

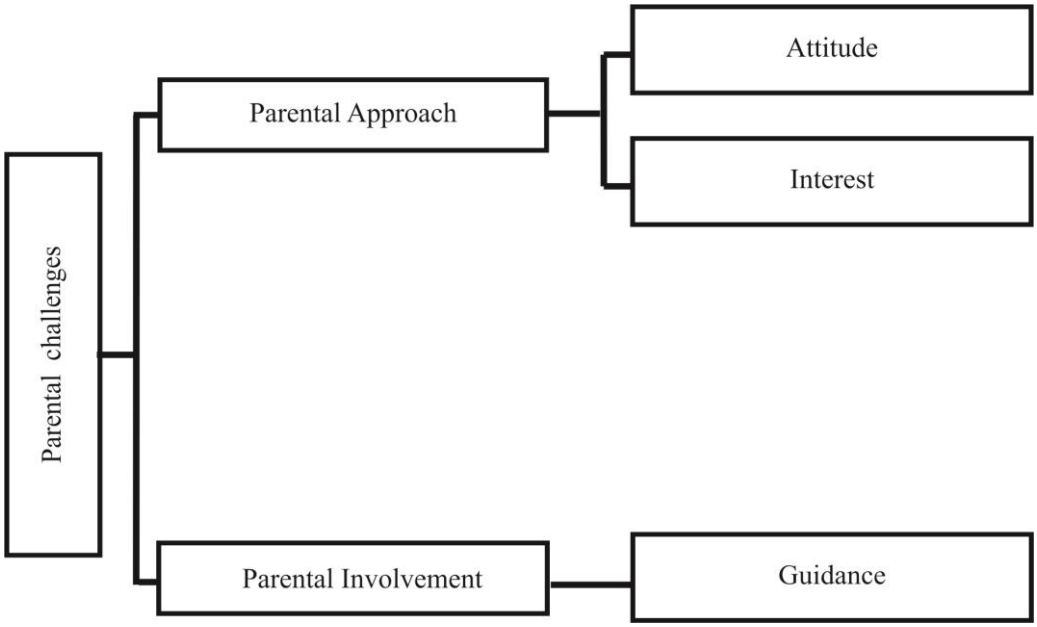

Figure 4.12 *Parental Challenges Hindering Vocational Teaching and Learning*

Moreover, nearly half of teachers felt that parents disvalued the training provided at these schools (T1, T2, T5, T6, T7, T8, T9) and due to that, they put pressure on teachers to graduate students (A1, A4). One of the teachers noted that parent frequently called him before and after final weeks to make sure that their children did not fail (T2). He said: "I am constantly called by some parents. They ask me to help [grade exam papers with high marks] their children as they need to graduate to take Public Personnel Selection Test (T2)".

Most of the teachers and some administrators thought that this attitude was the result of parents' *interest* in diploma (T1, T2, T6, T7, T8, T9, T15, T16) and in finding positions for their children at public institutions (T6, T8, T9, T10, T16, A4, A6, A7). Half of the teachers asserted that parents were not concerned about the quality of training and learning because Public Personnel Selection Test did not require knowledge of job but general knowledge and a diploma from the relevant study field. Moreover, one administrator and two teachers (A4, T9, T10) indicated that parents disvalued positions at the private sector and looked for references who would help their children be employed at public institutions to guarantee their future career. One teacher elaborated on parents' view as follows:

> Most of students aim to get diploma and work at a public institution by taking the entrance test. These students do want the diploma…. When I question them most say "I had to [study here] as my parents wanted me to do so". They apparently do not want to be here. And what happens then? They come [to school] and go [like an officer]. They are not concerned to earn their living either as they are being subsidized monthly by their parents. This is why they are exam-oriented. Only twenty percent of whole group consisting of 35-40 students is interested in job. The rest is like fulfilling the task assigned by their parents (T10).

As revealed through the abovementioned factors related to parents' *attitude* and *interest*, parents had a negative impact on their children preferences and experience at higher vocational schools.

The second theme, namely parental involvement, indicated that parents' *guidance* was also influenced by their attitude, interests and lack of knowledge. According to perceptions of some administrators and teachers, parents who were involved in guidance, urged their children to select the programs they want (A4, A7, T2, T6, T13, T16) or forced them to attend higher education regardless of the study field (A4, A7, T6). The interviewees believed that parents were not concerned about their children needs and interests. Additionally, a few teachers felt that parents were lack of knowledge about the capabilities of their children (T8, T10, T11). As stated by one teacher, they misguided their children based on the rumors and misconceptions concerning jobs in the society. Apart from that, three teachers criticized parents' lack of guidance during program selection (T8, T12, T13). They believed that students were left alone without parental guidance because of the socio-economic status and educational background of parents, which therefore resulted in uninformed school and program selection.

4.2.8 Summary of Challenges Hindering Effectiveness of Vocational Teaching and Learning

Seven main themes related to the challenges hindering the effectiveness of vocational teaching and learning evolved as the result of interview data analysis. These challenges were categorized as teacher-related challenges, student-related challenges, curricular challenges, system-related challenges, contextual challenges, employer-related challenges and parental challenges.

First of all, teacher-related challenges were found related to *teacher knowledge* and *teacher traits*. With regard to the first theme, the interviewees consisting of teachers, students and administrators reported the challenges derived from teachers' (lack of) content knowledge, (lack of) pedagogical knowledge and (lack of) technological knowledge while the problems originating from *teacher traits* were teachers' (negative) attitude, (un)professionalism, beliefs and (lack of) skills.

Mostly students and teachers interviewed thought that teachers' (lack of) content knowledge included (lack of) vocational knowledge and (lack of) subject knowledge. Drawing a clear line between vocational and subject knowledge, most teachers, especially the ones who had job experience, believed that teachers' job experience was equal to vocational knowledge and teachers' being lack of it posed problems for the effectiveness of teaching and learning since subject knowledge was not sufficient to be an effective vocational teacher. However, most teachers at higher vocational schools were reported to be recruited based on their subject knowledge rather than vocational one. Moreover, to the students in some focus groups, other indicators of teachers' (lack of) vocational knowledge were found to be teachers' being unaware of the developments regarding job, their outdated job knowledge and lack of job-related knowledge.

As to (lack of) subject knowledge, one teacher considered vocational teachers ineffective on the condition of lack of interdisciplinary approach to vocational subjects while a few students thought that ineffective vocational teachers lacked the content knowledge required for job. In other words, these students believed that teachers need to have job-specific content knowledge rather than general subject knowledge. Additionally, some students and three teachers criticized out-of-field teaching and found those courses delivered by such teachers ineffective.

In comparison to (lack of) content knowledge, most of the interviewees put more emphasis on teachers' (lack of) pedagogical knowledge while reporting teacher-related challenges they faced. In this regard, most students, some teachers and a few administrators believed that ineffective vocational teachers lacked knowledge of learner as they were observed to be indifferent to students' learning

needs, neglect group characteristics and the differences among learners with regard to prior knowledge and cognitive characteristics, and disregard individual differences in terms of learning styles and pacing. Moreover, students in two focus groups believed that teachers' lack of knowledge about students' socio-economic status hindered teaching and learning processes as students had financial problems and could not afford to buy course materials.

Additionally, teachers' ineffective presentation of content posed teaching and learning problems. Nearly half of students asserted that teachers failed to organize the content from simple to complex and delivered course content in a complicated way. Also, students found the content complicated when teachers used foreign words, terms and quantitative data. Similarly, a considerable number of students criticized teachers for focusing on rote learning and memorization rather than meaning making, leading to surface learning and lack of retention. On the other side, some teachers, who were also job experts, believed that too much academic focus on content rather than vocational one made vocational teaching ineffective and led deviation from the objectives of vocational education. Finally, another two teachers underlined lack of variety in instructional methods as a challenge for they considered that vocational students mostly had learning disabilities due to their experience at prior education levels.

Also, a few students and administrators alleged that ineffective classroom management by vocational teachers hindered learning as the students observed that teachers failed to engage all students and communicated only with the attentive students. This view was confirmed during the observations as most teachers were observed to ask questions to a few students, who were interested in the content and responded the questions. Moreover, it was observed that except a few, most of teachers stayed indifferent to off-task behaviors of students, like chatting with peers, lying on desk, playing with cell phones, etc. Focusing on the underlying reason, four administrators believed that ineffective classroom management was the result of teachers' lack of teaching experience as more experienced teachers were thought to be good at classroom management because they were well informed about what and how to do.

Teachers' (lack of) pedagogical knowledge also included (lack of) curricular knowledge according to the perceptions of both teachers and students. With regard to planning, some teachers marked that lack of planning courses according to job needs hindered effective teaching and learning at higher vocational schools because teachers tended to plan courses according to their field of knowledge, used course books as syllabus/lesson plan and transferred the book content or did not prepare/rarely prepared lesson plans. During the classes, as stated by some students, teachers also brought about challenges inhibiting effective learning as they did not inform students about the objectives and course content. Further, some students complained about irrelevant elective courses offered at the program and they believed that elective courses were planned according to teachers' field of study and knowledge. What most students agreed on as a curricular challenge was the lack of assessment and measurement knowledge. Most students criticized vocational teachers for utilizing limited assessment methods and types, lack of setting criteria and for being unfair.

The third subtheme evolved under *teachers' (lack of) knowledge* was teachers' (lack of) technological knowledge. A few teachers and some students considered that teachers made ineffective powerpoint presentation by putting too much content on each slide and reading them. Additionally, one teacher highlighted that vocational teachers lacked the knowledge of educational technologies and the only tools used by them were projector and powerpoint presentation.

Besides *teachers' (lack of) knowledge, teacher traits*, including their (negative) attitude, mishaviour, beliefs and skills, emerged from data analysis.

On the first place, teachers' (negative) attitudes revealed two dimensions: (negative) attitude toward students and (negative) attitude toward profession. Considering the attitude toward students, students in five focus groups believed that teachers demeaned students at higher vocational schools as they believed in their limited cognitive abilities and affective characteristics while students from two focus groups highlighted that teachers put blame on student in case of non-learning rather than self-assessment and reviewing their own strategies. There was also a considerable number of students criticizing teachers for blocking student questions during classes. As they stated, some teachers lectured without any interaction with

students and asked students to stay silent and listen to them. This kind of attitude toward students was believed by some students to be the result of teachers' attitude toward profession. Some of them felt that vocational teachers were not satisfied to be working at a higher vocational school and they did not have love for their jobs. One administrator also asserted that most teachers perceived higher vocational schools as a step to faculty. In other words, teachers involved in postgraduate studies aimed to work at faculty but worked at vocational schools to earn living till they find positions at faculties. Due to this fact and lack of motivation, it was perceived by two administrators that vocational teachers were not involved in professional development activities.

With regard to teacher (un)professionalism hindering teaching and learning, students reported that some teachers arrived late to the class on regular basis, finished classes earlier than the scheduled time, cancelled classes for personal reasons and threatened students with low marks and difficult questions in the exams. Moreover, they did not make up cancelled classes, share course materials and notes and set office hours to meet students out of class hours. Observations also confirmed that nearly all teachers started classes late and finished them earlier.

Three teachers also mentioned teacher beliefs that posed challenges for vocational teaching and learning. To them, vocational teachers believed that vocational students had lower level of cognitive skills and abilities and they arranged teaching accordingly. One of them also asserted that vocational teachers had misconceptions about learner-centered teaching approach as they perceived learning merely students' responsibility.

Lastly, teacher skills related to communication and collaboration were found to be limited based on the views of teachers and students. Some students highlighted ineffective and limited communication of teachers with students while some teachers criticized teachers' lack of communication with employers. These teachers believed that vocational teachers need to be in close interaction with employers to align their teaching with labour market demands. Focusing on the communication between teachers, four teachers and one focus group complained about the lack of cooperation between teachers at the same department, leading disconnected and disintegrated curriculum.

Second theme that data analysis revealed was student-related challenges that proved compelling during the teaching and learning processes at higher vocational schools. Student-related challenges were found to be pertinent to students' *entry characteristics, cognitive behaviors* and *affective behaviors* displayed at school.

Entry characteristics of students covered their (lack of) prior knowledge, school selection and socio-economic status. Most interviewees believed that students lacked prior knowledge required to learn effectively at higher vocational schools. Specifically, most teachers and administrators together with some students asserted that most of students enrolled at higher vocational schools lacked basic knowledge of Math, Computing, English and Turkish. Moreover, due to variance among the high school types students graduated from, students displayed different levels of job knowledge which created mixed-level groups. While graduates from vocational high schools had introductory job knowledge graduates from other high schools were good at academic subjects but lacked prerequisite vocational knowledge. This condition posed challenges for teachers as they had difficulty to accommodate the needs of two poles.

In addition to challenges derived from knowledge acquisition at secondary education, students' (uninformed) school selection had a negative impact on vocational teaching and learning. Most of the interviewees thought that students made uninformed choice while selecting their field of study. Besides, most administrators and teachers marked that students did not have information about the school setting and its location and learned where the school is after admission or enrolment. Students' limited knowledge about the selected job and the curriculum delivered at the program were also among the challenges indicated by teachers and administrators. Likewise, most of administrators, some teachers and students believed that some students made program selection randomly as they were interested in getting diploma, so the program they studied at did not matter. High employment rate after graduation was another motive for students to select some programs; however, according to perceptions of three administrators and one focus group, those students lacked the requisite knowledge and skills to learn the job. Furthermore, two teachers stated that students selected some programs as they had misconceptions about the job and its requirements. Specifically, students

considered that they would not be delivered quantitative courses or were not informed about the requisite knowledge to learn the content delivered at the program.

Among *entry characteristics* causing challenges was the socio-economic status of students. Most administrators and one teacher stressed that students had low family income and these interviewees believed that students' low economic status challenged both prior and present learning experiences. In line with that, one administrator and two teachers put emphasis on parents' low educational level, leading to parents' lack of informed guidance. Lastly, one administrator and one teacher asserted that students' being member of different ethnic group impacted their comprehension negatively as Turkish was the medium of instruction at all programs involved in this study.

After getting enrolled, students' *affective behaviors* were considered to create problems for teaching and learning. Among them, students' (lack of) motivation, (negative) feelings, (lack of) interest and (negative) attitude evolved as challenges. All of the teachers highlighted that students lacked motivation to learn the job, were reluctant to overstudy and attached no value to the content. Specific to in-classroom motivation, students from three focus groups noted that they lost their motivation due to uninterested peers. To confirm, in one of the classrooms, some students were observed to warn uninterested chatting peers verbally to be quiet for a few times. Focusing on male students, a few teachers and administrators mentioned that males mostly studied at higher vocational schools not to do military service as these schools were easily accessible for these students due to the low scores required to be admitted.

Also, students' (negative) feelings hindered effectiveness of vocational teaching and learning. As stated by most students, they felt unsuccessful for studying at higher vocational school and students studying at these schools felt marginalized as well since higher vocational schools were perceived to be at a much lower status than 4-year programs. Furthermore, all of the teachers believed that students mostly exhibited learned helplessness. This was also confirmed by the statement of two teachers who noted students' lack of confidence in their abilities to master the job-specific content and skills. Additionally, to two teachers and one

administrator, students had the fear for unemployment and felt too stressed during their study period.

Another *affective behavior* was found to be students' (lack of) interest. According to most teachers and some students, vocational students' interest was in getting diploma, passing the tests, transition to 4-year programs through Vertical Transfer Test and graduating to take Public Personnel Selection Test rather than learning a job.

Beside, students' attitude was revealed by nearly all teachers and some administrators and students as a problem for teaching and learning. The challenges related to students' attitude toward courses were as follows: students' negative attitude toward courses other than vocational ones, negative attitude toward quantitative courses, negative attitude toward theory-based courses and prejudice toward courses. Two teachers also asserted that students did not get prepared for the courses beforehand and to two administrators and one focus group, they dropped out in case of difficulty to master the content.

Cognitive behaviors of students emerged as the final theme of student-related challenges. Within that, students' abilities with regard to comprehension and application were discussed by the interviewees. Regarding students' comprehension, four teachers asserted that students had limited ability to make meaning while two of them also added that their students had difficulty to comprehend abstract topics. Additionally, some teachers and most students mentioned the difficulty students had while studying quantitative courses due to their limited numerical knowledge and skills. And finally, two teachers noted that vocational students were unable to make connections among knowledge through a holistic approach.

In addition to comprehension problems, some teachers put emphasis on lack of application as they observed that students could not transfer knowledge into practice and lacked critical thinking skills to interpret knowledge due to their surface learning and tendency to memorize.

As to the curricular challenges faced by the teachers, students and administrators there evolved six themes, namely challenges related to *curriculum*

development, content selection, teaching-learning process, measurement and assessment, resources and *evaluation*.

Concerning challenges with regard to *curriculum development*, the interviewees made criticisms on (lack of) needs assessment, (non)inclusion of stakeholders and time allocation. Due to the (lack of) needs assessment, two administrators and four teachers stated there was a mismatch between curriculum and labour market needs while lack of needs assessment led to lack of courses for specialization and branches within the program according to the perceptions of two teachers and one focus group. These interviewees believed that students should be provided with elective courses and sub-branches that would help them master more specific content and skills. Apart from those problems, most students and two teachers complained about the inclusion of irrelevant courses in the curriculum. They stated that they were delivered less vocational courses and the hours allocated to practice-based courses were limited because of such irrelevant courses. Additionally, most administrators and a few teachers criticized (non)inclusion of stakeholders in the curriculum development process. To three administrators, teachers acted as the sole decision makers in the curriculum process rather than involving all relevant stakeholders like employers, graduates, parents and policy-makers. As a result, two teachers marked that curriculum was designed according to the knowledge of the teacher, how that teacher perceived the job and requisite knowledge. Likewise, while a few administrators underlined the lack of employer involvement in curriculum development, which they attached high importance, two teachers and one administrator believed that graduates were a significant data source to evaluate the effectiveness of curriculum but they were not tracked and involved in the development process. Although teachers and administrators were concerned with (lack of) needs assessment and involvement of stakeholders, students were troubled with time. They asserted that they could not learn effectively due to inappropriate allocation of hours to courses, arrangement of course hours according to teachers' agenda, unequal weekly distribution of course hours and insufficient hours allotted for practice-based courses.

(Inappropriate) *content selection* included some other challenges related to integration, scope and balance in curriculum. With regard to integration problems,

students in one focus group indicated outdated course contents, which made them have difficulty to adapt to the procedures at the workplace during the traineeship. Moreover, two administrators and focus groups compared the curricula at vocational high school and higher vocational schools and alleged that there was a mismatch between both curricula. While some students believed that the curriculum delivered at vocational high schools were better at providing more comprehensive learning experiences some others criticized curricula at higher vocational schools due to lack of vertical continuity and for repeating the content delivered at vocational high schools. Moreover, one teacher highlighted lack of integration among the courses offered at higher vocational schools and criticized the teachers for acting independently while designing the course contents.

Besides integration problems, some interviewees argued the challenges related to the scope of curriculum. Two administrators remarked on the density of curriculum due to inclusion of too many courses while it was also reported by some students and two administrators that curricula at higher vocational schools were exactly copied from 4-year programs' curricula. One of the students in a focus group used the metaphor of "zipped curriculum" to describe the curriculum they were delivered and stated that this density led too busy schedules and intensive contents to study. From a similar perspective, some interviewees found general courses like Turkish Language, History, Information Technologies, etc. irrelevant and criticized higher education authority to make these courses compulsory in the first year because these courses replaced vocational courses required in the first year. In addition to those challenges, delivery of more knowledge than needed at workplace posed problems according to views of two teachers as students got over-skilled and had difficulty to adapt to the procedures at workplace.

The final factor related to this theme was found to be challenges regarding the balance between and within courses in the curriculum. It was mostly students who argued about the imbalance in the curriculum by marking that there was a need for more applied and practice-based courses, yet there was too much emphasis on theory-based courses. Some students also complained about English courses for being grammar-based with less focus on productive skills.

In respect to challenges originated from *teaching-learning process*, the participants came up with the problems related to delivery mode and teaching methods during the interviews. Concerning the delivery mode, all students criticized the delivery of English language course online as they believed that online English courses were ineffective in teaching productive skills. From a different angle, one teacher marked that delivery of applied and theory-based courses by distinct teachers posed integration problems and made practice-courses disconnected with theoretical background. As for the second dimension of *teaching-learning process*, use of lecture by most teachers and lack of variety of teaching methods were considered to lead to ineffective learning on the part of students as they believed a job cannot be taught through lecture but hands-on activities.

The next theme under curricular challenges was related to *measurement and assessment*. Testing types utilized by the teachers and validity of measurement tools issued problems for measurement of students' learning. Based on views of a few teachers and most students, testing types caused problems as vocational learning was tested through written exams testing abstract knowledge rather than practical skills. Correlatively, one administrator and two teachers laid emphasis on lack of variety of assessment methods. Likewise, most students believed that such written exams led to memorization of the content rather than applying it. There were also a few focus groups who complained about lack of rubrics and evaluation criteria. These students also voiced their concerns about the reliability of measurement and assessment tools because they believed teachers' grading was not fair as students were not informed about the criteria. Moreover, there were also some other students in five focus groups who criticized teachers' testing uncovered content.

The fifth theme of curricular challenges emerged out of data was related to *resources* including materials and time. As viewed by teachers and students, lack of materials and tools hindered teaching and learning processes as they believed that vocational education would be ineffective without use of relevant workplace materials. Although some schools provided required tools and materials, one administrator and students in one focus group asserted that these materials were outdated and no longer used at workplaces.

As to time, most teachers and students considered two-year time inadequate to cover the requisite content while there were also a few students in two focus groups who highlighted that there was no need for two-year time to cover the whole content. Additionally, some students were concerned with teachers' pacing and found it inappropriate. They believed that teachers delivered the content at such a speed that they had difficulty to follow and comprehend.

Finally, (lack of) *evaluation* was found as a challenge resulting in presentation of outdated content and incompliance with labour market demands. Nearly all administrators asserted that there was no curriculum evaluation conducted at higher vocational schools involved in the study. Two teachers believed that such an evaluation would increase the workload of teachers; therefore, teachers did not attempt to do it. Also, one administrator and one teacher mentioned course evaluation questionnaires administered university-wide at the end of year but they asserted that the findings were not broadcasted and shared with the teachers.

System-related challenges were the fourth main theme producing six themes, namely *prior education, admission, planning, implementation, resources* and *policy-making*.

The challenges derived from *prior education* were related to ineffective teaching and learning practices and lack of guidance at primary and secondary schools. At primary education level, all administrators and nearly all teachers believed that basic level knowledge and skills in Math and Turkish language were not taught effectively. Besides that, these interviewees believed that students at higher vocational schools made uninformed choice due to lack of guidance and counselling at early ages. As to challenges related to the secondary education, all administrators and nearly all teachers criticized lack of career guidance at high schools while some of them indicated lack of academic knowledge and skills acquisition at those schools which posed problems at quantitative and theory-based courses delivered at higher vocational schools.

The interviewees also criticized higher education system due to the *admission* criteria used while selecting and placing students to higher vocational schools. All teachers, some students and two administrators believed that selection of students to study at higher vocational schools through a general test was not

appropriate as such a test did not measure students' prior knowledge required to learn effectively at higher vocational schools. Similarly, most administrators and some teachers criticized the abolition of direct transfer of graduates from vocational high schools to higher vocational schools as they thought direct transfer was useful in recruitment of more interested students with requisite prior knowledge. Moreover, placement of students from inappropriate knowledge fields was considered as challenge by a few teachers and administrators. These interviewees asserted that the programs which required quantitative knowledge recruited students who scored high in verbal domain of university entrance exam and as a result, these student had difficulty during their studies at higher vocational schools.

Concerning the challenges related to *planning* of higher vocational education, it was found that nearly all interviewees faced problems due to the school setting and (lack of) needs assessment. Putting emphasis on the school setting, most interviewees argued that establishment of higher vocational schools at towns, locating these schools far from the main campus, establishment of schools in areas where the related sector is absent, distance of school settings to workplaces and lack of campus-wide activities due to the location were among the challenges hindering teaching and learning processes. Moreover, lack of needs assessment conducted nationwide was perceived as critical challenge. All administrators and teachers perceived that programs were launched before assessing the need nationwide, which in turn, led to the production of graduates above the needs of labour market. Additionally, two teachers indicated lack of data about graduates; however, they thought that gathering data from graduates would be useful in determining the needs of labor market. Another challenge on which all teachers and administrators also agreed was the irrational increase of intake capacity of programs by higher education authority. They asserted that intake capacity was increased based on the number of students enrolled and preference rate but physical capacity and adequacy of teaching staff were not considered or assessed. In relation to that, most teachers and administrators criticized program launch before meeting the physical needs while two of the teachers also argued about the challenge of program launch before recruitment of required number of teaching staff. In other words, programs were

launched before the assessing the needs regarding physical conditions, teaching staff and staff capacity of labour market.

The challenges in the *implementation* process were divided into two: problems originating from school-based practice and labour market practice. School-based practices were found related to curriculum, enrollment and delivery modes. With regard to curriculum, two administrators and one focus group argued that there was lack of curricular unity among programs offered at different higher vocational schools, which caused inconsistencies among graduates' qualifications and problems in lateral transition between programs. Similarly, some students marked that program titles did not reflect the content accurately because they noted that the job referred by the title required the delivery of more specific courses. This resulted from low enrollment rates as stated by two administrators and one teacher since program titles were changed by the administration to attract more students without changing the content accordingly. Facing problems due to delivery mode, two teachers and students from two focus groups criticized delivery of vocational programs through online education. They believed that vocational education would be ineffective when delivered online because vocational learning required situated learning experiences. In addition, labour market practices had a negative impact on higher vocational teaching and learning. Some interviewees highlighted that provision of same-level education through certificate programs challenged the status of higher vocational schools and the training delivered there because, as noted by students in two focus groups, certificates were treated equally with diplomas in the labour market while recruiting staff.

Concerning the challenges related to *resources,* the subthemes evolved were time, facility, materials, financial constraints and human capital. The first of all, most teachers and some administrators criticized standard study duration allotted to all higher vocational programs and argued that two-year time was inadequate for some programs while some others believed less time would be sufficient. Beside, two teaches and one administrator remarked on long summer holiday and believed that students forgot the content learnt in such a long time. Three administrators also mentioned insufficient capacity of dormitories at the national level and asserted that required facilities must be provided before the establishment of higher education

institutions. Moreover, some administrators and most teachers voiced the challenges posed by lack of materials by marking that higher vocational schools suffered from the shortage of authentic course materials and tools. From a similar angle, some teachers and one focus group put emphasis on the lack of job-specific teaching and learning materials which resulted in the use of resources presenting general knowledge of subjects. Moreover, financial constraints led to problems with regard to vocational teaching and learning due to budgetary constraints to set up laboratories and workshops and insufficient support for field trips and workplace learning. More specifically, all teachers highlighted that it was unaffordable for the schools and teachers to audit the traineeship performed in hometowns as students preferred workplaces in their hometowns to spend that time with their parents and to economize.

Final factor was related to human resources. A few teachers and one administrator marked the need for involving job experts in teaching but they asserted that it was difficult and unaffordable to recruit job experts due to the lower salaries paid to teaching staff. Moreover, four teachers criticized recruitment of academic staff rather than job experts.

The last theme of system-related challenges evolved to be challenges related to *policy-making*, specifically lack of regulation. The interviewees mentioned the following problems they faced due to lack of regulative measures: lack of collaboration between higher vocational schools, workplaces and public institutions; lack of specification of job titles assigned to graduates; prohibition of trade and workplace operation by higher vocational schools; availability of same programs at open universities; lack of incentives for professional development of teachers and treatment of teachers' postgraduate studies as workplace experience while recruiting them.

Fifthly, interview data analysis produced contextual challenges hindering the effectiveness of vocational teaching and learning. These challenges revealed three themes which were *school environment, resources* and *administration*.

According to the views of the interviewees, s*chool environment* led challenges in terms of physical environment and socio-cultural environment of the schools. The former, namely physical environment, caused challenges with regard

to infrastructure and facilities for most students, teachers and administrators while the latter, socio-cultural environment, were related to the attitude of local community toward students and school.

Infrastructure problems were related to the use of buildings constructed for other purposes for vocational education, narrow school buildings, classrooms furnished with fixed tables and benches, low lighting in the classrooms, dirty toilets, small size of classrooms and heating problems in the classrooms. Infrastructure-related challenges like narrow building and classrooms, unclean restrooms, cold and lowly lighted classrooms were also observed during the prolonged times I spent at each school. Similarly, lack of/ limited facilities were thought to be posing problems mostly for students. These problems were considered to derive from insufficient capacity of workplaces for trainees, limited workplace options for traineeship, lack of shops to buy course materials, lack of cafes around school, unhygienic and expensive canteens and limited food options at cafeteria.

Socio-cultural environment was another subtheme grouped under *school environment* and it revealed challenges with regard to accommodation, community life and attitude of local people. In terms of accommodation, all administrators and students complained about expensive house rents. As capacity of dormitories was not sufficient to accommodate all students they had to rent houses; however, local people kept the rents high, making it unaffordable for the students. As to community life, one teacher and some students mentioned lack of socio-cultural events in towns. Beside these, negative attitude of local people toward the students and the school community was among the challenges reported by some students and administrators. Most of them asserted that local people treated students as source of income and increased the prices of goods to make money. Furthermore, according to the views of one administrator and two focus groups, students were socially excluded from the local community due to the tension between students and people in the town.

In respect to *(lack of) resources*, the interviewees reported that they lacked human resources, financial resources and course materials. To give in detail, one administrator and one teacher noted that there was lack of technical staff at school and they received technical support from the main campus in case of need while all

administrators and nearly all teachers argued about the inadequate number of teaching staff, leading heavy course load for the present teachers. Likewise, some students complained about the broken technological devices like computer and projector which hindered administration of some courses while some teachers and administrators highlighted inadequacy of tools in proportion to student number. Finally, like it was in the nationwide, administrators and teachers marked that school contexts were delivered limited budget and due to this fact, they had difficulty to supply course materials and tools, and could not take students to field trips. Also, a few students voiced transportation problems between the town center and school and complained about lack of ring services.

As to the challenges related to school *administration,* it was found that negative attitude of administrators, (ineffective) coordination of instructional programs, lack of evaluation and (ineffective) staff management revealed problems for the interviewees.

Concerning the attitude of administrators, most of the students believed that administrators at higher vocational schools were prejudiced toward them and made discriminations between programs. They felt that administrators favored some programs and showed more interest to them. Moreover, most students complained about lack of communication between them and administrators. Also, a considerable number of students talked about their experience and marked that administrators were negligent of students' complaints and requests.

Administrators were also perceived to coordinate instructional programs ineffectively by some teachers, students and administrators. The challenges related to coordination were reported to be related to extracurricular activities, specifically either lack of extracurricular activities or lack of variety of these activities. Students from three focus groups also criticized paid professional development courses offered at school as it was unaffordable for them to attend. Furthermore, two teachers stated that due to lack of orientation course delivered at the opening weeks students were left uninformed about the school facilities, curriculum and procedures. In addition to problems with regard to organization and coordination of extracurricular activities, (ineffective) scheduling by administrators was put forward by some teachers and administrators. Assignment of too much course load

to teachers was the most agreed challenge by teachers and administrators while a few of them criticized accomplishing very little during the opening and exam weeks due to ineffective scheduling of administrators, as well.

The interviewees also reported the challenges originating from (lack of) curriculum, teacher and student evaluation. Nearly all administrators and two teachers marked that there was no internal and external curriculum evaluation conducted at the schools involved in the study. Similarly, student progress and teacher effectiveness, which were perceived to be highly critical for the effectiveness of higher vocational education, were not evaluated.

As the last dimension, two teachers expressed their perceptions with regard to administrators' (ineffective) staff management. They noted that there was a tension between teachers who pursue academic studies and have job experience as both undermined the qualities of the other, and they believed that administrators failed to manage this tension by disregarding this problem.

Employer-related challenges emerged from data as the sixth theme revealing challenges related to *workplace learning, characteristics of workplace* and *personnel selection.*

The interviewees perceived that the challenges related to *workplace learning* resulted from the employers' attitude and training process. Most teachers, students and administrators asserted that the negative attitude of employers toward trainees and workplace learning had a negative impact on-the-job training and learning. They believed employers considered trainees free or cheap labour force while some interviewees noted trainees were perceived as burden by employers and they did not want to recruit them. Moreover, most administrators and teachers criticized employers for letting students to do fake traineeship rather than delivering on-the-job training and marked that fake traineeship was a mutual agreement between employers and students. Additionally, some interviewees indicated reluctance of employers to pay salary to trainees despite the fact that the state covered a huge amount of expenses to be paid to the trainees. As to the challenges related to on-the-job training process, students from four focus groups noted that employers asked them to run errand like photocopying, serving drinks, etc. rather than perform the job. Likewise, some other students marked that employers did not

allow them to use the devices at workplace for the fear of damage to expensive tools and job materials and losing customers. In addition, to a few teachers and students, employers and trainers at the workplace did not exchange knowledge and job secrets with trainees which led to the ineffectiveness of workplace learning.

Characteristics of workplace also hindered effectiveness of on-the-job training. Some teachers and a few students asserted that there was mismatch between the knowledge learnt at school and required at workplace, resulting from over and under-skilling. As stated by three teachers, most workplaces are operated through habits and misconceptions while students get overskilled as the result of their education at higher vocational schools. Some teachers also mentioned the tension between students and graduates from higher vocational schools and self-educated staff at the workplaces. Self-educated staff was reported to underestimate the education delivered to students due to students' lack of requisite skills and knowledge to perform the job while graduates and trainees had difficulty to adapt to the procedures at workplace applied in traditional and conventional terms.

Employers were also considered to lead challenges due to their decisions with regard to *personnel selection*. Three administrators and one teacher believed that employers were unwilling to recruit newly graduated vocational students due to their lack of experience. Likewise, some interviewees asserted that employers recruited graduates from similar departments without seeking job-specific training and skills while one teacher criticized employers' preference for graduates from 4-year programs rather than graduates of higher vocational schools. All in all, it was understood that employers were prejudiced toward graduates' knowledge and skills, mostly recruited graduates with general skills and knowledge and considered graduates of 4-year programs more qualified.

The final group of challenges inhibiting effective vocational teaching and learning was found to be parental challenges based on *parental approach* and *parental involvement*.

Parental approach included parents' attitude toward higher vocational education and interests. Concerning their attitude, most teachers believed that parents disvalued the training provided at higher vocational schools as, to one administrator, they were prejudiced toward them due to the lower status of these

schools in the society. Due to this attitude, two administrators stated that parents put pressure on teachers to help students graduate. Attitudes of parents were also stated to correlate with their interests because, as was reported by most teachers, most parents were interested in diploma rather than the quality training. Some teachers and administrators believed that the interest in diploma resulted from their interest in positions to be found at public institutions. Parents aimed to have their children get diploma from a higher education institution, which was required to take Public Personnel Selection Test and get assigned to a public institution.

Beside attitude and interests, *parental involvement* in guidance gave way to challenges according to the views of some teachers and administrators. Due to abovementioned attitude and interests of parents, they urged their children to select the program and field of study they wanted or they forced them to attend higher education regardless of the program. Additionally, three teachers considered that parents were lack of knowledge about the capabilities of their children because of that they misguided and urged them to select programs inappropriate for their abilities, interests and skills. Apart from that, three other teachers stated that there were some other parents who were not involved in guidance during the program selection process and as a result, students made decisions on their own.

4.3 Practices and Strategies to Cope with Challenges

The third research question aimed to find out teachers', students' and administrators' strategies and practices to cope with the challenges that hinder the effectiveness of teaching and learning at higher vocational schools. In line with that, data were collected from these participants through interviews and data analysis produced three main themes in this regard, which were teacher-led practices, student-led practices and administrator-led practices. The findings related to each theme were given in detail in the following sections.

4.3.1 Teacher-led Practices to Cope with Challenges

Based on the data analysis, teachers' practices to overcome the challenges inhibiting the effectiveness of vocational teaching and learning were found out and these practices were grouped under four themes, namely practices related to

curriculum, instruction, resources and *peer collaboration*. See Figure 4.13 for the presentation of the teacher-led practices in summary.

The first theme, practices to cope with challenges related to *curriculum*, included teacher practices for planning, content selection, implementation, measurement and assessment, and extracurricular activities. Some teachers reported that they employed some strategies in order to cope with challenges related to curriculum planning. One of the teachers highlighted that graduates were a significant data source to determine the needs of labour market and discrepancies in the curriculum; therefore, he contacted graduates working in the sector and learned the needs from them (T3). He also asserted that graduates were the only stakeholders who had the experience of both sides, namely school and workplace. Additionally, six teachers noted that they considered labour market needs while determining the objectives (T7, T9, T10, T11, T14, T15) to eliminate the mismatch between the content delivered at schools and used at workplaces. Some of them also highlighted that they followed the developments in the labour market by contacting the employers at the workplaces where students did traineeship and kept track of changes in the technologies used and regulations (T9, T11, T14). Two teachers also added that they updated the curriculum according to changes in the sector (T7, T10). One of them said: "I instantly apply the changes in the curriculum and inform my students about those [changes] in my classes….I do this unofficially [without writing it down in formal curriculum]. Otherwise, I will have to make changes on the online system, get approval before and after changes, etc. (T10)". It was understood that the teacher who was informed about the developments in the labour market reported these changes verbally not to deal with formal curriculum development procedures.

Among the practices specific to *curriculum*, teachers also reported that they employed some strategies to cope with challenges related to content. During the interviews, half of the teachers emphasized students' lack of prior knowledge and its consequences like differences among students in readiness for learning, and difficulty for them to accommodate the changing needs. Therefore, these teachers

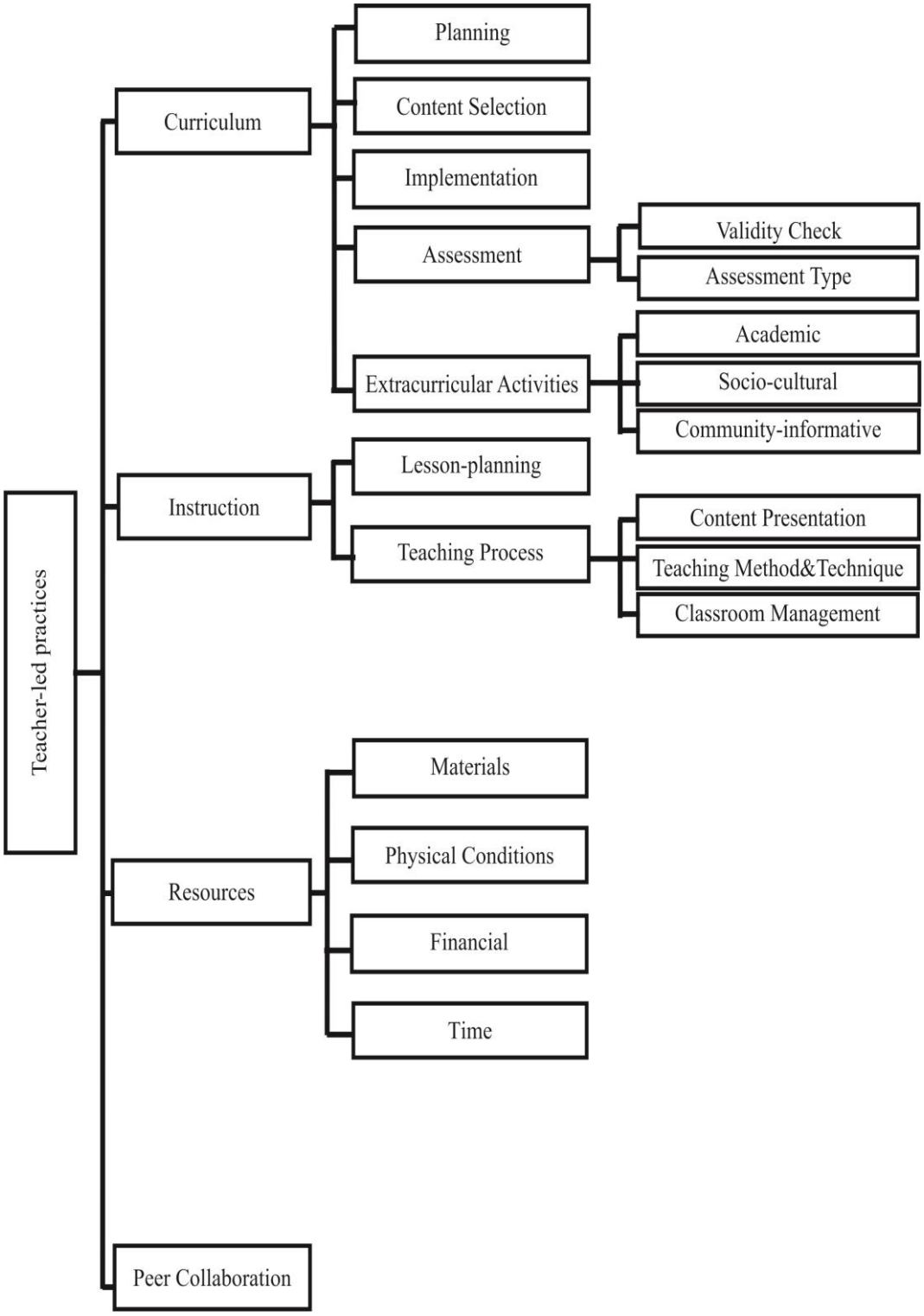

Figure 4.13 *Teacher-led Practices to Cope with Challenges*

handled these problems by focusing on the knowledge and skills students lacked of (T1, T4, T6, T7, T8, T9, T11, T15). In other words, teachers firstly made up knowledge gaps among students and then, presented further contents. On the contrary, rather than being concerned with prior knowledge, one teacher asserted that he aimed to teach all students employability skills like time management, problem solving, communication skills etc. (T4) which would help students perform the job more effectively. Furthermore, as was mentioned among challenges, teachers were criticized to have academic orientation rather than vocational one by both students and some administrators. To overcome this problem, six teachers asserted that they focused more on vocational dimensions of knowledge and delivered the job-related knowledge by considering all aspects (T3, T4, T5, T9, T11, T14): the code of conduct, job ethics, procedures followed, etc. Likewise, some teachers narrated their own job experiences (T9, T10, T11, T14, T15) in order to prepare students for workplace as some of them believed that knowledge of practical experience was more valuable than book knowledge; therefore, they delivered the knowledge not covered in the course books (T9, T11). One of them explained his practice as follows:

> I have 16-year practical experience. The vocational courses I deliver are more effective and more useful for the students. I believe I present the content in an enjoyable way as I teach everything I know. I know quite a lot of things related to job thanks to my experience. I am not concerned about ECTS, do not follow book contents or lesson plans displaying weekly topics. The book [knowledge] is of no use in our sector. You have to tell your experiences as you cannot hold down the job based on the book knowledge….I have many friends who are already working in the sector. [I contact them] and inform my students about the changes by also referring to previous practices, what they will encounter, what they will experience. I always tell the truth. For example, when I present a new topic the students immediately ask what good it was supposed to do. I inform them saying mastering this content would help them find a minimum wage job. Then they ask how they can get promoted and earn more. Then, I say they need to read the reports and interpret the findings. …I teach these. They are not included in the books (T11).

This teacher and another one also marked that they presented information of software used at workplace and got students to use them through persistent practice (T10, T11).

There were also some teachers who developed strategies to cope with challenges related to *implementation* of curriculum. As a solution to irrational increase of intake capacity by higher education authority, six teachers divided crowded groups into two or three to allocate more time for practice for each student (T1, T4, T7, T8, T12, T16). Moreover, although one of them applied to the Higher Education Council by writing a report on the unavailability of physical conditions and to stop increasing the capacities she remarked that she achieved no result (T8). Also, four teachers marked that they handled with limited hours allotted for practice-based courses by delivering more practice sessions than it was planned in the curriculum to develop students' skills (T1, T3, T4, T16). While two teachers accompanied students during these extra hours (T1, T3) other two teachers marked that they allowed students to enter and use materials in the laboratories/workshops at the weekends and out-of-class hours (T4, T16). In addition, two teachers noted that they added courses to the curriculum in order to respond to the students' learning needs (T8, T9). They both offered an additional course on interview techniques to prepare students for job application.

Another challenge faced by teachers was lack of specialization courses and branches within the programs. Two teachers marked that they formed informal branches according to students' interests and skills (T3, T7) by dividing students into groups or guiding them on individual basis and assigning branch-specific tasks to each group or student. One of these teachers also reported that she changed assignments according to student progress (T7). Although she already planned all of the projects to be assigned during the term she removed some of them and added some more based on pacing and progress of students. Last of all, one teacher who also delivered courses at some other relevant programs noted that she made changes in the scope according to needs of each program (T13). She asserted that some programs needed deeper learning while it was sufficient for some to get familiarized with the content.

As to *assessment*, teachers' responses produced two subthemes: practices for validity check and assessment type. Firstly, some teachers remarked that they checked the validity of workplace training to inhibit fake traineeship through some strategies. These teachers' strategies were interviewing students after traineeship to

test what they have learned (T7, T8, T12, T16), sending students to workplaces they know (T4, T7, T11, T14, T15) and asking for extra proof other than record book like photos (T7, T12). Three teachers also reported that they checked the validity of training delivered at school by asking for feedback from employers about the knowledge and skill deficiencies of trainees (T4, T7, T14).

Secondly, some teachers applied different assessment and measurement methods in order not to solely utilize written exams. Most of the teachers stated that they assigned research and presentations of the researched topic (T1, T4, T5, T7, T8, T10, T11, T12, T13) to make students more active and engaged. Beside, two teachers organized year-end exhibition where student works were exhibited (T1, T7). And finally, two teachers reported that they were involved in the development of training record book including checklist of tasks to be performed by the students at the workplace (T4, T5). They believed that checklist would inform the employers about the tasks needed to be performed by students at the workplace and also, teachers would make sure what tasks were completed during traineeship.

Teachers also addressed to the challenges related to lack of extracurricular activities by organizing academic, socio-cultural and community-informative *extracurricular activities*. The academic activities organized for students included certificate programs which was designed to deliver job-specific knowledge and skills, and would help students find job (T3, T11). One of these teachers invited the representatives from the national authority to deliver training and award students with the certificate validated in international arena. The other one asserted that he taught how to use the certified software used at all national and international workplaces, which would have students get ahead of other candidates for job. Moreover, three teachers provided counseling and guidance on individual basis (T3, T4, T7) to inform students about their progress and knowledge gaps. Additionally, four teachers underlined students' being uninformed about the job they selected; therefore, to deal with this challenge, they reported that they invited employers to school to give talk and inform students about the job.

Concerning the socio-cultural activities, two teachers were found to participate in sociocultural activities organized by students (T9, T16) to motivate them. One of them also stated that he organized sociocultural activities together

with students (T16). Sociocultural activities were reported to include football matches, table tennis tournaments, picnics and mini concerts.

Besides all, one teacher was involved in community-informative activity by providing vocational guidance at high schools in town to inform prospective students (T4). He believed that would be useful to hinder uninformed program choices although it was conducted through personal efforts.

The second theme that data analysis also revealed was teachers' practices to deal with the challenges inhibiting *instruction*, and they were found to be employing strategies for lesson-planning and teaching process itself.

All of the teachers reported that they determined the objectives according to job requirements (T1, T2, T3, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16) to keep the subject integrated with the career content. However, as was mentioned previously, students did not find the content of some courses job-related due to those teachers' lack of vocational knowledge and experience. From a different point of view, one teacher stated that he considered the characteristics of subject/job (T4) he was supposed to deliver while planning the lessons. He explained his practice as follows:

> I consider what the subject/job tells me when I plan and present the content. [Because] it tells you what materials you need to use, what order you need to follow and what you need to cover. If you are going to train a cook, and the course you are supposed to teach is Far Eastern Cuisine the [course] materials are self-evident. You need to include the dishes, ingredients, the presentation techniques and dressings in the [course] plan. Having these on hand, I organize the content from simple to complex. Any my job experience guides me how much [scope] I need to present to my students (T4).

Moreover, during the lesson planning, lack of job-specific teaching and learning materials was considered as a challenge hindering vocational teaching and learning and three teachers tried to overcome this challenge by searching for materials and relevant examples (T1, T6, T8) for each topic. They noted they utilized all relevant sources like websites, published materials and videos and prepared study notes for students. Furthermore, two of these teachers marked they got prepared for each lesson (T1, T8) beforehand by checking the developments regarding the job and studying to master the content.

As to the practices concerning *teaching process*, three subthemes evolved, namely content presentation, teaching method & technique and classroom management. While presenting the content, the strategy adopted by most teachers was presentation of pre-requisite knowledge and job-related knowledge simultaneously (T1, T2, T3, T5, T6, T7, T8, T9, T10, T13, T14, T16) as students lacked pre-requisite knowledge due to their prior education. However, during the observations, only two teachers were observed to check prerequisite knowledge through display questions as teachers mostly were concerned the content that was covered in the previous sessions, and to be covered the next sessions and prospective exams. Two teachers were also observed to review the content covered at other courses while seven teachers were found to remind the students previously covered content. There were also some sessions when teachers reviewed the connection between the present, previous and prospective topics. Out of six teachers, two of them related the present topic to the content covered in previous terms and how the content would set base for the courses to be delivered in the upcoming term. Being more session-oriented, other four teachers either reviewed the content of student presentation as soon as it ended or reminded the content covered at the end of lesson.

Except that, four teachers indicated they arranged pacing according to student progress (T1, T7, T15, T16) to be responsive to the learners' needs. All of them marked that they slowed down their speed as students had difficulty to comprehend some topics, most of which required numerical knowledge and skills. Likewise, simplification of content to enhance student understanding (T2, T6, T7,T9, T11) was another strategy applied to address to lack of comprehension. Two of these teachers applied linguistic simplification by speaking daily language while teaching (T9, T11) other teachers employed content simplification while conveying a complex content, which was meant to be quantitative courses, by presenting merely basic level information. Some teachers also reported that they informed the students about all processes to be involved in (T7), explained the relevancy of course to job in case of student prejudice (T5, T13), ask students how to teach (T7, T12), and used workplace jargon while teaching (T4). Three teachers were also observed to remind the importance of the topic for job while five teachers explained

how the content would be used at workplace. Moreover, during the class of T4, he was observed to act like an overseer and students performed the tasks he assigned in the classroom which was designed like a workplace and equipped with job materials. He seemed to speak the corporate jargon using some slang words. During the interviews, he also asserted that employees in real workplaces would yell, use slang and utter profane language; therefore, he believed that students should get accustomed to these conditions.

With regard to teaching methods & techniques teachers used to overcome challenges, most of the interviewees reported that they gave examples from the workplace to maintain students' attention (T3, T4, T5,T9, T10, T11, T12, T13, T14, T15, T16). This coping strategy was observed in the classes of four teachers who gave job-related examples while more teachers gave examples based on their job experience. As stated by these teachers, students seemed more concentrated when the examples were related to job. Not only job-related examples but also examples from daily life helped teachers to gain students' attention as was observed during the sessions of nine teachers. Additionally, half of teachers marked that they taught through hands-on activities (T1, T2, T3, T4, T7, T10, T12, T16) to improve student learning. Among these teachers, only six of them were observed to conduct hand-on activities because only that number of applied courses were involved in the classroom observation. Most teachers were observed to give lecture in theory-based courses which constituted the majority of hours observed. Five of these teachers also reported that they corrected students' misapplications through constant practice (T1, T3, T4, T7, T16) as they believed students corrected their mistakes through trial and error. Apart from those, one teacher noted that she used question-answer technique in theory-based courses (T12) to facilitate learning retention. She thought that students comprehended the content much better when they were asked close-ended questions, and thus, teacher could check their comprehension. Likewise, most teachers were observed to use display questions as a questioning technique while a few teachers utilized opinion questions, brainstorm questions and Socratic questioning. Some teachers also involved other students by asking unanswered questions to other students or asking whole class to answer the question of a student.

As to classroom management practices of teachers, most teachers reported that they constantly motivated their students (T1, T4, T7, T9, T11), and understood students' needs and motives and arranged their behaviors accordingly (T3, T7, T12, T13). Other strategies included: allowing students to express their ideas (T7, T12), creating a workplace atmosphere (T3, T4), putting more attention to uninterested students (T1, T4) and considering individual differences (T14). In terms of student engagement, four teachers were observed to engage uninterested students by asking them questions while three other teachers matched the students with materials with the ones who were lack of materials to engage them. On the contrary, half of teachers were observed to communicate only with the attentive and engaged students and they stayed indifferent to uninterested students.

Teachers' strategies to deal with the challenges related to (lack of) *resources*, which emerged as the third subtheme of teacher-led practices, produced four groups of findings which were found to be practices to overcome the problems related to materials, physical conditions, time and financial constraints.

First of all, some teachers were challenged with the lack of teaching and learning materials. One of the teachers voiced the lack of teaching materials published in Turkish and he noted that he translated resources written in German into Turkish (T3) to provide materials for the teachers and students from the same study field. Like him, three teachers faced a similar problem, namely lack of job-specific materials, and they marked that they used various resources at the same time to deal with this challenge. Rather than relying on one source, they made use of several published materials, ready-made powerpoint presentations and videos to enrich their teaching and make the materials more job-specific. Two other teachers also coped with lack of materials by preparing study notes for students (T6, T13) by gathering main ideas from several sources. One of these two teachers also noted that he used videos to show devices and tools used at workplace (T6) as these students could not be provided with authentic materials and devices due to financial constraints. Similarly, as stated by some teachers and administrators, the workshops and laboratories could not be equipped with required devices, tools and materials due to limited budget allocated to schools. Two teachers remarked that they overcame this challenge by equipping the laboratories with tools through own

means (T11, T16) by either raising donations from the local people or supplying the materials from the workplaces where they had close friends.

To cope with the problems derived from physical conditions, some teachers also came up with some solutions. One teacher asked local governors to meet the physical needs of the program (T7) but she asserted that she could not receive sufficient financial support. There was also another teacher who needed a spacious place for practice-based hours in which students were supposed to do physical activities. The teachers could not have students perform these activities in the classroom due to their narrow size; therefore, she used sports hall for practice-based sessions (T12).

In relation to teachers' practices for financial challenges, most students studying at higher vocational schools were reported during the interviews to have low income. As previously mentioned, students also had difficulty to supply course materials. To cope with this challenge, two teachers shared the costs of materials among student groups (T7, T12). One of these teachers also noted that she considered the costs of each assignment and select the assignments conforming to the students' economic status (T7). Moreover, that teacher and another one tried to find bursaries for the students in financial difficulty (T1, T7).

Some teachers also mentioned how they managed to deal with challenges related to time. The teachers who had to teach overcrowded groups mentioned that they could not spare enough time for each student to improve their practical skills. Also, time allotted to practice-based courses was found insufficient by both teachers and students. Five teachers tried to increase the time allotted to practice by allowing students to use laboratories and labs out of class hours (T1, T2, T3, T7, T16). Similarly, a few teachers reported that they delivered make-up classes to cover the required content (T1, T7, T13) as fourteen-week time was not found sufficient by these teachers to present all of the topics and have students master that content. One of them also marked that she extended the deadlines when students could not complete assignments (T7).

The final subtheme, *peer collaboration*, revealed teachers' practices for challenges faced due to out-of-field teaching and lack of collaboration. Three teachers reported that they collaborated with colleagues to make decisions about

curriculum, specifically course contents and exams (T7, T13, T16). One of them said: “We work in such a harmony. One warns the other about a student’s performance loss, the other tells the change in assignments, etc. We speak with a single voice and our students are also aware of that (T7)”. Another teacher, who had to teach an out-of-field course marked that she coped with this problem through knowledge exchange with the experienced teachers (T8). She noted that she visited these teachers and asked them about the strategies they employed while teaching out-of-field courses.

4.3.2 Student-led Practices to Cope with Challenges

Like teachers, students were also found to employ some strategies to cope with challenges hindering the effectiveness of vocational teaching and learning. These strategies, revealed by interview data analysis, were grouped under two themes: *learning strategies* and *extracurricular activities*. Figure 4.14 presents the summary of main themes evolved under student-led practices.

Students themselves reported that they developed *learning strategies*, namely peer collaboration, in-classroom learning strategies, out-of-classroom learning strategies and workplace learning strategies, to overcome learning problems they encountered.

With regard to peer collaboration, it was found out that most students asked their peers about the topics they did not comprehend (F1, F2, F5, F6, F7, F8, F9, F10, F11, F12, F13, F1) in case they could not learn from teachers. To some of them, peer tutoring was effective in making the content more comprehensible than teachers did. Similarly, half of teachers marked that they studied for the exams with their peers (F1, F2, F10, F12, F13, F14, F15, F16). More specifically, students from four focus groups noted graduates from vocational high schools and the ones from general high schools utilized peer tutoring (F7, F8, F12, F13) because vocational high school graduates were better at vocational subjects while students who graduated from general high schools were more competent in numerical and academic courses. Therefore, each group supported the other one by closing the gaps.

As for students' in-classroom learning strategies, half of the students reported that they asked teachers to review the content (F1, F2, F5, F6, F7, F8, F11, F12) when they could not comprehend the topic. Additionally, students in four focus groups asserted that their strategy was to come to the class prepared (F4, F7, F8, F12) as they believed that helped them get ready for learning, making them more motivated and interested. And, the strategy of some students from other two focus groups was to listen to the teacher attentively (F3, F12).

Students from some focus groups also mentioned their out-of-classroom learning strategies. When they believed that they could not learn through in-classroom activities, they employed following strategies: asking teachers questions out of classroom (F1, F3, F4, F7, F8), studying at home and learning on his/her own (F1, F2, F5, F6, F7, F8, F9, F10, F11, F12, F13, F15), searching the content on the internet (F2, F4, F12), memorizing the content in the book (F7), and learning from relatives who perform the job (F10). It seemed that students mostly tried to cope with learning challenges on their own while some of them received help from teachers or from peers and relatives.

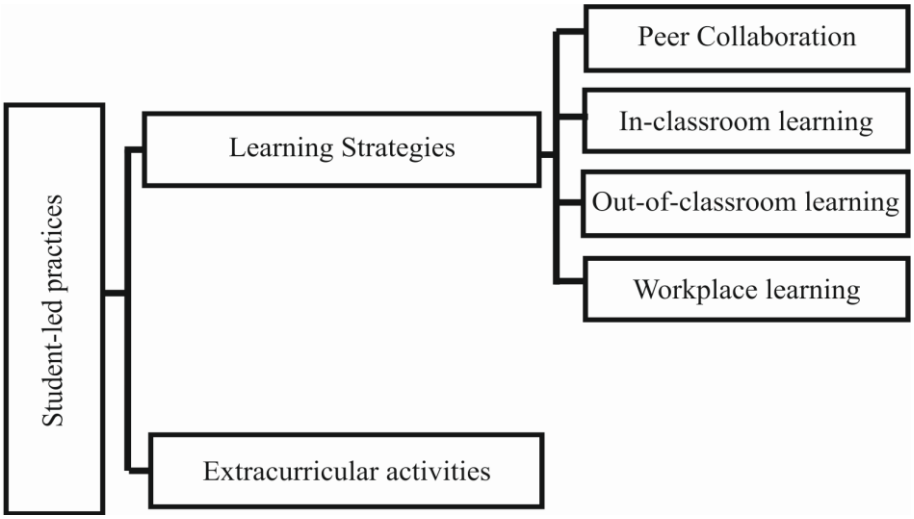

Figure 4.14 *Student-led Practices to Cope with Challenges*

In addition to in-classroom and out-of-classroom learning strategies, some students also stated that they developed some coping strategies to deal with problems related to workplace learning. Students from three focus groups noted that

they could learn during traineeship by constantly asking the experts (F6, F7, F10), and students from two groups added that they could learn during the traineeship as they were insistent on learning the job (F6, F10) although the employers tried to have them do errand. Unlike other students, one student from F1 reported that she learned the job from the employers thanks to working on part-time basis while studying (F1).

The second subtheme was related to *extracurricular activities* serving as student-led practices for the challenges of lack of socio-cultural events and non-involvement of employers in extracurricular activities. In line with that, some students from two focus groups asserted that they organized socio-cultural activities (F8, F16) like picnics, tournaments etc. as the administrators and teachers failed to offer such activities. Moreover, students from F16 noted that they invited teachers and administrators to participate in those activities. Apart from that, students in one focus group stated that they invited employers to school through personal efforts (F9) to inform them about the job and required qualifications.

4.3.3 Administrator-led Practices to Cope with Challenges

As was revealed in Figure 4.15, administrators involved in this study utilized some strategies for *student learning, accommodation, teacher development, resources, curriculum development, community-student interaction* and *diagnostic evaluation* to cope with challenges related to these factors.

First of all, administrators reported during the interviews that they were not authorized to intervene teachers' actions in the classroom but coordinate them and instructional schedules. Therefore, the sake of improving *student learning*, administrators signed protocols with employers for workplace training (A1, A5, A7) and invited employers to school to inform and motivate students (A4, A6). One administrator also marked that he added course to curriculum when he observed the need for them (A4). Moreover, concerned with *accommodation* of students, that administrator also tried to reduce rents and make them more affordable for the students by asking for help from local governors (A4).

Four administrators also reported their practices for *teacher development*. While coordinating the weekly instructional schedules of teachers these

administrators were found to give teachers one or two days off for their academic studies (A1, A2, A3, A6) as most of the teachers were doing master's or doctorate in other cities.

Beside, some administrators were also involved in some actions to improve *resources*, specifically the materials and equipment needed at workshops and laboratories. One administrator marked that he, together with some teachers, established the laboratories through personal efforts (A6) by raising donations for materials. Three administrators also mentioned about the limited budget and that they wrote European Union funded projects to find financial resource for required course equipment (A5, A6, A7).

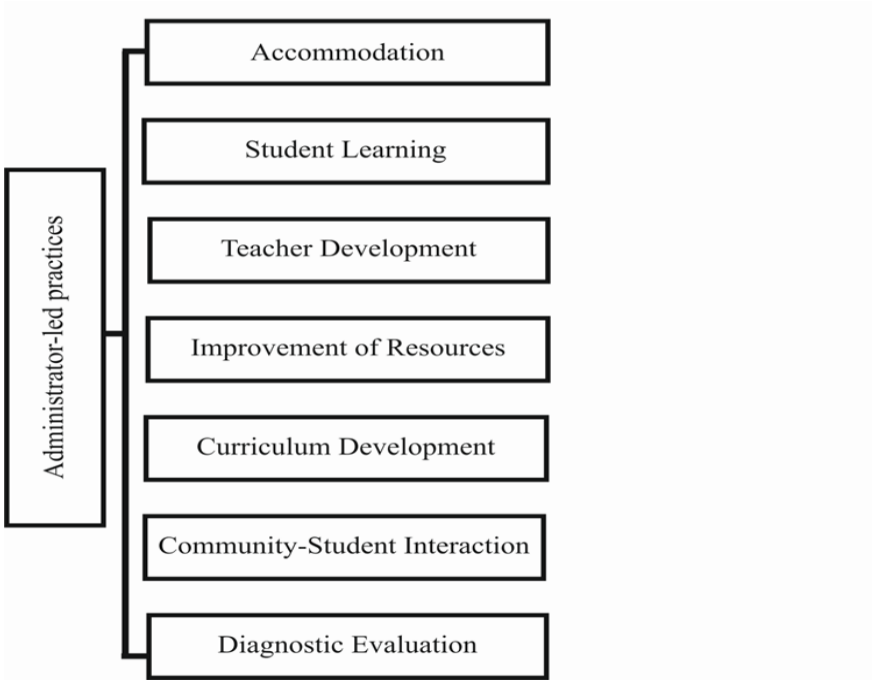

Figure 4.15 *Administrator-led Practices to Cope with Challenges*

Another practice was found related to *curriculum development*. One administrator who criticized variety of curricula implemented at the same programs asserted that he was a member of initiation aiming to standardize the curriculum to be designed and implemented at medical programs at higher vocational schools (A7).

With regard to *community-student interaction*, two administrators noted the tension between local people and students, and reported that students were marginalized as they did not conform to the socio-cultural structure of the society in those towns. To overcome that problem, two administrators organized events for local people to improve their relationship with students (A4, A6).

Finally, as was formerly criticized by some teachers and administrators, curriculum failed to respond to the demands of labour market and students' learning needs due to lack of needs assessment, and three administrators dealt with this problem by meeting students and teachers to learn their needs (A5, A6, A7) with the aim of *diagnostic evaluation*. Despite their attempts to assess the needs, administrators marked that they failed to meet all needs due to beforementioned financial and system-related challenges.

4.3.4 Summary of Practices to Cope with Challenges

Data analysis produced three main themes related to the practices which teachers, students and administrators were involved in to cope with challenges hindering vocational teaching and learning. These themes were teacher-led practices, student-led practices and administrator-led practices.

Teacher-led practices were grouped into four themes, namely practices for *curriculum*, practices for *instruction*, practices for *resources* and *peer collaboration*.

First of all, some teachers reported that they employed some strategies to overcome the challenges related to *curriculum*, the components of which were found as planning, content, implementation, assessment and extracurricular activities. With regard to curriculum planning, most teachers tried to eliminate the problems derived from lack of needs assessment and mismatch between curriculum and labour market demands by considering the labour market needs while determining the objectives. Moreover, two teachers reported that they updated curriculum according to the changes in the sector while one teacher noted that he contacted graduates and learned the needs from them.

As for practices to overcome challenges related to content selection, most teachers focused on the knowledge and skills students were lack of and tried to

compensate knowledge deficiencies. Focusing on job-related knowledge, some teachers underlined that they presented knowledge about all aspects of job. On the other hand, five teachers preferred narrating his/her own experiences at the workplace. Other practices were presentation of topics which were not included in books; focusing on employability skills like problem solving and time management rather than trying to close knowledge gaps; and inclusion of knowledge and application of software used at workplaces.

Teachers also reported their practices in curriculum implementation to deal with problems arising from that. Six teachers found a way out by dividing crowded groups into two or three to allocate more time for practice per student. Similarly, four teachers found the practice-based hours insufficient and offered more hours than was planned to develop students' practical skills. Two teachers also noted that they added courses while implementing the curriculum in case they noticed the need for that while another teacher reported that she made changes in the scope of curriculum according to the needs of program as each program required different levels of knowledge, surface or deep. There were two teachers who divided the program into sub-branches though it was not allowed officially, In other words, these two teachers tracked each student' progress and assigned them tasks according to their needs and interests. One of them also added that she made changes in the assignments when she detected students' were having difficulty or they needed more practice.

With regard to assessment of learning, teachers and students who were interviewed highlighted that they faced challenges due to the lack of validity of assessments tools and limited assessment methods. Concerned with workplace training, some teachers developed strategies to check the validity of traineeship by interviewing students after traineeship to test their learning, asking for extra proof, other than traineeship record book like photos, having students work at the workplaces they knew, and receiving feedback from employers about the knowledge and skill deficiencies of students. Additionally, some teachers aimed to cope with challenges related to assessment and measurement by introducing assessment methods other than written exams. Most teachers assigned presentations and research to students and graded them while two teachers organized year-end

exhibition to display student works. Two other teachers focused on the assessment of traineeship and developed training record book including the list of tasks to be performed at workplace together with a checklist.

Some teachers were also involved in practices to handle with lack of extracurricular activities, namely academic activities, socio-cultural activities and community-informative activities.

Academic activity organized by two teachers was certificate program designed to deliver job-specific skills and knowledge while four teachers invited employers to school to give talk to students and inform them about the job. In addition, three teachers provided counselling on individual basis to guide students. With regard to socio-cultural activities, one teacher was found to organize events together with students while two teachers noted that they participated in those activities organized by students. Last of all, one teacher was involved in community-informative activity as he provided vocational guidance at high schools in the town and informed prospective students to help them make informed choice.

Data analysis also revealed that teachers developed strategies to cope with challenges related to *instruction*, producing two subthemes which were lesson-planning and teaching process.

With regard to lesson-planning, all of the teachers noted that they determined the objectives according to job requirements to prevent the mismatch between the curriculum and labour market demands. On the other hand, three teachers searched for materials and relevant examples to improve students' learning while planning their lessons. Two of these three teachers also reported that they got prepared for each lesson by studying the materials.

Teachers' practices for teaching process included their strategies for content presentation, teaching methods and techniques and classroom management.

In respect to content presentation, teachers reported that they informed students about all processes to be involved in; explained the relevancy of course to the job in case of students' prejudice; asked students how to teach; delivered pre-requisite knowledge and job knowledge simultaneously; arranged pacing according to students' needs; simplified the content to enhance student understanding; used

the workplace jargon during content delivery, and spoke daily language while teaching.

In addition to those practices, most teachers were found to utilize some teaching methods and techniques to overcome challenges related to teaching process. Most of them noted that they gave examples from workplace to gain and maintain students' attention while teaching through hands-on experience was the method preferred by half of the teachers. Moreover, some teachers marked that they corrected students' misapplications by involving students in constant practice. And, one teacher reported that she used question-answer technique in theory-based course to increase retention.

Classroom management strategies was the final dimension of teacher practices in teaching process. Data analysis revealed that they motivated students; understood students' needs and motives and behaved accordingly; created workplace atmosphere; dealt with uninterested students more; allowed students to express their ideas and opinions, and considered individual differences.

Beside *curriculum* and *instruction*, teachers employed some strategies to cope with the challenges derived from lack of *resources*, and developed solutions for instructional materials, physical conditions, financial resources and time. On the first place, a few teachers mentioned how they overcame the challenges related to lack of instructional materials like published sources, devices and tools. Three teachers reported that they used several resources at the same time to deliver job-specific content while other two teachers prepared study notes for students due to lack of published sources. Furthermore, one teacher translated resources written in foreign language into Turkish to supply materials for the relevant programs nationwide. Finally, one teacher used videos to show devices/tools used at workplace as there was no laboratory equipped with devices at school. Similarly, two teachers stated that they equipped the laboratories with required tools through own means, namely donations.

Secondly, two teachers coped with problems resulted from physical conditions like narrow size of classrooms and physical needs of the school. One of them used sports hall for practice-based courses as classrooms were not wide

enough to accommodate all students while the other teacher asked local governors to meet the physical needs of school.

The third subtheme was related to teachers' practices to deal with financial challenges. As students had low income level, two teachers shared the costs of materials among student groups while one teacher gave assignments according to students' economic status by choosing cheaper materials to work with. Additionally, two teachers marked that they found bursaries for the students in financial difficulty.

Lastly, to cope with time constraints, what most teachers did was to allow students to use labs out of class hours as students needed more time to gain practical skills. Moreover, one teacher reported that she extended the deadlines when students could not complete assignments. Three teachers, also, delivered make-up classes to catch up with the plan as they found time insufficient to cover all requisite content.

Peer collaboration evolved as the final subtheme of teacher-led practices to cope with challenges. A few teachers looked to collaboration to figure out problems related to curriculum and teaching process. More specifically, it was found that three teachers collaborated with their colleagues to make decisions about the course contents and exams and they informed each other about all steps they had taken. Likewise, one teacher also noted that she asked for advice from experienced teachers for the out-of-field courses she had to teach to learn some coping strategies.

Along with teacher-led practices, student-led practices evolved in two themes, which were *learning strategies* and *extracurricular activities*. As far as data analysis revealed, students developed and employed learning strategies like peer collaboration, in-classroom learning, out-of-classroom learning and workplace learning to cope with challenges derived from ineffective teaching and learning.

Starting with peer collaboration, most students noted that they received peer support in case of teacher ineffectiveness. Nearly all students preferred asking peers to retell the content when teachers failed to do so. Also, most students reported that they studied for the exams together with their peers, which proved very effective according to their perceptions. Furthermore, some students mentioned the collaboration between vocational high school and general high school graduates in

the form of peer tutoring and they noted that each group instructed the other group in the field they were good at.

Besides peer collaboration, students employed some in-classroom learning strategies which were found to listen to the teacher attentively, to come to class prepared and ask teachers to review the content in case they do not comprehend it. Likewise, the students stated that they also pursued some out-of-classroom strategies to make up for learning problems experienced in the classroom. These strategies were reported as follows: asking teachers about content out of classroom, studying at home and learning on his/her own, searching the content on the internet, memorizing the content in the book, and learning from relatives who do the relevant job. As to workplace learning strategies, some students highlighted that they learned during traineeship by asking questions to experts working at the workplace while a few students declared their insistence on learning though the employers asked them to run errand. Apart from traineeship, one student reported that she preferred working on part-time basis while studying to learn the job.

Last of all, data analysis revealed administrator-led practices categorized under seven themes, namely *student learning, accommodation, teacher development, resources, curriculum development, community-student interaction* and *diagnostic evaluation.*

For the sake of *student learning*, three administrators signed protocols with employers for workplace learning; one administrator, together with some teachers, added courses to curriculum as he observed the need; and two administrators invited employers to school to give talk and inform students. As to *accommodation*, one administrator reported that he asked for help from local governors to reduce rents and make it more affordable for the students. Additionally, four administrators gave support for *teacher development* as they allowed teachers who pursue academic studies and professional development to leave for a few days. Concerning the *resources*, three administrators stated that they wrote EU funded projects to supply the required equipment for practice-based courses while another administrator noted he established laboratories through personal efforts by raising donations and supplying the materials from workplaces he had close relationships with. In addition, one administrator was involved in initiation for *curriculum development*

and participated in studies to develop a standard curriculum for medical programs offered at higher vocational schools. Further, two administrators attached high importance to *community-student interaction*, and organized events for local people to improve the relationship between them and students as they believed that students were being excluded and mistreated by local people. Finally, *diagnostic evaluation* was found highly important to eliminate challenges against teaching and learning by a few administrators and they asserted that they met students and teachers periodically to learn their needs.

4.4 Recommendations to Improve the Effectiveness of Higher Vocational Education

Along with conceptions of effective vocational teaching and learning, challenges hindering their effectiveness and practices to cope with them, recommendations for improving the effectiveness of higher vocational education emerged from the collected data. Analysis of interview data revealed five main themes of recommendations, namely student-centered recommendations, teacher-centered recommendations, curricular recommendations, contextual recommendations and policy recommendations.

The first main theme, student-centered recommendations, consisted of teachers', students' and administrators' views and recommendations for *student selection and placement* which consisted of two themes: admission and guidance & counselling (see Figure 4.16).

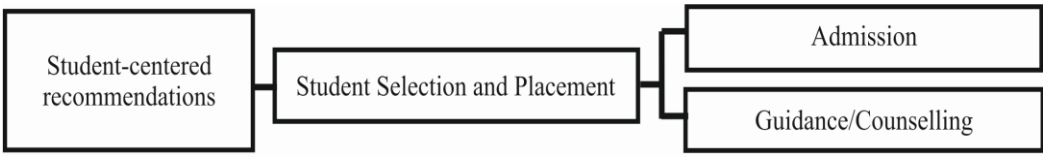

Figure 4.16 *Student-Centered Recommendations*

Concerning the first subtheme, namely admission, these interviewees believed that the type of students' admission to higher vocational schools should be modified to improve the effectiveness of higher vocational teaching and learning

through the administration of interview and skills test for student selection and placement (T1, T5, T7, T8, T13, T14, T15, A1, A2, A7) rather than standardized one. These teachers and administrators thought that selection of students through interviews and skills test would help them admit the candidates with requisite prior knowledge and skills, making teaching and learning at higher vocational schools more effective. One of the administrators raised some questions with regard to selection and placement system as follows: "Consider Fine Arts Faculties and Physical Education Departments. They select their students through skills test. What makes higher vocational schools different from them? We, at least as much as them, need students having requisite skills and knowledge (A1)". Similarly, four teachers recommended selection and placement of students by school committees (T5, T6, T7, T8). In other words, it was believed by these teachers that each program should select its own students by the jury consisting of teachers and administrators. Though they considered it would increase the educational quality at higher vocational schools some of them were also suspicious about the trustworthiness of such a system because, to them, there could be pressure on them to show favour and admit some students though they were not found qualified. In addition, two administrators and one teacher recommended pre-requisites of each program be specified in the school preference guide (A1, A8, T5). They asserted that some programs required prior knowledge while some others conditioned specific physical characteristics of students; therefore, students must be informed of these requisites in the guide and make their choices accordingly. Besides those recommendations, one administrator believed in the need for students to take job eligibility test before making selection and admission to schools (A1). He considered such a test would measure students' readiness to learn the job, and inform both teachers and administrators.

As to second subtheme, most administrators, one teacher and one focus group also made recommendations for improvement of student guidance and counseling services at secondary education level. Five administrators believed that visits to high schools must be organized by professionals to guide and counsel students about programs (A3, A4, A6, A7, A8). They felt that students would be acknowledged about the higher education programs in this way and make informed

school and program choices. Likewise, one teacher and students in one focus group proposed career days to be organized at high schools (T4, F12) to inform students about job and corresponding higher education programs. That teacher also provided an alternative recommendation for guidance and counseling saying that informative seminars for high school students (T4) and visits of high school students to workplaces (T4) must be organized.

The interviewees also made teacher-centered recommendations, the findings of which were grouped as *teacher education*, *teacher selection* and *professional development* (see Figure 4.17).

Recommendations for vocational *teacher education* gathered around the need for teachers to have vocational content knowledge, pedagogical content knowledge and knowledge of learners. More specifically, one administrator and one teacher proposed that job-specific teacher training should be delivered at vocational teacher education programs (A7, T13) rather than delivery of general subject knowledge. In other words, vocational (job) knowledge and subject knowledge must be presented in an integrated way according to perceptions of these two interviewees. Similarly, another administrator and teacher voiced the need for pedagogical content knowledge and asserted that vocational teachers should be trained about how to teach a job (A8, T8). In addition to them, students from two focus groups recommended vocational teacher education curricula need to include delivery of knowledge about vocational learners (F2, F7). These students believed that knowledge of learner was highly important for the effectiveness of teaching; however, most teachers lacked the knowledge of psychological and educational needs of students studying at higher vocational schools and they gained that knowledge in the process through trial-error.

With regard to the theme of *teacher selection*, most teachers and some students made recommendation for teacher recruitment criteria. Nearly all of the teachers asserted that teachers with at least five-year job experience must be recruited to work as teachers at higher vocational schools (T1, T4, T5, T9, T10, T11, T12, T13, T14, T15, T16). One of them also added that a vocational proficiency test should be administered to test candidates' vocational knowledge (T16). On the other side, students from three focus groups emphasized the need for

personality test to be administered to confirm teachers' eligibility to teach (F2, F10, F14). Rather than vocational knowledge and job experience, these students were found to attach more importance to teachers' personality traits.

Professional development of vocational teachers was another theme evolved under teacher-centered recommendations. Regarding that, some teachers and two administrators made recommendations for in-service training designed to improve pedagogical knowledge and vocational knowledge of teachers.

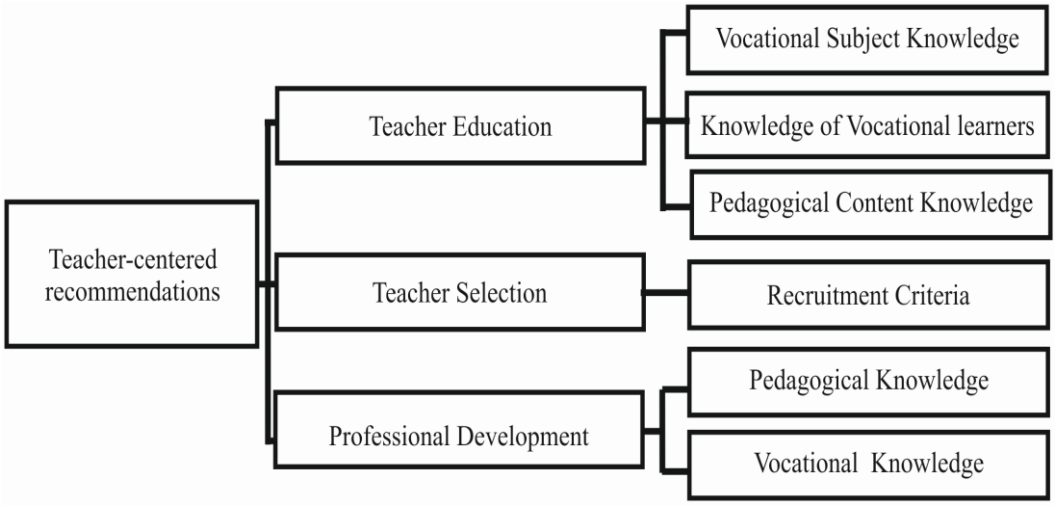

Figure 4.17 *Teacher-Centered Recommendations*

To improve pedagogical knowledge of vocational teachers, two teachers proposed delivery of in-service pedagogical development course to teachers (T8, T13). These two teachers mentioned the difficulty to make appropriate decisions about teaching methods and techniques as they lacked both theoretical and practical pedagogical knowledge and claimed the need for such a course for all teachers working at the school, whether they had teaching certificate or not. Being more specific, one administrator and one teacher voiced the need for in-service training on measurement and assessment (A7, T8) as it was observed by these interviewees to be most encountered indicator of teachers' lack of pedagogical knowledge. Besides that, totally four teachers and one administrator made recommendations for the improvement of teachers' vocational knowledge (A6, T6, T7, T11, T16). One of teachers noted that teachers should be delivered courses to update their

vocational knowledge (T11) as the labour market needs change constantly due to technological and operational changes. Instead of courses, three teachers and one administrator discussed that there was need for teachers to work while teaching to keep his/her vocational knowledge up-to-date (A6, T6, T7, T16).

Thirdly, according to the findings, the participants made recommendations for curriculum, revealed in two themes, the first of which was found to be for *curriculum development* while second was for *time allocation* (see Figure 4.18).

Regarding the recommendations for *curriculum development*, one administrator, three teachers and students from four focus groups highlighted the need for specialization courses within the curriculum (A8, T3, T7, T14, F1,F2, F7, F12) as they found curricula too general to gain expertise in sub-branches. Other recommendations were found to be: development of curriculum through interdisciplinary perspective (T13); development of standard job-specific curriculum for each program (T3), and design of a curriculum portal indicating the required content for each vocational program (A7).

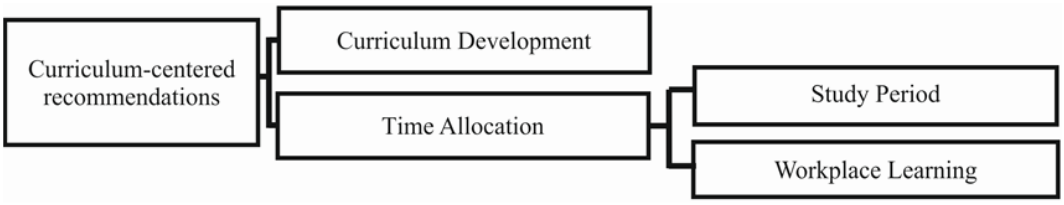

Figure 4.18 *Curriculum-centered recommendations*

Concerned with *time allocation*, some interviewees made time-related recommendations, which were categorized into two: study period and traineeship. Two-year study period, which was reported to be four terms in semester-basis and six terms in trimester basis, was viewed to be sufficient for some study fields and inadequate for some others. Two administrators and students in one focus group recommended that study duration be determined based on the needs of program and the job taught (A1, A4, F1) rather than standardizing it to two year time. Likewise, two administrators, one teacher and students in one focus group thought that three-year time should be allotted to higher vocational education by sparing the third year

for workplace learning (A6, A7, T16, F7). With regard to traineeship, most of the interviewees discussed allocation of 30-day time for workplace training. Five teachers and two administrators recommended that traineeship duration be determined according to the requirements of the study field (A2, A8, T2, T6, T8, T12, T13). While some of these interviewees asserted that medical and technology programs required longer time spent at workplace 30-day time was found sufficient for some programs. Therefore; they believed time allotted to traineeship should be assessed on program basis considering the needs of students and requirements of job rather than delivery of standardized traineeship for all. There were also some interviewees who recommended that there was a need for longer traineeship duration for all programs (A6, A7, T13, T16, F6, F12, F13, F16). These teachers, students and administrators considered that all of the study fields offered at higher vocational schools must be practice-based and workplace learning was found critically important to deliver job skills; so, according to their perceptions, the longer traineeship duration was, the more qualified students would be.

Some other recommendations were made for improving contextual problems encountered by the teachers, students and administrators involved in the study. Mostly students and administrators considered that contextual problems could be resolved through a sound *planning* and data *tracking* (see Figure 4.19).

The interviewees made recommendations for *planning* of higher vocational education, specifically curriculum planning, selection of setting, recruitment of teaching staff. First of all, nearly all of the interviewees recommended that higher vocational schools be established at city centers and close to workplaces (A2, A3, A4, A6, A7, A8, T6, T7, T8, T9, T16, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16). They thought that such a location would eliminate challenges related to workplace learning and status of higher vocational schools. With regard to curricular planning, nearly all of the students attached high importance on decreasing students' course load by removing irrelevant courses (F1, F2, F5, F6, F7, F8, F10, F11, F12, F13, F15, F16). As mentioned in previous sections, students were delivered too many courses, mostly theory-based, offered in compressed time, leading to too busy weekly schedules and leaving no space for socio-cultural activities. Therefore, they believed less course would pave way for

more effective learning. Additionally, one teacher suggested that an educational planning and curriculum development unit be established at each vocational school (T6); in this way, teachers would be provided professional support while designing their courses and assessing them. He, together with all administrators, also asserted that curriculum of each program should be designed by including all stakeholders, namely employers, graduates and decision makers (A1, A2, A3, A4, A5, A6, A7, A8, T6) instead of leaving it to the hands of individual teachers. Finally, concerned with teaching staff, one administrator and one teacher noted that teachers should be recruited before the programs were launched (A7, T10) as recruitment of teachers after students were enrolled led to busy schedules and heavy workload for the present teachers.

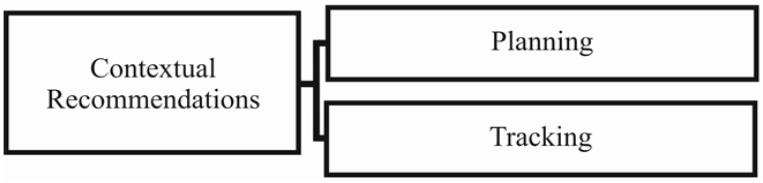

Figure 4.19 *Contextual Recommendations*

In respect to data *tracking*, one teacher believed that tracking graduates and gathering data about graduates and employment rates (T3) would provide invaluable data to evaluate the effectiveness of programs offered at higher vocational schools.

The last main theme that data analysis produced included recommendations for higher vocational education policy to be carried out at the national level. Some teachers, students and administrators interviewed proposed changes concerning the *status of higher vocational schools, regulation of workplace learning, accreditation of learning, further training* and *needs assessment* (see Figure 4.20).

On the first place, most administrators and two teachers emphasized the societal perceptions about the inferior status of higher vocational schools and suggested some interventions to correct these misperceptions. They recommended that mission of higher vocational schools be declared to community at the national level (A1, A4, A5, A6, A7, A8, T6, T14) through a collective action. Similar to that

view, one teacher and students in one focus group underlined negative attitude of employers and called for informative seminars for employers (F1, T6) while students from two focus groups believed that using media and press releases to inform the society would be very effective to empower higher vocational schools and eliminate bad reputation.

In addition, a few interviewees consisting of one teacher and some students in one focus group, marked that legislative interventions were required for the *regulation of workplace learning*. The students in one focus group recommended that traineeship department be established at workplaces to plan, implement and evaluate workplace training (F2). According to their views, that department would increase the effectiveness and accountability of workplace learning as in the current system, employers acted as the only decision makers in delivering the workplace training and effectiveness of workplace training were thought to be at their mercy.

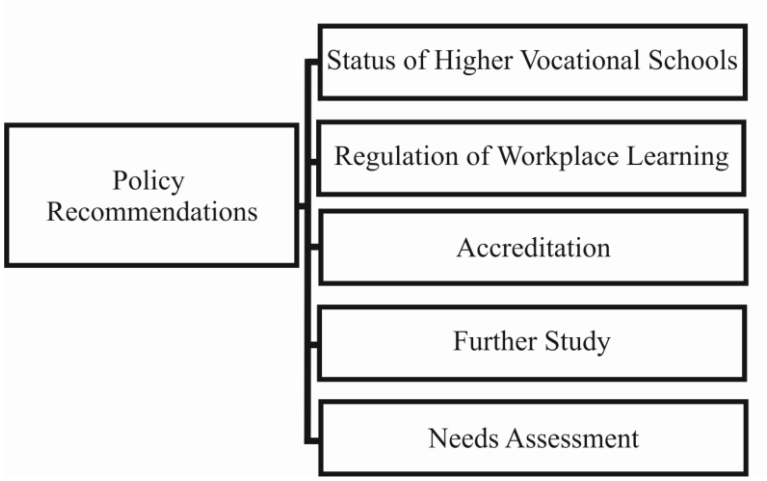

Figure 4.20 *Policy Recommendations*

Moreover, these students and one teacher suggested that a workplace inventory be set up on which trainees would grade workplaces based on the training they delivered (T12, F2). One of the students explained their view as follows:

> Employers have us do whatever they want. We serve tea and coffee, do photocopying, run errand, etc. I have heard from my friend: he was really lucky [because] he has been delivered good quality training at the workplace [he selected]. Moreover, he is planning to work there after he has graduated. I did not know what I would meet there [in the workplace I did traineeship].

> It was a renowned workplace in my hometown, I was deceived by that. I wish there was a list of good workplaces [delivering quality workplace training] we would apply for traineeship. We would select the quality ones from the list. And even, I wish we could give points to them [according to the training we are delivered]. Then, employers would be scared [of bad reputation] and devote more time to us (F2).

Besides assessment of workplace training, recommendations for the *accreditation of learning* were made by a few interviewees for the sake of accountability of higher vocational education. First, one teacher remarked that there was a need for vocational proficiency test to be administered to graduates (T5). She believed that that would make higher vocational schools more accountable for the training they deliver. Like her, two administrators and students from one focus group proposed that assessment and measurement of learning at higher vocational schools should be conducted by independent agencies (A1, A5, F11) leading to more reliable and more valid assessment and measurement. Moreover, as stated by one administrator, teachers would know that their teaching would be tested; and therefore, design the curriculum accordingly.

In respect to recommendations for *further training*, one teacher asserted that students should work as apprentice for some time after graduation (T5) before getting permanently employed. Apart from that, students in one focus group thought that Vertical Transfer Test should test graduates' vocational knowledge and skills (F12) rather than Math and Turkish language as, to them, the mission of higher vocational schools was to teach job rather than general academic knowledge.

Final policy recommendations were made for *needs assessment* by most teachers and administrators. Nearly all of them recommended that programs' intake capacity be determined according to nationwide need (T1, T2, T5, T6, T7, T8, T9, T10, T12, T13, T14, T16, A2, A3, A4, A6, A7, A8). In other words, according to their perceptions, the needed number of graduates from each study field must be identified by considering the needs of labour market and educational institutions, and that number of students should be enrolled at schools. And one teacher among them specified that needs assessment should be conducted by National Planning Agency rather than Higher Education Council (T6) as he believed that outputs of

higher vocational education was not only the area of educational interest but also economic and developmental concerns.

4.4.1 Summary of Recommendations for the Effectiveness of Higher Vocational Education

Recommendations for improving higher vocational education emerged from the data analysis producing five main themes: student-centered recommendations, teacher-centered recommendations, curricular recommendations, contextual recommendations and policy recommendations.

First of all, student-centered recommendations focused on *student selection and placement*, namely admission and guidance and counselling. With regard to recommendations for student admission, most teachers and some administrators recommended administration of interview and skills test to select students like Fine Arts and Physical Education Faculties while four teachers proposed selection and placement of students by school committees. Moreover, two administrators and one teacher specified the need for specification of pre-requisites for each program on the guide used by students while preferring schools. These pre-requisites were stated to include physical characteristics, personality traits and prior knowledge of students to be admitted. And lastly, one administrator recommended administration of job eligibility test before admission to place students to relevant programs. Concerning guidance and counselling, some participants made recommendations to increase the informed choice rates. These were: organization of informative seminars for high school students, organization of career days at high schools, visits to high schools by professional guides and counsellors, and organization of visits to workplaces by high school students.

On the second place, teacher-centered recommendations were made by some interviewees with emphasis on *teacher education*, *teacher selection* and *professional development*. For *teacher education,* some interviewees recommended that vocational teacher education programs present vocational subject knowledge by delivering job-specific teacher training; pedagogical subject knowledge by training teachers about how to teach a job; and knowledge of vocational learners by transferring vocational learner characteristics and needs. As to *teacher selection*,

mostly teachers and some students proposed that there should be recruitment criteria set while selecting teachers to work at higher vocational schools. To them, teachers should be recruited after administration of a personality test and a vocational proficiency test to confirm their eligibility to teach at higher vocational school. Additionally, most teachers stated that teachers with at least five year job-experience should be recruited to higher vocational schools. Last of them, some recommendations were made for teachers' *professional development*. While some interviewees, including three teachers and one administrator, teachers should be delivered courses on pedagogical knowledge, four teachers and one administrator, proposed that vocational teachers should be involved in professional development to improve their vocational knowledge. More specifically, for improving pedagogical knowledge of vocational teachers, some interviewees recommended that teachers should be delivered in-service pedagogical development course and in-service training on assessment and measurement. As for improving vocational knowledge, teachers were required to update their vocational knowledge through development courses or by working at a workplace on the part-time basis.

Thirdly, curricular recommendations emerged from the data analysis, the recommendations for which were grouped under two themes: *curriculum development* and *time allocation*. Regarding *curriculum development*, it was recommended that curriculum at higher vocational schools be developed through an interdisciplinary perspective. Similarly, most of the interviewees stated that there should be specialization courses offered through sub-branches. Another recommendation was found to be related to the development of job-specific standard curricula for same study fields to prevent different practices. Last of all, one administrator proposed that a curriculum portal should be designed which indicates required content for each job. Also, recommendations for *time allocation* were made by emphasis on time allotted to study period and traineeship. Concerning study period, two administrators and one focus group thought that study duration should be determined according to the requirements of the study field while two administrators, one teacher and students in one focus group recommended three-year higher vocational education by allocating third year for workplace learning. Also, most interviewees recommended changes in time

allocated for traineeship. Like study period, some interviewees believed that traineeship duration must be determined based on the requirements of study field. To them, it could be shorter or longer depending on the skills and knowledge to be gained at the workplace. However, nearly equal number of interviewees thought that traineeship duration should be longer than thirty days to have students acquire job knowledge and skills.

The fourth main theme was concerned with contextual recommendations evolved in two themes: *planning* and *tracking*. The recommendations related to *planning* included: decreasing students' course load by removing irrelevant courses; locating higher vocational schools in city centers and close to workplaces; establishment of educational planning and curriculum development unit at schools; designing curricula by including stakeholders; and recruitment of teachers before the programs are launched. In respect to tracking, one teacher recommended that data should be gathered from graduates and graduate employment rates to evaluate the effectiveness of curriculum and find out the needs of labour market.

Finally, data revealed policy recommendations grouped in five themes which were: *status of higher vocational schools, regulation of workplace learning, accreditation, further study* and *needs assessment*.

Since *status of higher vocational schools* were perceived to lower when compared to 4-year programs, most administrators and two teachers proposed that community must be informed about the mission of higher vocational schools. More specifically, students from two focus groups recommended using media and press releases to inform the society. Additionally, one teacher and students in one focus group asserted that informative seminars should be organized for employers to acknowledge them about higher vocational education.

As to recommendations for *regulation of workplace learning*, students from one focus group asserted that it was required to set up traineeship departments at workplaces to plan, deliver and assess workplace training. Besides that, these students and one teacher recommended formation of a workplace inventory for students on which they would select workplaces and grade them after traineeship.

Accreditation was another subtheme for which recommendations were made and a few interviewees noted that students should take vocational proficiency

test to graduate while two administrators and one focus group recommended that independent agencies conduct assessment and measurement.

With regard to *further study*, one teacher believed in the need for graduates to work as apprentices for some time to be permanently employed. Focusing on the graduates who want to continue their education, students from one focus group proposed that Vertical Transfer Test should test vocational knowledge and skills rather than Math and Turkish language.

Finally, regarding the policy recommendations related to *needs assessment*, it was found that nearly all of the teachers and administrators noted that programs' intake capacity should be determined according to nationwide needs of labour market. Furthermore, one teacher added that intake capacity of each program should be identified by National Planning Agency rather than Higher Education Council.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

In this chapter, the conclusions of the study with regard to teachers', students', and administrators' conceptions of effective vocational teaching and learning, definitions of effective vocational teachers' and students' characteristics, aim of higher vocational education and characteristics of an effective vocational program, challenges that inhibit vocational teaching and learning, and teachers', students' and administrators' practices to cope with these challenges are discussed. Besides them, recommendations to improve the effectiveness of higher vocational education are presented. Finally, the implications for practice and further research are given.

5.1 Conceptions of Effective Vocational Teaching and Learning

Teachers', students' and administrators' conceptions of effective vocational teaching were reflected through two opposing perspectives: effective vocational teaching as a product versus effective vocational teaching as a process. In line with the findings of this study, Kember (1997, cited in Richardson, 2005), came up with two opposing views of teaching in higher education in his review, namely a teacher-centered/content-oriented conception emphasizing the transmission of knowledge to students versus a student-centered/learning-oriented conception aiming at facilitating understanding and a conceptual change in the students. Samuelowicz and Bain (1992) also classified the findings related to conceptions of teaching as can be seen in Table 5.1. As revealed, the conceptions of teaching concerning the other tracks and levels of education do not fully embrace conceptions of vocational teaching as the latter is under the influence of context (Faraday et al., 2011; Lucas et al. , 2012), characterized with heterogeneous learners (McCrone et al., 2015;

Robertson, 2008; Smith, 2005) and stakeholders (CEDEFOP, 2004), and conceptions pertinent to vocational education have generally been provided to define vocational education and its outputs (CEDEFOP, 2017) or competence (Velde, 1999). Furthermore, the conceptions of teaching provided through previous studies and authors seem to focus on teachers and learners but do not cover the practice-based, contextual and job-specific nature of vocational education and importance of curriculum, learning environment and materials which were revealed by this study.

Effective vocational teaching as a process was interpreted by the participants of this stdy through teacher roles, learning environment, teacher knowledge, curriculum and content delivery while effective teaching as a product was considered to result in acquisition of job competences.

Among the teacher roles, some interviewees assigned the role as a master to the vocational teachers, who are supposed to model and coach in the classroom, laboratories, and workshops in the school setting for effective vocational teaching. In the traditional sense, Lave and Wenger (1991) discuss that apprentices learn sequence of activities and methods through observation, coaching and practice, yet the master reduces coaching, what these authors call guided participation, as the novice can complete the whole task and move from peripheral participation to full participation.Recently, modern apprenticeship enacted within the communities of practice has been discussed as a required form of situated learning in vocational education (Fuller & Unwin, 2003; Gonczi, 2002) as vocational learners in this process would be able to acquire not only knowledge and manual skills but also ways of thinking and problem solving through modeling, coaching, scaffolding, fading out, articulation, reflection, exploration (Collins, Brown & Newman, 1989). Gonczi (2002) elaborated on the apprenticeship model as a form of situated vocational learning as follows:

> We should be coming to the recognition that the best way to prepare people for occupations and professional practice and the more general capacity for successful life is through some form of apprenticeship – an educational process in which the exercise of judgment and the ability to act in the world emerge out of the complex of interactions to be found in a community of practice (p. 6).

Table 5.1 *Four Classifications of Conceptions of Teaching*

Biggs (1990)	*Dall'Alba (1990)*	*Martin & Balla (1990)*	*Fox (1983)*
Qualitative: teaching as facilitating student learning learning as a qualitative change in a student's interpretation	Bringing about a conceptual change	Relating teaching to learning	Student-initiated learning with a focus on student change
Organizational: Institutional responsibility for knowledge and standards	Exploring ways to understand	Developing active learning with one of three foci: -experiential -discussion -motivational	Student-initiated learning with a focus on content
Quantitative: teaching as transmission of knowledge learning as a quantitative increase in knowledge	Developing the capacity to be expert	Presenting information with one of two foci: -content organization -delivery	Teacher-initiated learning with a focus on student change
	-Developing concepts and principles and their interrelations -Illustrating the application of theory to practice -Transmitting information -Presenting information		Teacher-initiated learning with a focus on content

Source: Samuelowicz & Bain (1992)

However, two teachers and one focus group, who equated effective vocational teaching with the teacher role as a master did define the master in the traditional sense by emphasizing the modelling and coaching processes and advocated the need for master-apprenticeship model for effective teaching at higher vocational schools. This notion, teachers as masters, was also advocated nearly a

century ago by Allen and Prosser (1925) who noted effective vocational education depended on the experiences of masters of any occupations who served as the only reliable source.

From another perspective, teachers' acting like employers in the classroom was viewed as a requisite for effective teaching. Participants seemed to view this role significant due to the importance they attached to knowledge of workplace procedures, appropriate attitudes and behaviours valued at workplace and teachers' workplace experience. In parallel to that, to some interviewees, effective vocational teaching meant role-modeling by the teachers, which was also confirmed by Lucas et al. (2012) who viewed role-modelling as important as coaching and mentoring for the effectiveness of vocational teaching and learning as role-models act as a source of information for how to behave (Bandura, 1997) and increases learners' motivation (Gibson, 2004). Being a role model was also found to be a characteristic of a good vocational teacher in the empirical study by Smith and Yakusawa (2017).

Secondly, designing a learning environment which is equipped with authentic job materials, namely tools and devices used in real contexts (workplaces), and where students are given opportunity through learning conditions to experience and apply was associated with effective tertiary-level vocational teaching. Authenticity of context and activities has been a critical element of effective vocational education (Brown et al., 1989; CAVTL, 2013; CEDEFOP, 2015; de Bruijn & Leeman, 2011; Figgis, 2009; Lucas et al., 2012; Placklé et al., 2014). Therefore, learning environments at vocational schools should be situated through the provision of authentic context, authentic activities, access to expert performances and the modelling of processes (Herrington &Oliver, 2000, p.4). Likewise, use of authentic tasks and learning activities was counted among the characteristics of effective vocational teaching (de Brujin & Leeman, 2011). Correlatively, in a research by CEDEFOP (2015), authenticity of task, as a dimension of vocational pedagogy, together with construction and self-regulation was found to be in positive correlation with student motivation and engagement.

Designing a quality curriculum and following it step by step was also perceived as part of effective teaching. One administrator expressed his view as follows: "Effective teaching depends on the curriculum quality, actually I mean,

how robust it is. It does not matter how qualified the teacher is. If he/she does not implement a quality curriculum, the product will not be the thing we desire (A1)". According to this perspective, the knowledge, skills and personal qualities of vocational teachers were regarded less important than objective-based curriculum designed in accordance to the needs of labour market and competency standards. However, as Mulder, Weigel and Collins (2007) highlighted, being informed of and specifying the outcomes or required competences does not automatically result in effective learning activities since effective translation of demanded outcomes into teaching, learning and assessment strategies depends on teacher qualifications (Guthrie, 2009).

Contrary to this view, teachers' technological pedagogical content knowledge (TPACK) was stated among the conceptions of effective vocational teaching in this study, indicating that teachers' knowledge of content and pedagogy (PCK) advanced by Shulman (1987) should interact with the knowledge of technology (Koehler & Mishra, 2009). Having the individual knowledge of domains is not sufficient for effective teaching and does not produce PCK or TPACK (Koehler & Mishra, 2006; Shulman, 1987; Pamuk, 2012). As discussed by Pamuk (2012), teachers need to have PCK as base and involve in development process in other domains upon that. As to vocational teaching, PCK has been a highly discussed topic, and discussions centered on the idea that occupational knowledge need to be integrated into subject knowledge, and PCK of vocational teachers should cover knowledge derived from occupational experience and disciplines underpinning job-related knowledge and skills (Barnett, 2006; Chappell, 2003; Harkin, 2012; Johansson et al., 2007, cited in CEDEFOP, 2015; Brennan Kemmis & Smith, 2006; Lucas et al., 2012; Smith & Yakusawa, 2017; Shulman, 2005; Young, 2004).

Although effective vocational teaching was viewed by most interviewees to depend on the methods and techniques vocational teachers use while presenting the content their perceptions about the effective methods and techniques varied. Most of them believed that putting knowledge into practice was equal to effective vocational teaching at higher education level, indicating the need for experiential learning. In this study, practice was equated with "hands-on" experience but Clark

et al. (2010) noted that experiential learning coined by Kolb (1984) in vocational education is not limited to hands-on activities in authentic contexts and concrete experiences (Roberts, 2006, cited in Clark et al. 2010) but needs to include inquiry-based and problem-based learning elements (Clark et al., 2010). Additionally, some interviewees' perceptions centered on the use and integration of theoretical knowledge. While some believed effective vocational teaching requires simultaneous combination of theory, practice and field study some others considered that vocational knowledge and skills need to be taught through practice after delivering a basic level of theoretical knowledge. Moreover, a group of participants asserted that theory/abstract knowledge should be delivered and taught through practice from beginning to end. In consistent with the findings of this study, Kilbrink (2012) found out through interviews that teachers', supervisors' and students' views about theory and practice varied. On one side, theory was perceived as a starting point for practice or as knowledge about something, implying that theory is needed for preparation for practice while on the other hand, the practice is experienced as the application or use of the theory. The third view perceived theory and practice as a whole, which was also revealed in this study as the need for teaching theory through practice and integration of theory, practice and field work. As underlined in Ofsted report (2010), vocational learners get more motivated and engaged when vocational teaching brings practical and theoretical aspects of vocational learning together.

Besides views about theory-practice integration, teaching job procedures step by step was proposed as a conception of effective vocational teaching, which can be thought as the reflection of demand for modular instruction and linear programming based on behaviorist principles viewed as the most effective instructional theory (Doolittle & Camp, 1999; MacFarland, 1985).

From a different perspective, one teacher equated effective vocational teaching with know-how together with know-that by using the metaphor "teaching to fish rather than give fish", indicating the need for deep approach and meaning-making (Purdie et al., 1996) based on inquiry and problem-based activities (Hmelo-Silver, Duncan & Chinn, 2007). Rather than having students acquire occupational knowledge and skills at surface level through memorization, this teacher believed

that making vocational students internalize the knowledge and skills through understanding is the key indicator of effective vocational teaching.

On the other side, the perspective viewing vocational teaching as a product was outcome-oriented and competency-based, and vocational teaching was considered effective if students gained knowledge, skills, code of conduct, ethics and attitude required at the workplace; vision about job; or knowledge and skills at the entrance level to workplace. As revealed by the findings, perceptions varied from entry-level to complete-level acquisition of competences. Competence has been defined as a set of attributes (knowledge, values, skills and attitudes) used in various combinations to perform occupational tasks (Gonzci, 2002). Therefore, most participants in this study believed that effective teaching at higher vocational schools should lead to successful and complete acquisition of job-specific competences although contemporary era witnesses a shift towards teaching for lifelong learning, development of more generic attributes like critical thinking and problem solving skills (Bedi & Germein, 2016) and wider skills for growth (Lucas et al., 2012). Additionally, this view also implies perfect match between the competences acquired at school and demanded at workplace by developing curricula in partnership with employers (CAVTL, 2013). Contrasting this view, one teacher advocated entry-level qualification for graduates rather than full readiness for workplace, proposing that vocational teaching can be considered effective if it provides entry-level knowledge and skills related to job to be developed at workplace, which was also indicated in the ISCED (2011) categorization of educational levels. Higher vocational education in Turkey, corresponding to ISCED level 5B, aims at provision of job-specific skills and limited coverage of theoretical knowledge needed for entry into the labour market. In parallel to that, Lindeberg (2003) discusses that vocational knowing acquired at school serves as basis for further learning at other contexts.

Apart from these two perspectives, developing a vision about job was viewed equal to effective vocational teaching. Development of vision by setting long-term goals can be associated with meta-learning, firstly used by Biggs (1985, cited in Jackson, 2004) and defined by him as “being aware of and taking control of one’s own learning” (p. 391). Jackson (2004) adds the idea of meta-learning as

"a means of viewing and anticipating the future" when an individual needs to plan and develop strategies for achieving goals, which is highly consistent with the view of effective teaching as vision development.

Similar to conceptions of effective vocational teaching, the findings revealed two contrasting views with regard to conceptions of effective learning at higher vocational schools, namely process-oriented effective vocational learning versus product-oriented effective learning. Rather than process versus product, it was found by Säljö (1979, cited in Richardson, 2005) that students' conceptions of learning in higher education depended students' approaches to learning: learning as a deep approach versus learning as a surface approach. The learners who adopted surface approach to learning conceptualized learning as: (a) increase in knowledge, (b) memorization, and (c) acquisition of facts or principles while the deep learning requires abstraction of meaning; and an interpretive process aiming at understanding reality (Säljö, 1979, cited in Richardson, 2005). In their comparative research, Purdie et al. (1996) investigated secondary school students' conceptions of learning and their use of self-regulated learning strategies, and came up with nine categories of learning conceptions: learning as (1) increasing one's knowledge; (2) memorizing, reproducing and studying; (3) a means to an end; (4) understanding; (5) seeing something in a different way; (6) personal fulfilment; (7) a duty; (8) a process not bound by time or context; and (9) developing social competence.

In this study, views about effective vocational learning as a process focused on student traits and their learning strategies. As discussed by Beattie, Collins, and McInnes (1997) personal factors like personality, motivation and study skills affect learning approaches of individuals. In line with this view, the results of this study indicated that affective characteristics of students, namely their curiosity, eagerness and motivation to learn was associated with effective vocational learning. Mussel, Spengler, Litman and Schuler (2012) maintained that most jobs have requirements related to curiosity, like "gathering job-related knowledge, learning new skills, solving new problems, developing strategies, fostering innovations, or adapting to changed environments" (p. 109). They also noted that curiosity is closely related to intrinsic motivation to learn. Rather than dealing with motivation as an entry characteristic, Chiang and Lee (2016) focused on learning approaches that increase

motivation and found out that project-based learning enhanced learning motivation of vocational students, and also improved their problem-solving ability. Meijers, Kuijpers and Gundy (2012) also came up with the result that career dialogue between teacher and student at school and in the workplace contributed positively to career identity development, learning motivation, and experienced quality of choices.

As to learning strategies utilized for effective learning; making research, deep learning approach, experience-based learning and guided practice were among the conceptions associated with effective vocational learning. Therefore, effective vocational learning from this perspective can be directly associated with experiential learning, which requires real and concrete experience, reflective thinking, observational learning, risk and responsibility, active experimentation and teacher-as-facilitator (Herbert, 1995; Kolb 1984; Winn, 1959, cited in Knobloch, 2003). Also, supervised experience in vocational education was found to improve student achievement (Cheek, Arrington, Carter, & Randell, 1994, cited in Knobloch, 2003) and higher level of retention (Specht & Sandlin, 1991), and to support student inquiry (Newcomb, McCracken, & Warmbrod, 1993, cited in Knobloch, 2003). Additionally, it was reported in Ofsted report (2010) that young people get motivated when they are involved in practice-based and active learning, given the opportunities to apply their knowledge and skills in work-related contexts or at work, and use real-world like materials and resources. Besides, students' approach to vocational learning, deep or surface, either contributes to or reduces the positive influence of experiential learning. Defining the differences between both approaches, Hamm and Robertson (2010) note that deep learners spend more time and effort on learning and go beyond the requirements of assessment; ask questions of "why" together with "how"; conduct thorough research on tasks; aim at understanding rather than memorizing; and aim to not only satisfy curiosity and personal interest but also pursue topics they are less interested in (p. 953).

The second perspective viewed effective vocational learning as a product and the findings indicated two approaches to product-oriented learning. In the narrower sense, effective vocational learning was equated to gaining curricular objectives while in the wider sense, it was associated with acquisition of job

competences, as a traditional approach to success in learning (Guenther, 2011). Most of the participants believed that effective vocational learning required transfer of knowledge and skills to workplace, which has generally been viewed as the ultimate aim of teaching and learning (Cree & Macaulay, 2000). On one side, some interviewees viewed effective vocational learning as low-road integration (Baartman & de Brujin, 2011) by gaining knowledge at school and directly applying it at workplace without contextualizing. Heusdens et al. (2015) criticizes this view which reduces learning transfer to the notion of putting acquired knowledge into practice and viewing it as a passive end-product (Bransford et al., 2000) as the transfer from school to workplace, between written material and real life is the starting point for lifelong learning (Kilbrink & Bjurulf, 2013). Moreover, learning transfer has been viewed in socio-cultural theories as the ability to learn in new situations in which existing knowledge and skills are changed to adapt to the requirements of new task rather than being passed on to that (Tuomi-Gröhn & Engeström, 2003, cited in Baartman & de Brujin, 2011). In line with that, a group of interviewees associated effective vocational learning with learning know-how and know-why, and reaching at the level of decision-making and making informed judgments about job tasks, which corresponds to high-road integration involving reflection on the task besides practice (Baartman & de Brujin, 2011).

Apart from above mentioned approaches, overcoming the fear of inability and gaining self-confidence in performing job was associated with effective vocational learning by a few participants. In consistent with this view, Catts et al. (2011) maintain that innovative vocational learning leads to enhancement of self-confidence, which was also confirmed by the empirical research by Guenther (2011), the results of which indicated that learners found vocational training they received effective as it enhanced their self-esteem, awareness of options and self-confidence while they attached less importance to job-related outcomes.

When the findings of this study are compared to the demanded qualifications specified in National Qualifications Framework for Higher Education in Turkey students pursuing associate's degree are stated to need to achieve knowledge, skills and competences to be vocationally qualified. Specifically, students are supposed to gain up-to-date theoretical and practical knowledge and knowledge of materials

and tools used in practice and other resources while needed skills include the use of conceptual and practical knowledge and interpretion and evaluation of data. Thirdly, the competences given in the framework are (1) working independently and take responsbility, (2) learning competence, (3) communication and social competence, and (4) field-specific competence. Participants in this study discussed product-oriented view of vocational learning with focus on know-how and know-why, acquisition and application of knowledge, interpreting and evaluating data from multiple perspectives and decision making, which corresponds to knowledge and skills domains in the framework. Obviously, competences in the framework were not addressed by the participants although lack of the competences like communication in mother tongue and in a foreign language, and knowledge of information and communication technologies was counted among the student-related challenges while other competences which are learning to learn and generic skills like time management and problem solving were highlighted as personal traits of effective vocational learners.

In addition to conceptions of effective vocational teaching and learning, aims of higher vocational education emerged from data analysis. The findings revealed that higher vocational education aims at personal well-being, occupational well-being and intellectual well-being of students. Occupational well-being was the most emphasized aim among all with varying approaches to it. Likewise, economic outcomes of vocational education has been discussed more frequently and densely in literature than its social benefits (Preston & Green, 2008, cited in CEDEFOP, 2011b). When definitions of vocational education are considered it is specified as "preparation for work" and "gaining occupation-specific knowledge and skills" in general terms (CEDEFOP, 2011a; 2015; OECD, 2009; 2012). Likewise, in this study, most respondents agreed that higher vocational education aimed to raise semi-skilled workers for the labour market. Some of them also provided explanations about how vocational education would do that: through higher-level of apprenticeship model which integrates theory, practice and field work. Moreover, as stated by two administrators, higher vocational education aims at upskilling by upgrading the knowledge and skills of the adults who are already in workforce (OECD, 2012).

As to personal well-being, it was believed by a few interviewees that higher vocational education prepares persons for life. In consistent with that, it was stated in CEDEFOP research paper (2011b) that vocational learning which has been experienced in positive terms "can generate benefits to individuals beyond those of income and employment; the learning content can foster confidence and self-esteem in learners and offer topics relevant to the individual's engagement with their family and society" (p. 8).

Intellectual well-being was believed to be fostered through higher vocational education by compensating knowledge and skill deficiencies, which were not either provided or acquired at vocational high schools, and by developing creativity of students. Arum and Shavit (1995) discuss that due to restricted curricula at vocational high school students are not being delivered advanced courses on mathematics and science, and instruction at these schools is delivered at lower levels of intellectual complexity; therefore, it is required to put more academic content into vocational courses to enable students to apply abstract academic knowledge in new and challenging situations at workplace (Bottoms, Presson & Johnson, 1992), which would in turn develop their "adaptive expertise" called as "creativity" by the interviewee in this study, rather than routine expertise (Hatano & Inagaki, 1986, cited in Bransford et al., 2000).

Concerning the characteristics of effective vocational teachers, the findings of this study indicated that essential domains of effective vocational teaching were teacher knowledge (pedagogical knowledge, content knowledge, technological knowledge and contextual knowledge), teacher roles, and teacher traits (personal qualities, interpersonal communication and professionalism).

With regard to teachers' knowledge, according to the views of interviewees, an effective vocational teacher should have technological, pedagogical contextual content knowledge. In parallel to the findings, Chappell (1995) found evidence on that content knowledge, pedagogical knowledge, pedagogical content knowledge, knowledge of learners, knowledge of environment and knowledge of self were the knowledge bases utilized by vocational teachers.

In the literature, Shulman's notion of pedagogical content knowledge (1987) was discussed within the framework of vocational education as recontextualization

of pedagogy and content (Evans et al., 2009), signature pedagogy (Shulman, 2005), dual professionalism (CAVTL, 2013), subject-specific pedagogy (Brennan Kemmis & Smith, 2006), and vocational didactics (Johansson et al., 2007, cited in CEDEFOP, 2015).

The content knowledge of effective vocational teachers was found in this study to include occupational knowledge and subject knowledge, which was called as substantive and syntactic content knowledge (Robertson, 2008), or in a wider sense knowledge of disciplines underpinning occupational knowledge (Barnett, 2006; CAVTL, 2013). Consistent with the views gathered in this study, it was noted in CAVTL report (2013), best practices of vocational teaching and learning combine theoretical knowledge from underpinning disciplines and occupational knowledge. As stated by some participants' occupational knowledge to be integrated with subject knowledge requires industry experience, knowledge of tools and materials used at workplace and tracking developments and changes in the labour market, and therefore, having up-to-date occupational knowledge. Deep knowledge of subject area and industry qualifications and experience was also found to be "mission critical" for effective teaching in the research conducted by Smith and Yakusawa (2017). As it was in this study, what students valued most in Australian context was vocational teachers' industrial experience and how they draw on that knowledge in their practice (Smith & Yasukawa, 2017). Another research by NCVER (2001) also highlighted industry experience and knowledge as one of the essential capabilities of vocational teachers. These views were also underlined in CEDEFOP (2004) research paper, as it was found out through case studies that vocational teachers need to have the knowledge of learner-centered pedagogy and on-the-job learning techniques, and up-to-date vocational knowledge and skills related to modern technologies and work practices.

As to the pedagogical knowledge of effective vocational teachers, the findings revealed that effective vocational teachers need to manage the classroom effectively, present the content using appropriate strategies, select and deploy appropriate teaching methods and techniques, and have the knowledge of curriculum and learners to inform and guide their teaching practice. The participants in this study, mostly students, also noted that teachers' occupational

knowledge and industry experience should inform their pedagogical practices. The findings related to classroom management such as equal treatment, gaining and maintaining student attention were found to be applicable to and valid for all teaching and learning contexts, not being specific to vocational teaching because in the literature effective teachers were stated to be competent in classroom management by providing ample time for learning and engaging learner and maintaining their attention (Hart 2010; Ryan & Cooper, 2007). Among all views concerning classroom management, creating a collaborative learning environment where learners would work collaboratively and learn from each other, was defined as an effective strategy in the context of vocational education (CAVTL, 2013; Black & Yasukawa, 2013; Lucas et al., 2012; OECD, 2009; Placklé et al., 2014; Rowe et al., 2012). From a different angle, one teacher reported that effective classroom management in vocational classes required managing the classroom like managing the workplace. In other words, this teacher believed that teachers should act as employers and students as employees through workplace simulation in accordance with workplace rules, procedures and code of conduct in order to prepare students for real working life.

As for required approaches to content presentation, the interviewees reported that effective vocational teachers: inform students of the objectives, consider the needs of students, move from simple to complex, make connection among knowledge/courses, simplify the content, provide opportunities for practice and to discover capabilities, use plain language and workplace terminology while teaching, and provide feedback. During the observations, it was found out that some teachers informed students of objectives, stimulated recall of prior learning, provided guidance, elicited performance of students, provided feedback, assessed performance of students, and enhanced retention of learning by paraphrasing content and generating examples from daily life and workplace experience. These observed steps aligned with Gagné's (1989, cited in Driscoll, 2000) nine events of instruction which require teachers to include and follow in an effective lesson. Like Driscoll (2000), the participants seem to call for a learner-centered approach in the teaching process for effective vocational teaching as they highlighted the need to be responsive to learners' needs and differences, and create conditions for active

learning. Likewise, Corben and Thomson (2001) identified characteristics of excellent vocational teachers through interviews, and among findings, they explored that effective teaching required responsiveness to the needs of curriculum and learners, using a variety of strategies and resources to motivate learners and sequencing activities in a meaningful and holistic way. In parallel, Alvunger and Johansson (2018) found in their research that vocational students should be granted access to vocational knowledge and skills through that vocation's specific language by configuring the vocational knowledge and workplace code. They also identified the need for vocational teachers to sequence and structure the content in a logical and coherent order. Apart from the language teacher needs to use, some interviewees highlighted the need for simplification. Although simplification is a topic of discussion in language learning in the form of linguistic and content simplification (Honeyfield, 1977), it was counted among the effective strategies of content presentation by the participants in this study. Due to lack of prior knowledge and limited cognitive abilities of students, effective teachers were supposed to simplify the content by reviewing previous topics, less reliance on theory, using less abstract concepts, terms and formulas while teaching; and language by speaking in daily language rather than academic language. In vocational education context, the finding: "explaining concepts clearly and succinctly by demystifying and simplifying the jargon and bringing in examples" by Smith and Yasukawa (2017) seems to be consistent with the view that emerged in this study.

Within pedagogical knowledge, the interviewees also indicated their views about the teaching methods and techniques that effective vocational teachers need to use. These were demonstration, fieldwork, workplace simulation, hands-on activities, role-play, research assignments, question-answer, giving real-life examples and use of variety of techniques. In the light of these findings, it can be concluded that effective vocational teachers need to use and mix a variety of techniques and methods (Chappell, 2003; Harkin, 2012; Lucas et al., 2012) due to the action-oriented (Alvunger & Johansson, 2018) and context-bound nature of vocational education (Faraday et al., 2011), and the need for experiential learning (i.e. inquiry-based, problem-solving) (Clark et al., 2010; Lucas et al., 2012; Scott & Sarkees-Wircenski, 2008). Likewise, Said (2018) came up with similar findings

in her study: vocational students preferred interactive lectures, concrete industrial examples based on industrial knowledge and experience of teachers, research assignments and projects, group work, discussion, practical work, and new place outside class. Also, Rowe et al. (2012) found collaborative learning through group works facilitated effective learning while research by Fletcher et al. (2012) revealed that problem-based learning and discussion-based activities were among the strategies commonly used by vocational teachers. Additionally, Alvunger and Johansson (2018) underlined the need for a repertoire or "toolbox" of teaching methods and techniques for effective learning while Corben and Thomson (2011) underlined the need for expertise in teaching and learning by using various resources and strategies, adopting a holistic approach and conducting meaningful activities.

As revealed by findings, effective vocational teachers need to have the knowledge of learners (their needs, interests, capabilities and differences) they are addressing to while using teaching methods and techniques. Diversity of learner characteristics was highly emphasized in the vocational education research (Fletcher, et al., 2012; McCrone et al., 2015; Moodie & Wheelan, 2012; Robertson, 2008) because as stated by McCrone et al. (2015) vocational learners are diverse in terms of their educational, occupational and skills backgrounds. In their research in public and private vocational schools, Smith and Yasukawa (2017) also found that effective vocational teachers recognized learners' individual differences and needs and built relationships in a way to cater their different needs. Moreover, Maxwell, Vincent and Ball (2011) indicated through research that effective teachers at higher education programs put students at the central focal point while making decisions about teaching.

Another knowledge base required for effective vocational teachers was stated to be knowledge of curriculum. According to the views of interviewees, effective vocational teachers plan courses according to the needs and demands in the labour market, update the curriculum according to the developments, make changes in the course plan to respond to students' needs and progress, and make use of various assessment methods and techniques. Curricula at higher vocational schools in Turkey are developed and implemented by the teachers themselves,

indicating the need on their part to be knowledgeable in curriculum development and evaluation, and keep in communication with industries and employers. As indicated by Yıldırım and Şimşek (2001) in their qualitative analysis of curriculum development process in secondary vocational schools, a quality vocational curriculum requires integration of different types of subject areas, a holistic view which allows students to develop and apply knowledge and skills in a rapid and competent manner, and assessment of the needs of both industries and students as needs assessment was found to contribute to the curriculum development process, professional development of teachers and school-industry communication and collaboration. Needs assessment is of critical importance especially in vocational education as it is prescriptive, imposed and fixed outside the classroom (Bowers & Reid, 2005, cited in Bowers, 2006). Additionally, attaching high importance to assessment in vocational curriculum, Ecclestone (2006) highlighted the need for vocational teachers to use a variety of assessment methods and contexts by incorporating formative and diagnostic assessment into their teaching. Some empirical studies revealed consistent results with this view, such as, preferences for assessment for learning (Placklé et al., 2014, home-based assignments and projects (Said, 2018), collaboration with learners to determine learning and assessment processes (Smith & Blake, 2005), scaffolding assessment tasks (Smith & Yasukawa, 2017), and use of multiple strategies for teaching, learning, assessment and evaluation (TAFE NSW, 2004).

Besides content and pedagogical knowledge, effective vocational teachers were said to have technological knowledge. Integration of technological knowledge base into pedagogical content knowledge (Koehler & Mishra, 2006) was highly emphasized in recent literature. In this study, teachers were observed to use majorly powerpoint presentations, and videos, online sources and software displayed on computer or projector screens to a lesser extent. Having conducted a research on ICT skills of vocational teachers, Crittenden (2009) found that they used a variety of technologies like radio, television, video, DVD, telephone, satellite systems, computers and the Internet. With regard to students' preferences, Alvunger and Johansson's (2018) research indicated that students attached importance to the use

of digital tools, and images and videos to visualize and transfer knowledge from the workplace to the school context.

As the final base, the contextual knowledge was counted among the effective vocational teachers' knowledge domain. The participants considered that vocational teachers need to be aware of both the educational context where the teaching and learning occurs and the workplace context where the acquired knowledge and skills would be transferred. This view was supported by Cochran, DeRuiter and King (1994, cited in Chappell, 1995) as they believed that the conception of effective teaching should not be limited to pedagogical content knowledge but consider other domains like knowledge of the learner and knowledge of the educational and social environment as proposed by Shulman (1987). Consistently, Chappell (1995) found through interviews that knowledge of the learner, when combined with knowledge of the industry or vocational and social environment informed vocational teachers' decisions. In this study, students especially highlighted that teachers should understand their experience in the educational context, how they feel and what challenges they face, and must act accordingly. Likewise, Smith and Yasukawa (2017) came up with similar results as students described effective vocational teachers to have respect for learners' different challenges like coming from another country, speaking the medium of instruction as a second language etc.

In addition to knowledge base, roles of effective vocational teachers were stated to be coach, mentor, role-model, vocational knowledge source, leader and employer/workplace manager. Among them, coaching was highly valued in all approaches to vocational education as explained by Jameson (2012) in the following:

> As an approach that aims to help people to learn for themselves under the close guidance of an expert, the role of coaching naturally fits in with a range of other approaches in vocational education. Coaching complements classroom teaching and workshop delivery by providing a learner-focused approach in which students learn through experience in real-world situations. ... As a socio-cultural and cognitive apprenticeship-type pedagogical approach that fosters both independence and self-directed learning, coaching involves students working in partnership with expert coaches in the vocational field involved (p. 69).

It is obvious that the participants in this study referred to coaching as situated approach to vocational teaching, via which learners are involved in experiential learning and empowered by teachers as coaches in self-directed learning environments characterized with challenges and feedback, as essential ingredients of learning (Hattie, 2009). Learning by being coached was also listed among the effective learning methods in vocational education, together with "practising, feedback, teaching and helping others, real-world problem-solving, enquiry, learning on the fly …and various kinds of simulation and role play" (Lucas et al., 2012, p. 54).

Mentoring in vocational education was discussed in relation to mentoring teachers for their professional development (Wheelaan & Moodie, 2012), and mentoring novices at the workplace (Ofsed, 2010). Since this study deals with school-based vocational teaching and learning, the role of teacher as a mentor was said to be required in the school context. Meijers (2008) describes the mentor in vocational education as an adult with job expertise who supports the cognitive, social and emotional development of students based on sharing experiences and embodying explicit knowledge into tacit knowledge and learning by doing (Swap, Leonard, Shields & Abrams, 2001). In the research by Meijers (2008) the interviews revealed that mentoring led to increase in learners' confidence and vocational aspiration, more effective functioning at workplace and deeper insight into weaknesses owing to feedback given by mentors. Additionally, being a mentor requires being a role model in vocational education as Meijers (2008) argues:

> It is assumed that … mentors will build a good relationship with their mentees and become role models for them. This constitutes the additional value of mentoring for vocational education: the mentor as a role model who bridges the existing gap between the educational system and the labour market. Once the mentor has become a role model, so the implicit reasoning goes the mentee will ideally develop a stable occupational preference, gain clarity about the relevance of the subject matter of their chosen career, and as a result be more motivated (p. 238).

Beside, some studies indicated that reflection process proved more effective for vocational learning when learners are guided by a mentor (Bateman & Knight,

2003; Smith & Clayton, 2009) because mentors help learners to discover their potential "by probing deeper and deeper" (Smith & Clayton, 2009).

In addition to these roles, effective vocational teachers were viewed as the sources of vocational knowledge. This view implies the need to vocational teachers to have the relevant knowledge and practice of occupation with less academic interest (Chappell, 1995). Additionally, emphasizing the dual identity of vocational teachers, the participants in this study believed that being a vocational knowledge source requires teachers to maintain industry currency as well as pedagogical skills (Schmidt, 2019). Moreover, it can considered that students viewed effective teaching as the transmission of knowledge due to their surface approach to learning.

Besides all, assigning the role of leader and workplace manager to vocational teachers can be linked to the idea of schools as professional learning communities (Hargreaves, 2002). Though discussed within school improvement discourse, professional learning communities, in other words, communities of practice, can serve as a medium where teachers would act as leaders or workplace managers, by sharing joint purposes, engaging in collaborative work and accepting joint responsibility for outcomes (Harris & Lambert, 2003).

Lastly, teacher traits of effective vocational teachers including personal qualities, interpersonal communication skills and professional responsibilities were found to be applicable to all teachers teaching at different levels. The results concerning personal qualities, like being fair, enthusiastic, disciplined, patient, having sense of humour and teaching experience; communicating with students in respect and clearly; and fulfilling professional responsibilities like being prepared, showing love for teaching, involving in professional development, being accessible etc. were confirmed by the findings of some studies on general and vocational education teachers. For example, without distinguishing the level and the subject taught, Walker (2008) determined twelwe characteristics of effective teachers: being prepared, being positive, holding high expectations, being creative and fair, displaying a personal touch, cultivating a sense of belonging, being compassionate, having a sense of humor, respecting students, forgiving, and admitting mistakes. It seems that similar characteristics were reported for vocational teachers; for example, Luft and Thompson (1995) indicated that effective agriculture teachers

were enthusiastic for teaching, a good role-model for students, self-confident and poised, prompt and on time, neatly dressed and well groomed, committed to helping students learn, showed their commitment to teaching by belonging to professional teacher organizations, and enjoyed teaching. Likewise, Corben and Thomson (2001) listed following personal attributes, beliefs and values possessed by effective vocational teachers: passion for facilitating learning and helping others reach their potential, being committed to professional development, communication skills, and belief in transformative nature of education. In addition to similar personal traits, the need for professionalism was also highlighted by the students and teachers who participated in the study by Smith and Yasukawa (2017); vocational teachers and students agreed that effective teachers were organized and prepared for classes, returned assessment tasks on time and with plenty of feedback, did not waste class time by bringing their own issues into class, dressed neatly and committed to continuous professional development.

As to the characteristics of effective vocational learner, they were found related to students' entry characteristics, cognitive and affective characteristics and personal traits. Hattie (2015) discusses the applicability of visible learning to higher education and concludes that students act as the source of variance (about 50 percent) in learning as "they differ greatly, they bring different attributes and prior knowledge, they have different motivations and purposes for learning, they study in varied ways, some are collaborators some are loners, they have a manifold of likes and dislikes, and they can be bright or struggling" (p. 87). Therefore, defining common characteristics of effective vocational learners can help designing and tailoring vocational teaching and learning practices according to this target group (Drachsler & Kirschner, 2012).

With regard to entry characteristics, students' prior knowledge (field of study at high school, being informed about the selected job and school, general knowledge and basic level of numeracy, literacy and language skills) and eligibility to study at higher vocational programs (required personal traits, and informed school and program choice) were discussed by the participants of this study.

Varying demands with regard to prior knowledge were obviously related to the course contents delivered at higher education level because the participants

mostly from medical and tourism programs viewed students' acquisition of prior vocational knowledge by studying at a relevant vocational high school program critical for learning success at higher vocational programs as those learners get familiarized with the content and materials at high schools, which were believed to directly lead to better achievement by facilitating learning, and to indirectly have a positive influence on achievement via clarity of learning materials (Dochy, Moerkerke, & Martens, 1996). Recent research consistently indicated that students' acquisition of prior knowledge at vocational secondary schools had a significant impact on their success at higher education programs (Happ, Zlatkin-Troitschanskaia, & Förster, 2018). On the other hand, most teachers and administrators believed that students need to acquire foundation level of academic knowledge and skills, namely Math, Turkish and English at high school, to gain deeper understanding in higher level courses delivered at higher vocational schools. This view was also supported in the report by Ofsed (2010) that effective vocational learning experience at higher education level required acquisition of strong foundation in literacy and numeracy as science and Maths are somehow fundamental to the vocational curriculum (Hobley, 2015). However, the research conducted by Fuller and Macfadyen (2012) indicated that vocational students labeled themselves as academic failures and academically inadequate as they failed to achieve at traditional and academic levels of study.

Prior knowledge is also critical for effective teaching, and Smith (2005) asserted that effective vocational teachers recognized prior learning and developed flexible teaching strategies to cater the needs of learners.

Besides these, according to the views of interviewees, prior knowledge included knowledge about job requirements and the mission of higher vocational schools in order to eliminate misconceptions informing their decisions while making school and program choices.

The second dimension of entry characteristics of effective vocational learners was found related to their eligibility to study at a vocational program: having required personal traits and considering their eligibility for the selected job, and making informed school/program choice. Considering it as metacognitive awareness, knowledge about being eligible or not can be related to knowledge of

self (Flavell, 1979, cited in Pintrich, 2002) as knowledge of self includes one's knowledge about his/her skills, strengths and weaknesses (Pintrich, 2002). Therefore, vocational learners to study at higher vocational schools were supposed to improve metacognition during the pre-adolescence and adolescence (Brizio, Gabbatore, Tirassa, & Bosco, 2015) and regulate his/her learning and make decisions accordingly. This view can also be related to self-regulated (Zimmerman, 2002) and self-directed learning defined by Knowles (1975) as

> a process in which individuals take the initiative, with or without the help of others, in diagnosing their needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (p. 18).

Although self-directed learning was associated with adult learning theory Knowles (1975) himself noted that it does not only apply to adults because students who perceive themselves as adults expect to be independent in decision making, and thus get more motivated and self-directed (Jossberger, Brand-Gruwel, Boshuizen, & van de Wiel, 2010). In line with that, it can be said that nearly all of the interviewees in this study, expect adult-like approach to learning from the student to study at higher vocational schools.

Another characteristic of effective vocational learners was found to be related to their affective characteristics, namely motivation and interest. There is a great deal of research in literature which indicated that interest and motivation are in positive correlation with achievement. For example, Schiefele, Krapp, & Winteler (1992) found in their meta-analysis of 150+ studies that individual interest was correlated with both academic and laboratory performance. From vocational perspective, Beaty, Gibbs and Morgan (1997) argued that learning could be understood on the condition that the interaction between learning orientation, approach to learning and conception is investigated. They found that students in higher education who are vocationally-oriented to learning had either intrinsic or extrinsic interest in learning. The students who were intrinsically interested in vocational learning aimed at training and concerned with relevance of a course to their future career while extrinsically interested students focused on qualification

or degree and its recognition. In other words, these students aimed to graduate to get a job and concerned with the worth of qualification in the labour market.

As to motivation, although the participants believed that motivation for learning the job, having objectives and love for that job is among the affective characteristics of vocational learners, Hattie (2015) revealed in his synthesis of 1200+ meta-analyses that motivation has moderate effect on effective learning. Similarly, in her meta-analysis of 205 research studies, Orhan-Özen (2017) found out that motivation has a low level positive effect on student achievement.

In addition, cognitive characteristics of effective vocational learners was found to be related to students' learning strategies, namely self-regulated study skills. Observed by Zimmerman (2002) self-regulated learners are proactive in their learning rather than viewing learning "as a covert event that happens to them in reaction to teaching" (p. 65). Adopting and using different study strategies was highly related to conception of learning held by students (Van Rossum & Hamer, 1985, cited in Burnett, Pillay & Dart, 2003) and their approach to learning (Marton et al., 1993). In this study, based on the classification by Entwistle & Peterson (2004), study skills of effective vocational learners revealed a surface approach (e.g., reviewing content before and after class, participating in classroom activities), deep approach (e.g., learning to learn) and strategic/achieving approach (e.g., do extra practice out-of-classroom). In line with that, Purdie et al. (1996) underlined the need for versatility or flexibility as a student's pragmatic ability to use among a repertoire of study or learning behaviours in self-regulated learning, and they found in their meta-analysis that versatility in using study skills, and deep and achieving approaches to learning correlated highly with learning outcomes while a singly study skill characterized with surface approach was found in negative correlation with outcomes.

Finally, personal traits like being creative, curious, responsible and observant etc. were counted among the characteristics of effective vocational learners, which was found applicable not only to vocational learners but all. The personality traits, namely Big Five: openness to experience (O), extraversion (E), conscientiousness (C), agreeableness (A), and neuroticism (N) (Costa & McCrea,

1992, cited in Jensen, 2015), was highly researched with their relation to learning and achievement (Jensen, 2015).

In this study, among the traits of effective vocational learners, creativity, curiosity, and being observant seems to apply to facets of Big Five, namely openness, while self-regulation and responsibility correspond to conscientiousness. Consistently, Jensen (2015) reviewed ten studies relating personal traits to learning approaches and found a positive correlation between openness and deep approach to learning, yet a negative correlation between openness and surface approach to learning. Additionally, conscientiousness was highly correlated to two approaches to learning: deep and achieving approaches to learning. Similarly, it was indicated by Hattie's synthesis (2009) that there is a low level of relationship between personality traits and learning, yet, only the personality trait, conscientiousness, was found to have an impact on learning. In relation to job performance, research indicated that cognitive ability and conscientiousness was highly valued by employers (Dunn, Mount, Barrick, & Ones, 1995), and workers with high conscientiousness, and agreeableness received higher ratings of job performance (Witt, Barrick, Burke, & Mount, 2002).

Characteristics of an effective vocational program also emerged from the data revealing that effectiveness of a vocational program depended on person-related factors (teacher and student characteristics), school-related factors (curricular characteristics and school context) and educational system-related factors (admission, further study and employment). It is obvious that the interviewees in this study believed that effectiveness of a vocational program depended on the input (teacher, student, curriculum and learning environment) and output (further study and employment). Corresponding to the findings related to curriculum, employment and further study in this study, Blom and Meyers (2003) indicated that a quality vocational program: (1) is developed in concert with, and responsive to feedback from stakeholders, such as industry and community; (2) articulate into further educational pathways; (3) clear economic and/or social benefits post-completion; (4) offer structured, sequenced, assessed, quality assured, certified training; and (5) deliver nationally, mutually recognized and portable qualifications (p. 14). More comprehensively, Blom and Meyers, developed a

framework of quality indicators (see Figure 5.1) by bringing the common quality indicators used across countries together by noting the influence of contextual factors, namely personal characteristics and background of learners, community, labour market and family factors, on the selection and operation of quality indicators. Comparing the findings of this study with the indicators in the framework, it was seen that the participants in this study did not put value on outcomes/outputs of vocational education except the ones related to employment and further study while their views related to process centered on infrastructure, teacher qualifications and curriculum disregarding indicators related to administrative and management structures and procedures, teaching process itself, evaluation and research. It may have been assumed by the participants that qualifications possessed by teachers and learners would directly lead to effective teaching and learning. This variance in views can be explained through contextual factors, and/or as the result of different approaches to quality or effectiveness. Understanding related to quality changes from actor to actor depending on their priorities (Seyfried, Kohlmeyer, & Futh-Riedesser, 1999). Another study conducted by Guenther (2011) also reflects this variance. That study aimed to define the characteristics of an effective vocational program, and findings of his study produced six categories, which are needs; motivators, enablers, delivery aspects, identity aspects and outcomes as essential elements of effective programs, among which delivery aspects (content, qualification, delivery and the trainer) received largest group of responses followed by identity formation (self-esteem, awareness of options and self-confidence). Although other categories were somehow consistent with the findings of this study, identity formation was not referred as an output of effective vocational programs.

5.2 Challenges Hindering Effectiveness of Vocational Teaching and Learning

The challenges that inhibit effective vocational teaching and learning were found to depend on teacher-related, student-related, curriculum-related, system-related, employer-related and parent-related factors.

Teacher-related factors were stated to be related to teachers' lack of knowledge, namely lack of content knowledge, pedagogical knowledge and

technological knowledge, and inappropriate teacher traits including their negative attitude towards students and profession, their unprofessional demeanors, their beliefs and lack of communication and cooperation skills.

Although technological pedagogical content knowledge was highly valued and counted among the characteristics of effective vocational teachers by the participants in this study, it was said that vocational teachers lacked these knowledge domains. This may be considered as the result of the lack of a unified approach to qualification and competence requirements for vocational teachers (CEDEFOP, 2015). In Turkey, although the content of initial vocational teacher education is vocational didactics combining subject matter and general teaching skills (Grollman, 2008) there is not such a qualification requirement to recruit teachers to teach at higher vocational schools. Subject matter knowledge, work experience or post-graduate studies in the relevant field are the criteria employed to recruit vocational teachers to higher vocational schools.

From a similar perspective, Desai and Whiteside (1999) found that administrators perceived existing teacher qualifications and teacher education inadequate and believed more training is needed to improve teachers' practical or technical skills, professional or technical knowledge and experience of industry. As an overall conclusion of their study, they noted that vocational teaches lacked pedagogical content knowledge and curricular knowledge although there were a very few of the teachers with specialist training to teach in vocational education. Despite such qualitative attempts to assess pedagogical content knowledge of vocational teachers, knowledge bases of vocational teachers have not been assessed adequately due to scarcity of valid assessments (Holtsch, Hartig, & Shavelson, 2018; Kuhn, Alonzo, & Zlatkin-Troitschanskaia, 2016). As Carlson (1990, cited in Kuhn et al., 2016) discussed, this may be due to lack agreement on common teaching methods and content structures and lack of identification of working teaching and learning methods in vocational education (Lucas et al., 2012).

Within the framework of pedagogical knowledge, the participants reported challenges they faced due to lack of knowledge of learner and curriculum, and ineffective classroom management and content delivery.

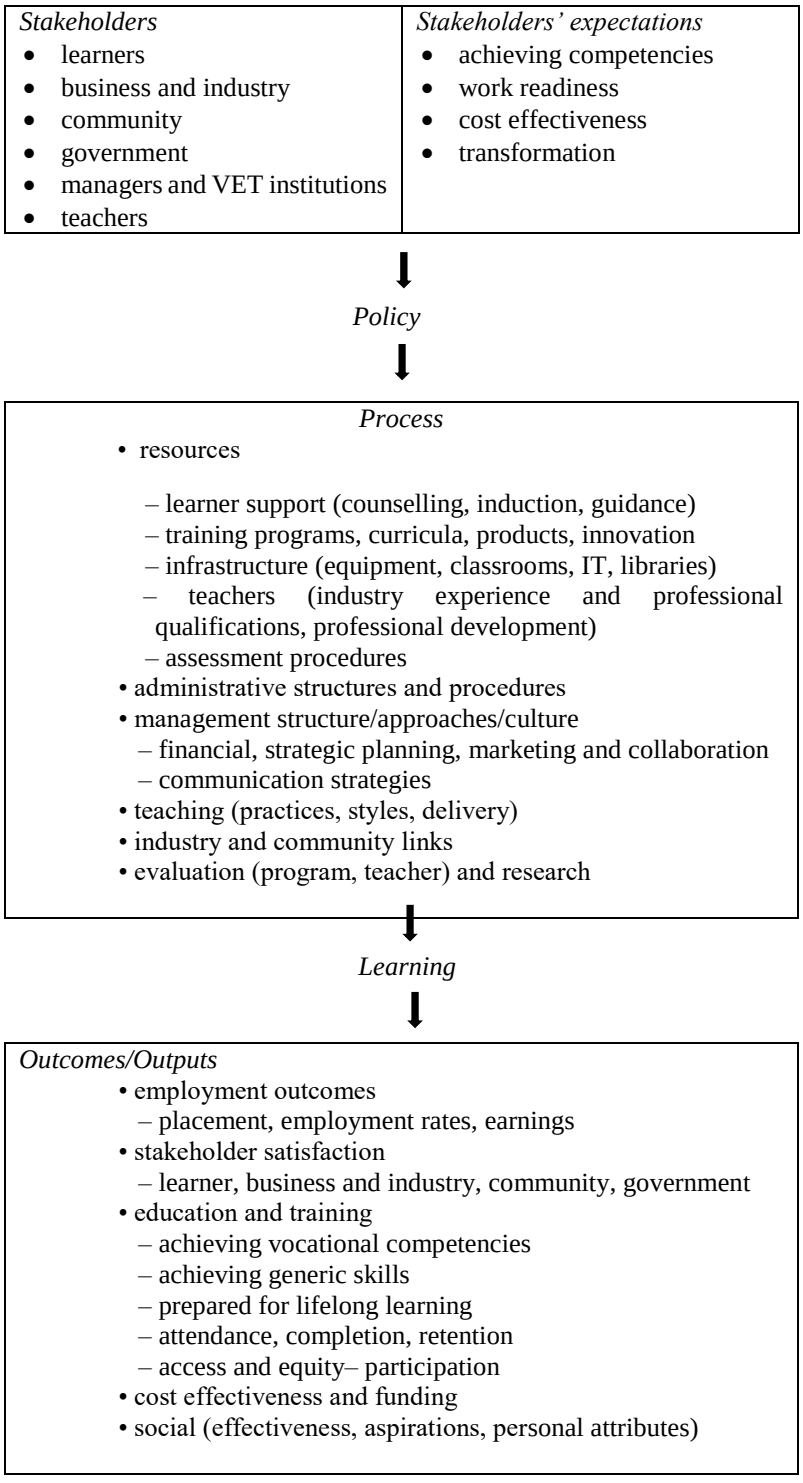

Figure 5.1 *Quality Indicators Framework for Vocational Education (Blom & Meyers, 2003, p. 41)*

Knowledge of learner includes teachers' knowledge of abilities and learning strategies of students, their ages and developmental levels, attitudes, motivations, and prior knowledge (Cochran, 1997); however, it was believed by the participant in this study that vocational teachers failed to cater the diverse needs of learners who were stated to have different learning orientation, age, socio-economic status and learning preferences and styles. In order to be responsive to the diverse needs of vocational students, Mitchell et al. (2006) highlighted the need for vocational teachers to "move beyond their own habitual or acquired personal and professional learning styles" (p. 32). Confirming this need, Said (2018) who aimed to explore students' experiences at higher vocational schools found that students did not favour formal lectures through powerpoint presentations which was observed in this study to be main teaching method in theory-based courses but showed demand for interactive lectures. As also indicated by Selassie's research (1989), teachers rarely selected the teaching method in accordance with the nature of students and their intellectual development. Furthermore, research in higher education revealed that activities conducted by agriculture teachers were generally teacher-centered and associated with lower cognitive learning levels (Ewing & Whittington, 2009; McCarthy & Anderson, 2000) on contrary to the student-centered teachers who consider learners' needs and plan the courses accordingly and correspondingly (Biggs, 1999). Beckett and Hager (2002) also criticize transmission of propositional knowledge through lectures and tutorials by the use of verbal and written materials in classroom setting by vocational teachers, and advocate contextualized, activity-based, situational and collaborative learning.

Knowledge of curriculum was also reported to be a knowledge domain vocational teachers lacked. It was observed that teachers mostly showed negative attitude towards curriculum as revealed by their conceptions of curriculum. They equated curriculum with "book knowledge", "syllabus" and "paperwork" and they associated curriculum development with syllabus design. Students were not informed about curriculum and equated curriculum with "what teacher tells". Similar views about curriculum were revealed in the research by Bowers (2006). In her study, students viewed vocational curriculum as "a list of topics" and relied on

teachers for information about curriculum while teachers were found not to use curriculum fully and constructed their teaching on individual syllabi.

Furthermore, vocational teachers in this study, given academic freedom to design, implement and evaluate the curriculum, were believed to select the content they personally valued and they learned at workplace or during their undergraduate or graduate studies rather than the job requirements. Especially, teachers with industrial background maintained that they preferred telling their own experiences and transmitted the content they perceived important. Similar to this case, Salemi and Siegfried (1999, cited in Bowers, 2006) found that teachers immersed themselves in their own interests as a result of academic freedom disregarding the whole program. As a recent study, Albashiry, Voogt and Pieters (2015) investigated curriculum development practices at a community college in a developing context, and findings revealed in a consistent manner with this study that curriculum development process was content-driven, intuitive and highly individual, concluding that those practices were not conducive to internally and externally consistent vocational programs.

Additionally, teachers were stated to lack of measurement and assessment knowledge. Due to that, they were reported to mostly use written exams to test students' conceptual knowledge. This is obviously the result of their educational background and lack of pedagogical focus in the recruitment and professional development of vocational teachers. Supportively, Black and William (1998) note that teachers' lack of assessment knowledge and skills limits their use of a variety of assessment techniques in the classroom. In their empirical study, Mellati and Khademi (2018) found through their research that "assessment literate"" teachers set goals in accordance with learners' interest, utilized dynamic assessment through classroom assignments and gave feedback owing to the knowledge and skills they acquired during their studies in contrast to "assessment illiterate" instructors with limited knowledge about evaluation and classroom assessment.

As pedagogical knowledge of teachers has generally been undermined and neglected in vocational education (Lucas et al., 2012), vocational teachers and trainers with content knowledge are considered effective (Choy & Haukka, 2009), and therefore, due to this view, vocational teachers are generally and traditionally

recruited from artisans, tradesmen, technicians and engineer/technologist or academic fields whose major training has been concentrated on technical or academic areas but with fewer being trained as teachers and trainers (Kerre, 1997). In order to investigate the experiences of beginning vocational teachers, Orr (2009) conducted a research in English context, where vocational expertise and knowledge was perceived as necessary while pedagogic expertise and knowledge was treated as optional as it is in Turkey, and the results indicated that there was a lack of pedagogical development culture in further education colleges along with the pressure for trainee teachers to quickly cope with teaching, which led to conservative practice by the prioritization of expedience over flair. With regard to workplace training, Gauld and Miller (2004) found in their study that employers recruited subject specialists for the training in the workplace due to their belief in content knowledge as the basis for effective teaching and training, and they concluded that content knowledge was not alone adequate to teach job competences.

However, relying on content knowledge without assessment can be prohibitive and cause students to develop and formulate incorrect conceptions (Harris, Koehler, & Mishra, 2009). This was also highlighted through term "out-of-field teaching" which refers to the "subjects for which teachers did not have undergraduate and teaching qualifications" (Hobbs, 2012, p. 278). In her study, Hobbs (2012) investigated the reasons for labeling teachers "out-of-field" and found that the reasons were related to teachers' qualifications, teaching and pedagogy, student-related issues and teachers' personal responses, attitudes and motivations. Consistently, both teachers and students in this study found out-of-field teaching ineffective due to those teachers' lack of content and pedagogical knowledge and their negative attitude towards the course and students.

With regard to elements of content knowledge, it was found in this study that content knowledge included vocational knowledge and multidisciplinary and job-specific content knowledge. Teachers' lack of vocational knowledge was said to originate from their lack of job experience and up-to-date knowledge related to occupation. In an OECD report (2012) it was stated that teacher's lack of industrial experience is a particular challenge for the school-based vocational education

system. Because of that, it was believed that teachers could not transmit job-specific knowledge and skills although "industry currency" is listed as one of capabilities and skills required by effective vocational teachers (CEDEFOP, 2004; Dickie, Eccles, Fitzgerald & McDonald, 2004). Likewise, employers attached high importance to industry background and relevant knowledge of workplace trainers (Clayton, Jonas, Harding, Harris, & Toze, 2013). However, as the research by Schmidt (2019) indicated, the legislation which requires vocational teachers to have pedagogical knowledge and skills as well as up-to-date vocational competencies was misinterpreted and led to prioritization of industry currency over pedagogical skills. Moreover, this also poses further challenges for vocational teachers to keep up with changes and constantly update their knowledge and skills (Choy & Baukka, 2009) due to changing conceptions of knowledge, skill and learning (Chappell, 2003) and changing nature of work and work organization (Chappell et al., 2002).

As another knowledge domain lack of which posed challenges for teaching and learning was technological knowledge. Vocational teachers were stated to be lack of the knowledge of educational technologies and powerpoint presentation was the only educational tools used by them, which they were believed to make ineffectively. This seems to result from teachers' lack of knowledge of educational technologies, their resistance to change (Zimmerman, 2006) and habits (Greenberg & Baron, 2000, cited in Zimmerman, 2006). Zheng and Gong (2010, cited in Zhang, 2018) discussed that the reason for technology illiteracy of vocational teachers was their lack of motivation to learn, and as a result of that, they keep using traditional teaching methods since they do not adapt to the developments in ICT. In parallel, Kotrlik, Harrison and Redmann (2000) found that vocational teachers lack the necessary skills and knowledge to use technology for instructional purposes although they value the use of technology in their programs. In Turkish context, Kuşkaya-Mumcu and Koçak-Usluel (2010) investigated the ICT usage purposes of vocational teachers, and found that teachers most frequently used ICT for managerial purposes, and the least for instructional purposes.

The second theme of teacher-related challenges was related to teacher traits, namely their negative attitude, beliefs, unprofessional behaviours and lack of skills.

Some participants in this study felt that teachers showed negative attitude towards students and teaching profession. Negative attitude towards teaching may be the result of low status of higher vocational schools (CEDEFOP, 2018a; Lucas et al., 2010; 2012), low professional status of teachers in vocational education (Grollman, 2008) and/or lack of love and motivation for teaching (Lapido, 1984). Due to their negative attitude towards teaching at higher vocational schools, they were said not to be involved in professional development and perceive teaching at higher vocational schools as a temporary job. Likewise, in Australian context, Harris, Simons and Clayton (2005) noted that vocational teachers are mostly part-time and casual teachers who seek a permanent position secured by contract. In Turkish case, vocational teachers pursuing academic studies were believed to aim at finding a position at university, or a vacation in the labour market with higher salary. Also, teachers with industrial experience stated that they started teaching at school due to their demand for stability and regular salary. In addition to that, vocational teachers other than the ones were criticized for their non-involvement in professional development. Lack of incentives and motivation to learn and heavy course load can be considered as reasons. In the study by Schmidt (2019), for example, vocational teachers reported difficulty in enacting currency requirements due to limited time, teaching commitments and attitude of managers.

As to teachers' attitude, views commonly revealed that attitudes have a deep influence on teacher behavior and practices (Richardson, 1996), and it was indicated through research that the teachers with positive attitude towards the teaching profession had higher educational and instructional performance (Lapido, 1984; Lubis, 1988). As attitudes (Knox & Anfara, 2013), and beliefs (Muijs & Reynolds, 2015) affect behaviors, teachers' unprofessional behaviours may be reflection of their negative attitude and lack of positive beliefs. For example, Güven (2015) investigated negative teacher behaviours during their primary and secondary schools and found the categories of negative behaviours as follows: "insulting and humiliating", "scolding and blaming", "discriminatory and indifferent attitude" and "negative warning and authoritative attitude". Some of these behaviours were also reported and observed in this study like insulting, blaming, scolding, discrimination, indifference and authoritative attitude. Furthermore, Archambault,

Janosz, and Chouinard (2012) found that teachers' negative beliefs and attitudes toward students with low income hindered students' cognitive engagement and achievement. In this case, vocational teachers were said to demean students for studying at higher vocational schools due to their belief in their lower cognitive abilities and as vocational students are generally low achievers who cannot find a place at university (Teese, Davies & Ryan, 1997).

Finally, teachers' lack of communication skills were perceived as a challenge. Communication skills are required for effective teaching (Yılmaz, Yoncalık, & Çimen, 2010) and were also found to be among the important qualities of effective vocational teachers (Johnson & Roellke, 1999). Beside communication with students, communication with employers were stated to be limited although it was believed to be highly critical for the responsiveness of curriculum to the demands of employers. It was also said that lack of teacher collaboration led to the implementation of a fragmented and inconsistent curriculum and research indicated that administrator support and persistent manner were needed for teacher collaboration (Strauss, 2002).

As to student-related challenges, the findings showed that teaching and learning processes were affected negatively due to vocational students' entry characteristics, affective behavior and cognitive behavior.

Due to their previous educational experiences, students were stated to be at varying levels of prior knowledge related to job and academic knowledge including the knowledge of literacy, numeracy and foreign language. Likewise, Jung et al. (2004) came up with consistent findings in Korean and Australian contexts and found that higher vocational students lacked literacy and numeracy knowledge and skills, knowledge of subjects required to learn the job and industry-specific skills needed for progress to higher levels of training. Lack of or limited academic knowledge was also treated as a challenge in OECD (2012) report. It was noted in the report that there was limited space for literacy and numeracy in vocational curricula and little direct teaching in Maths, literacy, or other academic subjects although literacy and numeracy is needed for successful completion of vocational programs and for further education and career development.

As Barnett and Ryan (2005) argue, there is growing interest in integration of general and vocational education which would lead to shift "from utilitarian to broader educational objectives" (p. 90). However, as revealed in this study, before all, questions concerning the role and function of higher vocational education and its versatility need addressing: is it a continuation of initial vocational education delivered at high school, how much academic knowledge should be integrated into vocational curriculum, is it supposed to deliver initial vocational education for the ones who changed the track or upskill the current workforce?.

Informed school and program choice was another challenge voiced by the participants in this study. Identification of reasons behind students' educational choices is difficult as it is a complex process influenced by individual, social and institutional factors which interact while making decisions (Fuller & Macfadyen, 2012). Furthermore, as Fuller (2009, cited in Fuller & Macfadyen, 2012) indicated, students from low socio-economic backgrounds are generally lack of support and guidance to help them assess educational opportunities and select the appropriate one among them. In this case, vocational students who are not supported through professional guidance and by their parents, therefore, lacked the feeling of belonging academically and socially to higher vocational schools, which was discussed by Tinto (2012) as an important factor for success in higher education.

Socio-economic status, found to have moderate effect on achievement (Hattie, 2015), was also mentioned as a challenge. The fact that students at vocational track are generally from low socio-economic backgrounds is widely accepted and revealed through research (Foley, 2007; OECD, 2010; Teese et al, 1997). Similar to the reported profile of students in this study, Barnett and Ryan (2005) indicated that those with low academic results, living in rural areas and those without tertiary educated parents and graduates of public schools tended to study at vocational schools in Australia.

The participants in this study perceived low socio-economic status as a reason for low achievement and uninformed school choice and these students who are marginalized in the system are kept under control at vocational schools used as a tool to hinder unemployment as expressed by one administrator (A4) who participated in the study.

As to affective behavior, students were reported to be lack of motivation for and interest in vocational studies, and have negative attitude and feelings towards school, job, and courses. Students mostly were not happy to study at a higher vocational school and felt marginalized and unsuccessful due to the notion: “Bad students go to vocational schools!” (Ling, 2015).

Also, students’ interest in further study was seen as a reason for ineffective learning though it was stated in the literature that progression to higher levels of education was a characteristic of quality programs (Blom & Meyers, 2003; CAVTL, 2013; Ofsted, 2010; OECD, 2012). Rather than interest, the challenge seems to arise from the content of vertical transfer test which students take to enter and continue studies at university by being tested on literacy and numeracy rather than vocational content. Because of that, students perceiving higher vocational schools as “stepping stone” (O’Shea, Lysaght & Tanner, 2012) may show higher interest in diploma, in passing tests and lower interest in vocational courses, which inhibits teaching and learning at higher vocational schools.

The academic failure of vocational students whose literacy and numeracy is tested before and after vocational education and who were said to have negative attitude towards quantitative and theory-based courses can be the result of lack of academic integration into vocational curricula and failure of previous educational levels because students’ approach to learning provides hints about the quality of education they are delivered (Biggs, 2001). As a result, they are labeled as “slow learners” (Berger, Kipfer, & Büchel, 2008) or “low achievers” who lack required study skills and work habits (Jung et al., 2004), who cannot transfer learning to workplace (Kilbrink et al., 2018), and have surface learning approach (Choy& Delahaye, 2005; Çolak & Kaya, 2014). Besides, their fear of unemployment seem to cause stress on them, which in turn influence their achievement (Lloyd, Alexander, Rice & Greenfield, 1980). Hwang (2017) discusses that the factors around graduate unemployment can be related to market conditions, skills and ability of graduates, overeducation (overqualification) and the gap between perspectives and reality (p. 6), which can be counted among reasons for unemployment anxiety of students focused in this study.

Curriculum was another dimension which created challenges due to teachers' lack of curriculum knowledge, pedagogical knowledge, content knowledge, knowledge of learner, and knowledge of educational context (Shulman, 1987) as discussed in previous parts. Besides teachers, administrations were found to lead to curriculum-related challenges due to their lack of establishing links with workplaces and employers, auditing, and internal and external curriculum evaluation.

Among the teacher-related curricular challenges, one of the most prominent one was found to originate from the scope of, integration and balance in the curriculum: the level of theory and academic knowledge, the balance between theory-based and practice-based courses, integration among courses, and between secondary level and higher level curricula.

In OECD (2012) report, intermediate or higher level vocational curriculum was stated to "include practical training and teaching of the theory associated with the vocational field, but little direct teaching in Maths, literacy, or other academic subjects" (p. 169). However, nearly all students in this study perceived theory useless but practice critical to learn effectively and criticized insufficient hours allocated for practice-based courses while teachers who pursue academic studies attached high importance to theory and spared more space in curriculum for theory-based courses. This may be the result of their incompetence in practical knowledge and skills, and their lack of workplace experience. Too much emphasis on theory at the expense of practice or vice versa lead to an imbalanced curriculum. Zhang (2018) discusses that vocational teachers traditionally base their teaching on theoretical knowledge without paying attention to the need for hands-on ability students require to adapt to job procedures at workplaces. On the other hand, some teachers may have a stronger commitment to practice and practical knowledge than theory by drawing connections with their occupational knowledge due to their utilitarian approach to vocational education (Chappell, 1995), which was observed in this study with teachers who have industrial experience. Apparently, teachers' epistemological beliefs about the nature of vocational knowledge and learning influence their choices and decisions with regard to curriculum and teaching practice (Pajares, 1992).

As teachers were found to design course syllabus individually or implement ready-made syllabuses by making changes depending on their beliefs about how students learn, teacher role in the classroom, the ability levels of students, and the relative importance of content topics (Cronin-Jones, 1991), lack of teacher collaboration during curriculum design can be the reason of an imbalanced curriculum and lack of integration. Beside, lack of collaboration among stakeholders and non-involvement of students, employers, policy makers and graduates in the curriculum design was believed to decrease the responsiveness of vocational curriculum to the needs (OECD, 2012) as different interests would favour different frames in vocational curricula (Lewis, 2004) and collaborative curriculum development would enhance quality of outcomes and improve professional development of teachers (Voogt, Pieters & Handelzalts, 2016).

Lack of instructional resources was another challenge related to curriculum. Teachers and students expressed the difficulty of finding job-specific resources. As Barnett (2006) discusses, the books, whose titles are defined as "Geography for Travel and Tourism" or "English for Business", generally present the content at surface level not to confuse students with too much factual information (Dyson, 1987, cited in Barnett, 2006). However, Barnett notes that incorporating disciplinary knowledge into vocational programs poses recontextualization problems on the part of teachers who are supposed to develop pedagogy to use effectively available learning materials and texts. Though this may be valid for teachers in international contexts the availability of such materials in Turkey and their correspondence to Turkish context poses further challenges for the vocational teachers in Turkey.

Online delivery of vocational education was another challenge related to curriculum. Both teachers and students found distance vocational education ineffective due to the practice-based nature of vocational education and need for hands-on practice (Zirkle, 2000) though positive experience and satisfaction of students with distance vocational education was reported in some research studies (Thompson, Thompson, & Orr, 2002).

Challenges related vocational education system and policies concerning vocational education were among the most referred ones by the participants of this

study. System-related challenges, which also lead to contextual, teacher-related, student-related and curriculum-related challenges, were associated with policies concerning prior education, student selection and placement, planning, implementation, resources and decision-making. A recent research conducted nationwide by YÖK (2018) in Turkey, revealed some consistent results in respect to the challenges in higher vocational education, which are: limited connection with labour market; locating higher vocational schools in settings where relevant sectors are absent and with limited social life; low status of higher vocational schools; higher intake capacity of programs than needed; placement of vocational school graduates by university graduates at workplaces; presence of outdated vocational programs that do not correspond to labour market needs; and insufficient course contents at some programs.

As the research by YÖK and this study revealed, lack of needs assessment is one of the main reason underlying these challenges because needs assessment provides answers to the following questions: What goals should be addressed by educational programs?, What priorities should be assigned to different goals?, What funds should be allocated to each goal?, How can quality services be maintained with declining enrollments and shrinking revenues?, and What programs could be cut if necessary? *(*Stufflebeam, McCormick, Brinkerhoff & Nelson, 1985, p. xiii). However, answering these questions by completing surveys behind closed doors would not help (Cuiccio & Husby-Slater, 2018). Cuiccio and Husby-Slater note that needs assessment requires focus on context and problems, topics and questions to be addressed in that local context; rigorous data collection and analysis; active involvement of stakeholders; and collaborative action, which seems to be lacking in identification of needs in the local contexts of higher vocational schools in Turkey. As far as the results indicated, lack of needs assessment revealed challenges related to student selection and placement, location of schools, supply of resources and inappropriate policies with regard to capacity increase, launching overlapping programs both at university and higher vocational schools, introduction of different vocational education providers with varying study duration, which, in turn, influence teaching and learning practices in the context of Nevşehir.

As this study indicated, system-related challenges were the main determinant of challenges experienced in the school contexts as student placement and selection policies, lack of guidance and counselling services, inappropriate school setting and financial problems directly influence the practices at higher vocational schools.

Within the student selection and placement system, university entrance exam aiming at "selecting and placing students having a high academic potential in the higher education institutions of their preference" (ÖSYM, 1984, cited in Ağazade, Caner, Hasipoğlu, & Civelek, 2013) is conducted to select students to study at higher vocational schools, and it was found inappropriate by the participants in this study to select the "right" students for higher vocational education, which is highly important for the quality and internal consistency of educational programs (Harman, 1994). Furthermore, abolition of direct transfer of graduates from vocational high schools to higher vocational schools strengthened the focus on academic knowledge and skills. Is this the result of gradual transition attempts to integrate academic knowledge and skills into vocational curriculum or of uninformed and reactionary policies which can lead counter-productive results?

Additionally, lack of guidance and counselling administered nationwide, as discussed earlier, leads to uninformed school choice, which in turn influence students' sense of belongingness (Tinto, 2012) and commitment (Meijers, Kuijpers, & Gundy, 2013). Research by te Wierik, Beishuizen and van Os (2015), for example, proved that career guidance increased the achievement level of students at higher vocational schools and decreased the drop-out rates in the first year. However, as the research indicated, the emphasis of guidance and counselling services has mostly been on helping students with academic achievement rather than helping students plan and prepare for work (Meijers, 2008, cited in Meijers et al. 2013). Furthermore, provision of guidance by teachers educated in counseling and guidance poses challenges as those teachers are lack of occupational knowledge and experience (OECD, 2012).

Beside, higher vocational schools are generally located in towns or outskirts of capital cities, which is stated to be similar in Australian (Wheelahan & Moodie, 2005; Jung et al., 2004) and Korean contexts (Jung et al., 2004). However, these

authors highlight that these locations are mostly strategically placed locations where schools specialize in study areas aligning with the needs of local industry. However, in the case of higher vocational schools in Nevşehir, most of the programs were stated not to correspond to the needs of local and even nationwide industries because the economy in Nevşehir depends on tourism and agriculture. On the other hand, the programs offered in the higher vocational schools in Nevşehir and its towns range from health to technology programs to which corresponding industries lack or are limited. This condition leads to insufficient capacity for workplace learning or absence of workplaces where on-the-job learning activities would be conducted. Moreover, according to the statements of some participants, location of schools is mostly determined in line with the demands of local authorities due to well-known economic contribution of higher education institutions to the local economy (Karataş, 2002; Taşçı et al. 2008; Valero & Van Reenen, 2019) through increased consumption from students, staff and purchase of local goods and services by higher education institutions (Valero & Van Reenen, 2019). However, these benefits were stated to be abused because of huge increases in rents and prices of goods by local people. Also, perceived negative attitude of local people towards students despite these economic benefits can be related to generational conflict and/or conservative social structures in rural areas. Furthermore, school buildings which were constructed for other purposes and are not physically appropriate settings for teaching and learning practice are donated to schools by local authorities or wealthy persons, leading to problems related to infrastructure and facilities.

Funding problems counted among system-related challenges inherently create problems in the school contexts. Due to the high costs characterized with vocational education (Hoeckel, 2008) and costly materials, equipment, facilities, work-based placements and internships (Grubb, 2006) higher vocational schools in Nevşehir had difficulty to supply the learning materials and equipment required for job learning, which was found to be similar in some other contexts in Turkey (Ergin & Yağcı, 2003; Kaya, 2014). Beside, budgetary problems hinder human resource supply, namely vocational experts and professionals who do not want to teach due to lower salaries paid to the teachers. Consistently, Simons, Harris, Pudney and

Clayton (2009) indicated that it was challenging to recruit qualified trainers from workplaces due to the gap between what is earned in industries and income of teachers.

Among the contextual challenges, ineffective administration at the local level was reported to lead to further challenges. Administrators' indifference to the needs, their negative attitude towards students, ineffective scheduling and staff management, and lack of curriculum, teacher and student evaluation were stated to be administrator-initiated problems, which directly influence professional performance of vocational teachers (Grollman, 2008), and therefore, students' learning.

Quality vocational school administration at local and institutional level was discussed by Blom and Meyers (2003) to include: successful interpretation of policy to offer quality programs; appropriate funding; accountability to stakeholders; adoption of equity and ethics principles; and being informed by quality principles like continuous improvement and feedback from stakeholders (p. 14). However, this study revealed that students and teachers at higher vocational schools in Nevşehir receive inadequate support and leadership from administrators. Likewise, in a study conducted by Polesel et al. (2004, cited in Barnett & Ryan, 2005), vocational teachers expressed that they received insufficient support from administrators and school, which is required for their professional development. Similarly, consistent with the findings of this study, Currie and McCollow (2002) reported teacher complaints about timetabling problems and lack of funding for professional development.

Heavy course load leading to highly busy timetable was an obstacle for both students and teachers. Although vocational education is characterized with heavier and more demanding workload when compared to academic track (CEDEFOP, 2017) this challenge seems to result from uninformed planning and decisions. Ineffective scheduling of timetables was mainly ascribed to administrators however, it may be caused by too fragmented curriculum consisting of independent courses taught by different teachers. It was noted by Henson (2006), students learn better and more able to apply knowledge when they are delivered collaboratively planned interdisciplinary curriculum. Brady (1996) also discusses the challenge of

fragmented curriculum and teaching for learning as students generally have difficulty to the connection and interrelatedness of information pieces, which was voiced by some students in this study. While some participants believed that this was the result of lack of collaboration among teachers some participants noted that it was caused by the administrators' pressure to comply with ECTS requirements. Teachers designing curriculum were required to offer pre-determined course credits, and therefore, include irrelevant courses within the curriculum depending on the study fields of existing teachers to complement the credits to 20 (trimester) or 30 (semester) ECTS per term. Therefore, fragmentation of curriculum and isolation of courses may be the result of teachers' lack of curriculum knowledge and administrators' lack of professional support.

Although vocational schools in Nevşehir shared similar problems in their own school contexts there were also some challenges varying from context to context. Obvious differences between private and public higher vocational schools and schools in central places and far towns were detected. As S8 was a private higher vocational school administrators and teachers tried to be more responsive to students' needs and expectations while administrators at other vocational schools seemed less interested in needs. Additionally, S8 included stakeholders in curriculum development and teaching process and signed protocols with employers to guarantee the employability of graduates. These endeavours might be related to aim of attracting more students and of being a well-recognized school with good reputation. On the other hand, administration at public ones were more passive in developing collaborative links with employers and involving them in the teaching and learning process except for examples of personal investments of few administrators. Concerning the spatial differences, students and teachers at schools in central places and main campus had easier access to facilities, socio-cultural activities and wider options of workplaces. It seemed that students and teachers at centrally-located schools had more sense of belonging and were more satisfied with the conditions when compared to their peers and colleagues at remotely-located schools. Besides differences, whether private or public, participants at all schools included in the study expressed financial constraints and insufficient resources. This

may be the result of high costs of vocational education and limited financing at the national level.

Another factor impeding vocational teaching and learning was pertinent to employers and workplaces, namely problems encountered during workplace learning, workplace characteristics and personnel selection although workplace learning has been attached high importance by the participants in this study as it provides authenticity, applied learning, active explorations, adult connections and appropriate assessment practices (Stern, 1999).

Workplace learning through work placement was influenced negatively due to the employers' attitude and training process itself. Employers were thought to perceive trainees as either burden or free labour force, and they were reported to be involved in fake internship not to deal with trainees. This may be related to unwillingness of employers to deal with trainees within their busy schedule because success of work placements highly depends on goodwill and attention of workplace supervisors (Jung et al., 2004).

Training process during work placements posed learning challenges due to lack of knowledge exchange, workplace characteristics and the nature of work demanded by the employers. Billett (2001) came up with similar challenges with regard to workplace learning: inappropriate learning; lack of access to appropriate experiences; lack of understanding; reluctance by workers to share knowledge; absence of expertise, and lack of interest by workers. Ineffective learning at workplace may be related to the peripheral positions of trainees at workplace. In their study, Akkerman and Bakker (2012) found that the students were perceived as peripheral participants in the workplaces and hence, were assigned to do routine work whose decisions and interpretations were checked by others. Also, the mismatch between knowledge and skills of trainees and workplace requirements in the form of overqualification (CEDEFOP, 2015; Hwang, 2017) or underqualification (Bartlett, 2013; CEDEFOP, 2015; Günay & Özer, 2016) can be considered as a reason for ineffective workplace learning and for the tension between self-educated staff and trainees.

What is more, employers' recruitment policies was criticized by some participants as they believed employers were prejudiced towards vocational school

graduates and recruited graduates from a variety of study fields without seeking job-specific knowledge and skills. However, as some participants stated, employers tend to adopt a pragmatist approach while recruiting and select candidates who would be most productive and cost less.

As to the parental challenges, this research indicated that parents' attitude towards higher vocational education and their involvement in guidance could influence teaching and learning practices negatively. Though parents are not supposed to involve in students' decision making processes at higher education level this condition might be the result of cultural effect since in Turkish culture, parents tend to guide their children in their educational and employment-related decisions. Based on their interests and attitudes, parents influence the preferences of students, and Otto (1989, cited in Hairston, 2000) indicated that parents are the most influential determinant of students' decisions about occupations. However, as indicated by Salami's (1999) research, young people made wrong career choices as a result of ignorance, inexperience, peer pressure, advice from friends, parents and teachers and the prestige of chosen jobs. Though other influences from peers and teachers were not addressed in this study, the participants highlighted parents' negative influence on students' career choices due to their interest in diploma required to be employed and the value they attach to vocational education and certain jobs. Although Bellibaş and Gümüş (2013) found that parents did not involve in school as they did not value education, the parents of students at higher vocational schools were said to involve in school by putting pressure on teachers for passing grades as parents were stated to be merely interested in diploma and positions at public institutions rather than quality training.

5.3 Practices to Cope with Challenges and Recommendations

The findings of the study showed that vocational teachers, students and administrators employed a variety of strategies to cope with challenges hindering the effectiveness of vocational teaching and learning. The participants all seemed to feel desperate for system-related challenges and they tried to find and employ some strategies for overcoming contextual challenges derived from vocational education policies. Besides system-related and contextual challenges, teachers and

students were exposed to problems caused by administrators at local and institutional level, employers and parents. In addition, problems teachers and students themselves brought about were revealed in this study along with the practices for them. The participants also gave recommendations centered on students, teachers, curriculum, school context and policies.

Among the participants, teachers used some practices to cope with challenges related to curriculum, instruction, resources and lack of collaboration. As findings revealed, teachers made changes and updated curriculum based on their beliefs, experiences, values, changes in regulations, workplaces and labour market, and needs of students to make curriculum more responsive, which is highly critical for higher education institutions not to become certificate awarding bodies without relevance (Ameyaw, Turnhout, Arts & Wals, 2019). The reported practices clearly indicated that teachers varied in their approach to curriculum responsiveness based on their educational and industrial background. While teachers with industrial background predicated on job, its requirements and their own experience as the base of their instructional and curricular practices teachers pursuing academic studies focused on conceptual deficits, literacy and numeracy. Both poles can pose further challenges because of their narrow approach to vocational knowledge (Heusdens, Bakker, Baartman, & de Bruijn, 2015; TAFE NSW, 2004) and competence (Brockmann, Clarke, Méhaut, &Winch, 2008). Furthermore, both approaches can undermine the importance of tacit knowledge for vocational learning (Lindberg, 2003) because "unless we understand how tacit knowledge is acquired, VET learners may achieve technical competence but lack vocational or professional competence, and almost certainly will not have learnt how to learn "(TAFE NSW, 2004, p. 5).

Self-reportings of teachers about their practices also uncovered that teachers made these changes in the classroom without reflecting these changes on the formal curriculum (e.g. dividing students according to their interests and forming sub-branches within the program, delivering more practice-based hours than planned, etc.). The motive to do that was found to be teachers' unwillingness to deal with paperwork and administrative tasks required by bureaucracy. This perceived burden on vocational teachers when combined with increased course load may be the

reason for such informal practices. From a different angle, such practices seem to increase teacher autonomy on one hand while decreasing teacher accountability on the other.

In addition to those practices, some teachers developed strategies to involve stakeholders like graduates and employers through their personal attempts. Likewise, a few teachers checked the validity of learning during work placement through follow-up testing. Moreover, one teacher provided guidance to high school students in the town. These practices indicated that improving teaching and learning depended on personal initiatives of some teachers rather than structured initiatives at the local and national level.

Recommendations centered on curriculum proved that there is a need for more flexible and personalized curriculum at higher vocational schools rather than a standard one to offer students different tracks within the programs because a considerable number of participants highlighted the need for elective specialization courses. One teacher also recommended interdisciplinary approach to curriculum development in vocational education, which was also recommended for effective vocational teaching in the literature (Barnett, 2006; CAVTL, 2013). The need for job-specific standardized curriculum was also emphasized, but this view seems to undermine that a standardized curriculum does not mean standardized practices due to the diverse characteristics of learners (Sparapani & Perez, 2015). Another recommendation, emphasized the need to design a curriculum portal which presents the required content for each job may be more applicable as it gives more freedom to teachers to select the content. In addition, participants made recommendations about study duration and work placements by highlighting the standard duration assigned to all programs for study and traineeship hindered effective teaching and learning which was also confirmed by the findings of Gündeş and Atakul (2017). They believed that duration should be determined according to the needs of program because some programs required less time while more time than four terms was needed at some others. This recommendation, again, proved the importance of needs assessment while planning education.

As to the instructional practices, teachers noted that they determined the objectives according to the job requirements, planned the lesson considering subject

characteristics, get prepared for the lesson by studying the content and searched for relevant examples. As seen, the content itself was attached high importance by the teachers by aligning it with job or the subject requirements rather than the needs and demands of students though meeting the needs of students. Personalized approach was counted among the characteristics of quality teaching in vocational education (Corben & Thomson, 2001; Faraday et al., 2011; McCrone et al., 2015). Distinctly, one teacher stated that he considered the subject while planning and teaching a course as he thought that the vocational subject clearly reveals the materials, the sequence and scope. Like the teacher in this study, the nature of subject was considered to be highly important for vocational pedagogy by Lucas et al. (2012) as vocational subjects, herein referred as programs, have implications for teaching and learning based on the elements they work with (physical materials, people and symbols).

Teachers also used some practices during teaching process. In this phase, some teachers were more learner-centered than they were during planning as they asked students about their preferences for teaching method and technique, arranged pacing according to the needs of students, simplified the content and communicated the content in plain language to enhance understanding, and considered individual differences. Despite these practices, teaching process in theory-based courses was mostly observed to be teacher-centered as teacher talk ruled the class time and students were passive recipients. Teachers also reported that they used job-related examples to gain and maintain students' attention because students highly valued job-specific knowledge and skills, and conducted hands-on activities to improve learning and students' practical skills as required by the hands-on and practical nature of vocational education (Lucas et al., 2012).

Effective classroom management refers to teachers' actions for creating a learning environment leading to successful instruction, students' attention and engagement (Brophy, 2006). Teachers who reported their practices in classroom management indicated that they tried to engage uninterested students more, acted according to the needs of students, considered individual differences, allowed students to express their ideas, motivated students and created a workplace atmosphere. Though the teachers expressed their student-centered approach in their

practices, most of them could not provide concrete examples of their classroom management practices. Furthermore, they were mostly observed to be teacher-centered in the classroom despite their reported tendency to be more learner-centered, which is consistent with the results of Akın, Yıldırım and Goodwin's research (2016).

Practices used to cope with resource-related problems pertaining to time, financial resources, materials and physical conditions indicated that teachers tried to overcome the lack of job-specific published materials by producing study-notes or translating texts into Turkish. Expressing the challenges they faced due to lack of equipment, tools and materials required for practice-based courses and hand-on activities, teacher utilized videos to show those materials used at workplace or supplied the affordable equipment through own means and sought donations. Besides those, they considered students' financial status while giving assignments, shared the costs of materials among students, allowed students to use labs out-of class hours, etc. These practices seemed to result from personal efforts of teachers to be responsive to the needs, and attempts to make their teaching practices more effective. Nevertheless, these practices proved that teachers were isolated due to lack of administrative and governmental support. Similarly, Fimian (1982, cited in Davis, 1986) discusses that "lack of administrative support reinforces teachers' perceptions that they are totally on their own" (p. 102), which made these teachers to seek solutions on their own.

Peer collaboration among teachers was counted as another strategy to develop an integrated curriculum and knowledge exchange between experienced and out-of-field teachers. Studies, consistently, showed that teacher collaboration on teaching-related issues like curriculum, syllabus and teaching methods improved students' leaching and achievement (Goddard & Goddard, 2007).

Considering the recommendations centered on teachers, they were found to concentrate on vocational teacher education, teacher selection and teachers' professional development. The need for vocational teacher education programs to incorporate vocational subject knowledge, knowledge of learners and pedagogical content knowledge was highlighted by the participants was also discussed in the literature and these knowledge domains were listed among the required elements of

effective vocational teaching (Barnett, 2006; Chappell, 1995; 2003; Harkin, 2012; Lucas et al., 2012; Shulman, 2005; Young, 2004). The need for workplace experience and industrial currency as a part of professional development of vocational teachers was also among the recommended issues, revealing consistent approach to vocational teachers' knowledge with the literature (CEDEFOP, 2004; Choy & Haukka, 2009; Harkin, 2012; Lucas et al., 2012). Additionally, in-service training to keep teachers' subject and pedagogical knowledge up-to-date was recommended; however, research indicated that in-service training do not have much effect on teachers' practices in the classroom due to cultural, contextual and institutional constraints (Personn, 2014). Tomlinson (1988, cited in Personn, 2014) discusses that in-service training may not lead to innovative teaching and learning techniques as it threatens the security zone of teachers and usual ways of teaching. However, Hattie's synthesis (2015) revealed that professional development practices of teachers had a moderate influence on student achievement. Therefore, professional development of vocational teachers can be supported through experiential in-service training on pedagogical and subject knowledge and skills, and through continuous workplace visits. Additionally, it was recommended to administer personality test to determine the eligibility of teachers for teaching though teacher personality was found to have a low influence on students' achievement (Hattie, 2015).

Findings related to student-led practices showed that students coped with learning-related challenges caused by teachers and employers by regulating and reformulating their learning strategies they utilized in the classroom, out of classroom and at workplace. Peer tutoring, which was found to have moderate effect on student achievement by Hattie (2015) was one of the strategies students used. The collaboration between vocational high school and general high school graduates was found helpful to close the knowledge gap in vocational and academic knowledge. Cooperative learning was also found to have a medium-level impact on student achievement (Hattie, 2015). Students' in-classroom and out-of-classroom strategies revealed their surface approach to learning as most of them focused on content and tried to memorize, study the content in the book, searched the content on the internet. Students also developed some strategies for workplace learning.

Despite the unwillingness of employers to train and share knowledge, students tried to overcome these problems through persistent manner. These opposing strategies may be the result of their learning orientation and corresponding approach to learning: surface or deep approach (Beaty et al., 1997) or the importance they attached to each.

Students also organized extra-curricular activities to improve their social life and invited employers to give informative speech, both of which were found to be limited in higher vocational school (YÖK, 2018).

Recommendations concerning students, however, centered on the student selection and placement. Though students are at the center of these recommendations, it concerns educational system and decision makers. Provision of guidance and counselling, and selection and placement of eligible students to higher vocational schools were recommended. Hattie (2015) found that career interventions had low level effect on achievement, however, the case of vocational students may be different due to their occupational orientation. On the contrary, Hattie's (2015) findings showed that prior achievements of learners are powerful predictors of their future performance. Therefore, admission of eligible students to higher vocational schools can enhance the effectiveness of teaching and learning.

As to the administrator-led practices, the findings indicated that these practices aimed to cope with challenges related to students' accommodation, student learning, teacher development, curriculum development, resources, community-student interaction and lack of needs assessment. These results showed that some administrators were involved in curriculum development. Bratt (1991) discusses administrator's roles in curriculum development process as master, planner, facilitator and guide and note they need to initiate and nurture the process. However, rather than a participatory approach, administrators acted as main decision-makers. Considering all findings with regard to administrators, it can be concluded that administrators were either indifferent to curriculum development process or adopted a top-to-down approach without engaging teachers. Administrators also reported that they supported professional development of teachers by giving them off days for their post-graduate studies, which seems to be a very limited approach to teacher development.

Additionally, administrators aimed to improve student learning by improving resources by supplying equipment for laboratories and writing EU projects to find funds, and developing links with employers through protocols and extracurricular activities. These attempts by administrators can improve learning outcomes of students by making their experiences more relevant.

Beside, administrators tried to improve community and student interaction by organizing socio-cultural events for local people which can be considered as attempts to generate social capital, counted as one of the roles of schools (Mulford, 2003).

Besides these practices, contextual recommendations were made to improve the practices of local and institutional-level administrators. The decisions about the settings of schools were stated to be made at institutional level and approved by Higher Education Council. Rather than being suppressed by local pressures and relying on donated buildings, administrators need to consider the possible difficulties students and teachers would experience in reaching to workplaces. Therefore, higher vocational schools were recommended be located at settings close to workplaces. Jung et al. (2004) also reported such kind difficulties students experienced in getting to and from vocational schools, and to and from workplaces in Australia.

The need to establish a curriculum development unit at each vocational school and for engagement of stakeholders in this process was also highlighted by the participants. This view, again, underlines the need for curriculum knowledge and participatory development process at vocational schools. Moreover, recruitment of teachers before enrolling students was perceived necessary, which, again, indicates the lack of needs assessment.

Formation of a data pool including information about graduates and their employment, was another recommendation. Such a pool was believed to serve as a mirror to inform teachers and administrators about the outcomes of their practices.

System-related challenges deeply affected the practices in school contexts. Recommendations to improve vocational education policies focused on the lower status of higher vocational schools, regulation of workplace training, further study, accreditation and needs assessment.

According to the views of some participants, lower status of higher vocational schools can be improved through community and employer-informative seminars using media and press releases. However, such attempts would make temporary impact. Because such a change would not happen unless the outcomes of higher vocational education are improved. Positive experiences of students, their parents, employers and teachers would create an information network, and thus improve the status of higher vocational schools.

Other recommendations for eliminating system-related challenges highlighted the need for regulations for workplace training, assessment and measurement of graduate competences and the content of Vertical Transfer Test.

Apart from all, some participants believed that needs assessment should be conducted by National Planning Agency to determine needed capacity at vocational program rather than Higher Education Council, implying that vocational education should produce graduates as many as the labour market needed. This approach seems to put value on economic outputs of vocational education rather than educational aspects.

5.4 Implications for Practice

The participants' perceptions and experiences indicated that teaching and learning at higher vocational schools are under the influence of: teachers' knowledge, conceptions and beliefs, industry experience and currency, teacher skills, teacher behaviours, personal traits and professional development; and students' learning orientation, prior learning experiences, prior knowledge, learning approach, cognitive and affective characteristics and personal traits. Besides these, educational context, its resources, administration, school environment, relations with employers and community, and the curriculum and its responsiveness to the demands and needs affect the teaching and learning processes at those schools. Among all, national education system, educational policies concerning vocational education, and local and institutional-level administration were found to be most determinant factors. The attitude and actions of employers and parents, somehow indirect, were also found to influence teaching and learning practices at vocational schools.

These results implicate that vocational teacher education programs should align with the requirements of vocational teaching and learning, incorporating the knowledge domains highlighted in this study, namely content knowledge (vocational knowledge and subject knowledge), pedagogical knowledge (knowledge of learners, curriculum knowledge, knowledge of educational context) and technological knowledge. Additionally, vocational teachers might be involved in continuous professional development both during their studies at teacher education programs and after recruitment to gain occupational knowledge and skills, and keep them up-to-date to correspond to the immediate changes in the labour market. In line with these activities, teacher recruitment policies at higher vocational schools might be altered with a renewed focus on teacher knowledge and skills. Furthermore, teachers' industrial experience and currency can be legally organized and vocational teachers might be involved in industrial attachment in the summer term or periodically.

As for vocational students, comprehensive professional guidance and counselling services are needed to help students discover their needs and interests at early levels of education. The students who would continue their education at vocational track should be guided by job experts who have the knowledge of occupations and their requirements.

This study also revealed implications for educational system. Higher vocational schools seem to be overshadowed by academic education and perceptions at universities which they are affiliated to in terms of teacher recruitment, teacher qualifications, student selection and placement, curriculum and policy development, and assessment and evaluation. Decentralization of higher vocational schools can be a solution to overcome this problem to be more responsive to the needs of stakeholders from a vocationally-oriented perspective. In this way, admission criteria, program intake capacity, study durations and total time allocated for workplace learning can be determined at the local and program level in consideration of contextual factors. Beside, stronger collaboration with local governments, non-governmental organizations and student cooperations is needed to empower higher vocational schools and increase the economic, social and innovative contribution of these schools to the local communities and businesses.

Curricula delivered both at vocational high schools and higher vocational schools also need to be designed by involving stakeholders in order to increase the responsiveness to national qualifications and labour market demands. Apart from that, knowledge of literacy and numeracy which has limited space in vocational curriculum at secondary education level might be reconsidered and can be studied at all grades at vocational high schools. In addition, differences in the prior knowledge of students enrolled in higher vocational schools can be compensated through offering different tracks for different levels and design of flexible curricula. Moreover, a conditional program can be offered for the students with limited literacy and numeracy knowledge and skills.

The findings of this study also indicate that higher vocational schools are not supported by research, therefore, research centers for vocational education and training might be established at the national and local level to give academic, professional and vocational support to teachers and students, conduct research and make recommendations. These centers can also provide guidance and assistance with regard to curriculum development and teaching materials.

Due to high costs of teaching and learning materials in vocational education, there can be simulated workplaces or practice sites at a central setting which students from vocational schools can use jointly. Moreover, it is required to remove the ban on vocational schools to run businesses in order to provide income to these schools to meet their financial needs, and to found their own practice sites. These sites can provide learning experiences for students in real or real-like settings and also introduce innovation to underdeveloped and developing regions.

Standards concerning workplace training and work placements can also be helpful in providing students with opportunities to be trained at certified and accredited workplaces with workplace trainers and mentors.

A last but not the least suggestion is that vocational high schools and higher vocational schools might be established in the same campuses for knowledge exchange between teachers and students. As vocational education is costly, students can use the same materials and tools, and create and participate in communities of practice.

5.5 Implications for Further Research

As a qualitative analysis of teaching and learning at tertiary-level vocational education, this study provided insights into the teachers' and students' conceptions of effective vocational teaching and learning, their perceptions about challenges hindering vocational teaching and learning and corresponding practices to cope with those challenges. The findings confirmed that a qualitative approach to this phenomenon allowed in-depth investigation and understanding of the experiences of teachers and students at higher vocational schools. To gain further insights into this phenomenon, this study provides some implications for further research.

In order to assess the transferability and relevance of these findings to other contexts, this study can be replicated in other higher vocational schools located in other cities of Turkey. Besides direct replication in other schools, different methods (mixed method or quantitative) involving different vocational programs and different groups of people (employers, graduates, parents etc.) can be utilized to explore the same phenomenon through multiple views, and find out differences in conceptions, perceptions and experiences and underlying reasons.

This study only sought to shed light on the teaching and learning practices at higher vocational schools. It may be also useful to research these practices at vocational high schools, apprenticeship programs, work placements and higher level engineering and medical programs. Additionally, involvement of employers, decision-makers and parents in further research would provide deeper understanding of the phenomenon of vocational teaching and learning at higher vocational schools.

Longitudinal research design can also help gain deeper insight to explore the contextual changes over time, changing nature of interactions and changes in the perceptions of stakeholders. Further, other research methods like action research and design-based research can be utilized to improve teaching and learning practices at vocational schools and professional development of vocational teachers. Moreover, additional data collection methods like document analysis might be used to look into the curriculum implemented at higher vocational schools and policy documents.

This study also revealed the lack of needs assessment and curriculum evaluation at the national and local level as highlighted in the findings in relation to system-related, contextual, curricular and teacher-related challenges. Therefore, needs assessment and evaluation studies to be conducted in the school contexts can inform practitioners and decision makers. Such studies can also enhance the accountability of higher vocational schools.

Finally, this study indicated the need for more research on vocational teaching and learning: specifically, on conceptions of and approaches to vocational teaching and learning, and factors that influence vocational teaching and learning in both national and international context. In both contexts, research mostly focused on conceptions of general teaching or generally conceptions were provided in the international context to define vocational education and its outputs (CEDEFOP, 2017) or competence (Velde, 1999). Therefore, this study is expected to pioneer other studies on conceptions of vocational teaching and learning.

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APPENDICES

APPENDIX A: Observation Guide

Amaç

Bu gözlemin amacı, sınıf içinde etkili öğretme ve öğrenmeyi tanımlamak, etkili öğretim ve öğrenme süreçlerini olumsuz yönde etkileyen etmenleri ve olumsuzlukların nasıl giderildiğini ortaya çıkarmaktır.

Araştırma Soruları

1. Sınıf içinde öğretmen, öğrencilerin etkili öğrenebilmeleri için neler yapmaktadır?

a. Hangi koşullar etkili öğretimi zorlaştırmaktadır?

b. Öğretmenler etkili öğretimi zorlaştıran durumlar karşısında ne yapmaktadır?

2. Sınıf içinde öğrenciler hangi koşullarda etkili öğrenebilmektedirler?

a. Hangi koşullar etkili öğrenmeyi zorlaştırmaktadır?

b. Öğrenciler etkili öğrenmeyi zorlaştıran durumlar karşısında ne yapmaktadır?

Veri Toplama

Sınıf içinde etkili öğretim ve öğrenmeyi tanımlamak, etkili öğretim ve öğrenme süreçlerini olumsuz yönde etkileyen etmenleri ve olumsuzlukların nasıl giderildiğini ortaya çıkarmak amacıyla görüşme yapılacak öğretmenlerin belirlediği meslek derslerinin gözlenecektir. Gözlemlerde veriler, aşağıdaki boyutlar çerçevesinde toplanacaktır:

1. Fiziksel ortam: Sınıf içindeki fiziksel ortama ilişkin veriler (oturma düzeni, öğretmen masasının yeri ve konumu, sınıf içindeki fiziksel ögeler, sınıf içindeki araç gereçler, aydınlatma, ısı vb.)

2. Öğrenci ve öğretmen özellikleri: Cinsiyet, derse yönelik tutumlar, öğretmenin öğrencilere yönelik tutumları, öğrencilerin öğretmene yönelik tutumları, öğrencilerin birbirlerine yönelik tutumları.

3. Sınıf içi etkileşim: Motivasyon düzeyi, öğrenme iklimi, öğretmen-öğrenci iletişimi, öğrenci-öğrenci iletişimi, iletişimin yönü ve sıklığı.

4. Öğretmen: Öğretim stratejileri/yöntemleri/teknikleri, alan/konu bilgisi, sınıf yönetimi, sınıf yönetiminde karşılaşılan zorluklar ve çözümü, materyal kullanımı, araç-gereç kullanımı, teknolojiden yararlanma, sınıf içi etkinlikler ve sırası, sınıf içi rol ve sorumluluklar, iletişim.

5. Öğrenci: Hazır bulunuşluk, derse katılım, öğretmen ve akranlar ile iletişim, bireysel ya da grup çalışması, sınıf içi rol ve sorumluluklar, karşılaşılan öğrenme zorlukları, tepkiler ve çözümleri.

APPENDIX B: Semi-Structured Interview Schedule for Administrators

Okul -Yönetici:_____ Tarih: _____

Başlangıç Saati:_____ Bitiş Saati:_____

Merhaba, ben Yelda Sarıkaya Erdem. ODTÜ Sosyal Bilimler Enstitüsü Eğitim Programları ve Öğretim Anabilim Dalında doktora öğrencisiyim. Meslek yüksekokullarında etkili öğretim ve öğrenme süreçleri üzerine bir araştırma yapıyorum ve sizinle bu konu ile ilgili konuşmak ve görüşlerinizi almak istiyorum. Bu görüşmede amacım, sizin yöneticilik yaptığınız bu okul, programlar, öğretmen ve öğrenci profili hakkında bilgi almak ve etkili öğretmenlere ulaşabilmem için başarılı gördüğünüz programları ve başarı kriterlerinizi tespit etmektir. Sizlerin görüşleri doğrultusunda başarılı programların öğrencilerine ve öğrencilerin görüşlerine göre etkili/başarılı öğretmenlere ulaşacağım ve öğretmenler ve öğrencileriyle görüşme yaparak ve derslerini gözlemleyerek mesleki eğitim ve öğretimi etkili yapan etmenleri araştıracağım.

Kimlik bilgilerinizi kimse ile paylaşmayacak ve gizli tutacağım. Görüşme süresince verdiğiniz cevaplar araştırma raporunda isimleriniz belirtilmeden yansıtılacaktır.

Bu görüşmenin yaklaşık bir saat süreceğini tahmin ediyorum. Görüşme sırasında cevaplamak istemediğiniz soru olursa cevaplamayabilir ya da görüşmeyi istediğiniz zaman bırakabilirsiniz. Ek olarak;

1. Söylediklerinizin hiçbirini kaçırmamak için görüşmeyi kaydetmek istiyorum. Bunun sizin için bir sakıncası var mı?
2. İzin verirseniz sorulara başlamak istiyorum. Başlamadan önce, eklemek ya da sormak istediğiniz bir şey var mı?

Sorular

1. Sizi daha iyi tanıyabilmek adına birkaç kısa soru ile başlamak istiyorum:

a) *Yaşınız:*

b) *Eğitim gördüğünüz alan:*

c) *Öğrenim durumunuz (lisans, yüksek lisans, doktora):*

d) *Akademik unvanınız:*

e) *Okuldaki göreviniz:*

f) *Ne kadar süredir yöneticilik yapıyorsunuz?:*

g) *Ne kadar süredir bu okulda yöneticilik yapıyorsunuz?:*

h) *Öğretmenlik yaptınız mı? Ne kadar süre öğretmenlik yaptınız?:*

2. Okul hakkında bilgi verir misiniz?

Sonda: *Okulun misyonu, hedefleri*

Öğretmen profili (cinsiyet dağılımı, öğrenim durumu, yaş aralığı, tecrübe)

Öğrenci profili (cinsiyet dağılımı, sosyo-ekonomik düzey, başarı düzeyi, tutum ve davranışları, talep ve beklentileri)

Okulda yürütülen sosyal-kültürel-eğitsel etkinlikler

Sınıfların fiziksel özellikleri, donanım

Ölçme-değerlendirme sistemi (teorik dersler, uygulama, staj)

3a. Bu meslek yüksekokulunda öğretim ve öğrenimin etkin/iyi/başarılı bir şekilde yürütüldüğü programları ele alacak olursak sizce bu programlarda öğretim ve öğrenimi etkili/iyi/başarılı kılan şey/şeyler ne/nelerdir? Neden?

Sonda: *Öğretmenlerden kaynaklı*

Öğrencilerden kaynaklı

Sınıf ortamından kaynaklı (fiziksel ortam, sınıf mevcudu, donanım)

Kullanılan araç-gereçten kaynaklı

Öğretim programından kaynaklı (hedefler, içerik, süreç, değerlendirme)

Okuldan kaynaklı (konum, imkanlar vb.)

3b. Peki bu programlardaki öğretim ve öğrenimin daha etkili/iyi/başarılı olması için neler yapılıyor? Neden?

Sonda: *Yönetici olarak sizin yaptıklarınız*

Öğretmenlerin yaptıkları

Öğrencilerin yaptıkları

Sınıf ortamındaki düzenlemeler (fiziksel ortam, sınıf mevcudu, donanım)

Kullanılan araç gereçler

Öğretim programındaki düzenlemeler (hedefler, içerik, süreç, değerlendirme)

Okuldaki düzenlemeler (konum, imkanlar vb.)

4a. Anlattıklarınızın aksine, diğer programlara kıyasla öğretim ve öğrenimin istenildiği gibi etkili/iyi/başarılı bir şekilde yürütülemediği programları düşünürseniz sizce etkili/iyi/başarılı öğretim ve öğrenimi engelleyen /zorlaştıran şey/şeyler ne/nelerdir? Neden?

Sonda: *Öğretmenlerden kaynaklı*

Öğrencilerden kaynaklı

Sınıf ortamından kaynaklı (fiziksel ortam, sınıf mevcudu, donanım)

Kullanılan araç-gereçten kaynaklı

Öğretim programından kaynaklı (hedefler, içerik, süreç, değerlendirme)

Okuldan kaynaklı (konum, imkanlar vb.)

4b. Peki bu programlarda etkili/iyi/başarılı öğretim ve öğrenmeyi zorlaştıran etmenlerin oluşmaması için ne/neler yapılıyor? Neden?

Sonda: *Yönetici olarak sizin yaptıklarınız*

Öğretmenlerin yaptıkları

Öğrencilerin yaptıkları

Sınıf ortamındaki değişiklikler

Kullanılan araç gereçlerdeki değişiklikler

Öğretim programındaki değişiklikler (hedefler, içerik, süreç, değerlendirme)

Okulda yapılacak değişiklikler (konum, imkanlar vb.)

5. Peki programlardaki öğretim ve öğrenimin etkinliğini/başarısını nasıl değerlendiriyorsunuz?

Sonda: *İç değerlendirme (öğretmen, öğrenci, yönetici)*

Dış değerlendirme

6. Öyleyse bir yönetici olarak etkili /başarılı bir meslek yüksekokulu öğretmenini nasıl tanımlarsınız/tarif edersiniz? Neden?

Sonda: *Kişilik özellikleri*

Pedagojik bilgi ve öğretim becerileri

Alan/meslek bilgisi

Öğrenci/öğrenen özellikleri bilgisi

Sınıf yönetimi

Sınıf içi/dışı davranışlar (iletişim becerileri, tutum, yaklaşım vb.)

Teknoloji bilgisi ve kullanımı

Tecrübe (sektör tecrübesi, öğretmenlik tecrübesi)

7. Peki öğretmenlerinizin daha etkin olabilmeleri için onları ne tür etkinliklerle destekliyorsunuz? Neden?

Sonda: *Hizmet içi eğitim (alan bilgisi, öğretmenlik bilgi ve becerileri)*

Yurtiçi-yurtdışı seminer-kongre-konferanslara katılım

Mesleki eğitimler/kurslar

8. Peki bu okuldaki öğrencilerden yola çıkarak etkili / iyi öğrenen bir meslek yüksekokulu öğrencisini nasıl tarif edersiniz/tanımlarsınız? Neden?

Sonda: *Kişilik özellikleri (karakter, inanç, hedef, sosyo-ekonomik düzey vb.)*

Ön bilgi/Öğrenim geçmişi (genel ve mesleki bilgi ve beceri)

Öğrenme stratejileri/yöntemleri (sınıf içinde/dışında)

Sınıf içi/sınıf dışı davranışları (katılım, aktif öğrenme)

Motivasyon düzeyi

Aile (sosyo-ekonomik düzey, tutum vb.)

9. O halde daha iyi/etkin öğrenebilmeleri için öğrencilerinizi ne tür etkinliklerle destekliyorsunuz?

Sonda: *Öğretim programı dışındaki etkinlikler (seminer, konferans, saha gezisi vb.)*

İşveren-öğrenci buluşması (Kariyer günleri)

Staj/uygulama yeri seçimi

10. Etkili öğretim ve öğrenmeye dair konuştuklarımızdan yola çıkarsanız meslek yüksekokullarında öğretimin ve öğrenimin daha etkili/ iyi / başarılı olması için ne tür değişiklikler önerirsiniz? Neden?

Sonda*: Öğrenci özellikleri/davranışları*

Öğretmen özellikleri (Mesleki bilgi, öğretim bilgi/becerileri, kişilik özellikleri vb.)

Öğretim programları (hedefler, içerik, süreç, değerlendirme)

Okulun konumu, imkanları, yöneticilerin tutumu

Staj /uygulama

İşveren tutumu

Mesleki eğitim politikası

11. Görüşmemizin sonuna gelmiş bulunuyoruz. Paylaştığınız bilgiler için çok teşekkür ederim. Bu çalışmaya katkı sağlayacağını düşündüğünüz ve eklemek istediğiniz bir şey var mı?

APPENDIX C: Semi-Structured Interview Schedule for Teachers

Okul-Öğretmen:_____ Tarih: _____

Başlangıç Saati:_____ Bitiş Saati:_____

Araştırma Soruları:

1. Öğretmenlerin etkili öğretime yönelik algıları nelerdir?

2. Öğretmenlerin etkili öğrenmeye yönelik algıları nelerdir?

3. Öğretmenlerin etkili öğretim ve öğrenmeyi zorlaştıran etmenler konusundaki algıları nelerdir?

4. Öğretmenler etkili öğretim ve öğrenmeyi zorlaştıran etmenlerle nasıl başa çıkmaktadır?

Merhaba, ben Yelda Sarıkaya Erdem. ODTÜ Sosyal Bilimler Enstitüsü Eğitim Programları ve Öğretim Anabilim Dalında doktora öğrencisiyim. Meslek yüksekokullarında etkili öğretim ve öğrenme süreçleri üzerine bir araştırma yapıyorum ve sizinle bu konu ile ilgili konuşmak ve görüşlerinizi almak istiyorum. Bu görüşmede amacım, öğretmenlerin etkili öğretim ve etkili öğrenmeye yönelik algılarını öğrenmek, etkili öğretim ve öğrenme sürecinde karşılaştıkları zorluklarla ilgili olarak ne düşündüklerini ve bu zorluklarla nasıl başa çıktıklarını ortaya çıkarmaktır. Sizlerin görüşleri alınarak elde edilen sonuçların mesleki eğitim ve öğretimin etkililiğinin artırılmasına yönelik olarak yapılabilecek müdahalelere ve diğer çalışmalara katkı sağlayacağına inanıyorum.

Kimlik bilgileriniz araştırmacılar dışında kimse ile paylaşılmayacak ve gizli tutulacaktır. Görüşme süresince verdiğiniz cevaplar araştırma raporunda isimleriniz belirtilmeden yansıtılacaktır.

Bu görüşmenin yaklaşık bir saat süreceğini tahmin ediyorum. Görüşmemizin gidişatına göre bu süre uzayabilir. Görüşme sırasında cevaplamak istemediğiniz soru olursa cevaplamayabilir ya da görüşmeyi istediğiniz zaman bırakabilirsiniz. Ek olarak;

1. Söylediklerinizin hiçbirini kaçırmamak için görüşmeyi kaydetmek istiyorum. Bunun sizin için bir sakıncası var mı?
2. İzin verirseniz sorulara başlamak istiyorum. Başlamadan önce, eklemek ya da sormak istediğiniz bir şey var mı?

Sorular

1. Öncelikle sizi daha iyi tanıyabilmek için birkaç kısa soru ile başlamak istiyorum:

i) *Yaşınız:*

j) *Eğitim gördüğünüz alan:*

k) *Öğrenim durumunuz (lisans, yüksek lisans, doktora):*

l) *Akademik unvanınız:*

m) *Öğretmenlik yaptığınız program:*

n) *Ne kadar süredir öğretmenlik yapıyorsunuz?:*

o) *Ne kadar süredir bu okulda öğretmenlik yapıyorsunuz?:*

2a. Meslek yüksekokulunda verdiğiniz derslerinizi düşündüğünüzde, öğretim ve öğrenimin etkili/iyi/ başarılı/verimli geçtiğini düşündüğünüz ve sonucundan memnun olduğunuz bir ders gününüzü/saatini ele alacak olursak bu dersinizi;

a) nasıl planladınız? Nelere dikkat ettiniz?

-Öğrenci ihtiyaçları

-Alan/konu/ünite gereklilikleri

-İşveren/iş dünyasının gereklilikleri

-Fiziksel imkânlar/şartlar

b) nasıl işlediniz?

- Öğretim strateji, yöntem ve teknikleri

-Sınıf içi/ sınıf dışı etkinlikler

-Materyal/kaynak

-Araç-gereçler

-Ödev

-Geri bildirim alma şekli/sıklığı

-Sınıf içi iletişim/etkileşim (Sözel-sözel olmayan davranışlar, öğretmen-öğrenci /öğrenci-öğrenci iletişimi, öğrenci-materyal iletişimi, öğrenci katılımı)

c) öğretimi/öğrenmeyi nasıl/ne biçimde değerlendirdiniz?

- Ders sırasında

- *Ders sonunda*

2b. Anlattıklarınızdan yola çıkarak sizce bu dersinizi etkili/iyi/başarılı kılan şey/şeyler nelerdi? Neden?

Sonda: *Öğretmen olarak sizden kaynaklı*

Öğrencilerden kaynaklı

Sınıf ortamından kaynaklı (fiziksel ortam, sınıf mevcudu, donanım)

Kullanılan araç-gereçten kaynaklı

Öğretim programından kaynaklı (hedefler, içerik, değerlendirme)

Okuldan kaynaklı (konum, imkanlar, yöneticilerin tutumu vb.)

2c. Anlattığınız bu dersin daha etkili/iyi/başarılı olması için başka neler yapılabilirdi? Neden?

Sonda: *Öğretmen olarak sizin yapabilecekleriniz*

Öğrencilerin yapabilecekleri

Sınıf ortamındaki değişiklikler (fiziksel ortam, sınıf mevcudu, donanım)

Kullanılan araç gereçlerdeki değişiklikler

Öğretim programındaki değişiklikler (hedefler, içerik, değerlendirme)

Okulda yapılacak değişiklikler (konum, imkanlar, yöneticilerin tutumu vb.)

3a. Peki etkili/iyi/başarılı geçen bu ders gününüzün aksine etkili/iyi bir öğretim ve öğrenmenin gerçekleşmediği ve öğretimde zorlandığınız bir dersiniz oldu mu? Bu derste yaşananları başından sonuna kadar anlatır mısınız? Bu dersinizi;

a) nasıl planladınız? Nelere dikkat ettiniz?

-Öğrenci ihtiyaçları

-Alan/konu/ünite gereklilikleri

-İşveren/iş dünyasının gereklilikleri

-Fiziksel imkânlar/şartlar

b) nasıl işlediniz?

- Öğretim strateji, yöntem ve teknikleri

-Sınıf içi/ sınıf dışı etkinlikler

-Materyal/kaynak

-Araç-gereçler

-Ödev

-Geri bildirim alma şekli/sıklığı

-Sınıf içi iletişim/etkileşim (Sözel-sözel olmayan davranışlar, öğretmen-öğrenci /öğrenci-öğrenci iletişimi, öğrenci-materyal iletişimi, öğrenci katılımı)

c) öğretimi/öğrenmeyi nasıl/ne biçimde değerlendirdiniz?

- Ders sırasında

- Ders sonunda

3b. Sizce bu dersinizde etkili/iyi öğretim ve öğrenmeyi ne/neler zorlaştırdı? Neden? Siz ve öğrencileriniz bu zorlukları gidermek için ne yaptınız?

Sonda : *Öğretmen olarak sizden kaynaklı*

Öğrencilerden kaynaklı

Sınıf ortamından kaynaklı (fiziksel ortam, sınıf mevcudu, donanım)

Okul kaynaklı (konum, imkan ve şartlar, yönetici tutumu vb.)

Program/Alandan kaynaklı

Öğretim programından kaynaklı (hedefler, içerik, değerlendirme)

3c. Sizce etkili öğretimi engelleyen bu sıkıntı/zorluk/engellerin oluşmaması için ne yapılmalı/önerirsiniz? Neden?

Alternatif: Sizce ne tür değişiklikler bu zorlukların/sıkıntıların önüne geçebilir? Neden?

Sonda: *Öğretmen olarak sizin yapabilecekleriniz (öğretim, iletişim, öğretim programı, alan/meslek bilgisi vb.)*

Öğrencilerin yapabilecekleri (ilgi, tutum, katılım, öğrenme stratejileri vb.)

Yöneticilerin yapabilecekleri (fiziksel imkan ve şartlar, eğitim desteği vb.)

4. Sizce, etkili/başarılı/verimli geçen dersiniz ile bahsettiğiniz gibi sorunlarla/zorluklarla geçen dersinizi karşılaştırdığınızda öğrencileriniz üzerindeki etkisi bakımından bu iki ders arasında ne tür farklılıklar gözlemliyorsunuz?

Sonda: *Kısa vadeli etki*

Öğrencilerin ders sırasında ve sonrasındaki tepkileri

Öğrencilerin katılım düzeyleri

İletişim (Öğretmen ve diğer öğrenciler ile)

Öğrencilerin ilgi, bakış açısı, motivasyonu

Öğrencilerin sınav ve uygulamadaki performansı

Uzun vadeli etki

Gerçek hayatta kullanma/İş hayatında kullanma

5. İyi/etkili mesleki öğretim sizin için ne anlama geliyor?

Alternatif: O halde etkili/iyi mesleki öğretim sizde neyi çağrıştırıyor?

6a. Sizce meslek yüksekokulunda bir öğretmeni etkili/başarılı yapan şey/şeyler nedir? Neden?

Alternatif: Etkili /başarılı bir meslek yüksekokulu öğretmenini nasıl tanımlarsınız/tarif edersiniz? Neden?

Sonda: *Kişilik özellikleri*

Pedagojik bilgi ve öğretim becerileri

Alan/meslek bilgisi

Öğrenci/öğrenen özellikleri bilgisi

Sınıf yönetimi

Sınıf içi/dışı davranışlar (iletişim becerileri, tutum, yaklaşım vb.)

Teknoloji bilgisi ve kullanımı

Tecrübe (sektör tecrübesi, öğretmenlik tecrübesi)

6b. Peki etkili/başarılı bir öğretmenin öğrenciler üzerindeki etkisi konusundaki gözlemleriniz neler? Neden? Örnek verebilir misiniz**?**

Sonda: *Kişilikleri üzerinde*

Öğrenme üzerinde

Öğrenci hedefleri, inançları ve motivasyonu üzerinde

Mesleki gelişimleri/hayatları üzerinde

7. Peki iyi/etkili mesleki öğrenme sizin için ne anlama geliyor?

Alternatif: O halde etkili/iyi öğrenme size neyi çağrıştırıyor?

8. Etkili/başarılı öğrenmeyi tarif ettiniz. Peki etkili / iyi öğrendiğine inandığınız öğrencilerinizden yola çıkarak etkili / iyi öğrenen bir meslek yüksekokulu öğrencisini nasıl tarif edersiniz/tanımlarsınız? Neden?

Sonda: *Kişilik özellikleri (karakter, inanç, hedef, sosyo-ekonomik düzey vb.)*

Ön bilgi/Öğrenim geçmişi (genel ve mesleki bilgi ve beceri)

Öğrenme stratejileri/yöntemleri (sınıf içinde/dışında)

Sınıf içi/sınıf dışı davranışları (katılım, aktif öğrenme)

Motivasyon düzeyi

Aile (sosyo-ekonomik düzey, tutum vb.)

8c. Peki öğrencileriniz bahsettiğiniz bu özelliklerin hangilerini taşıyor? Tarif ettiğiniz gibi iyi/etkili öğrenen bir meslek yüksekokulu öğrencisi olabilmeleri için sizce ne yapmaları gerekiyor?

Sonda: *Sınıf içinde (öğrenme stratejileri, katılım, davranış vb.)*

Sınıf/okul dışında (ders çalışma/öğrenme stratejileri, staj/uygulama vb.)

9. Bütün bu konuştuklarımızı düşünürseniz meslek yüksekokullarında öğretimin ve öğrenimin daha etkili/ iyi / başarılı olması için ne tür değişiklikler önerirsiniz? Neden?

Sonda*: Öğrenci özellikleri/davranışları*

Öğretmen özellikleri (Mesleki bilgi, öğretim bilgi/becerileri, kişilik özellikleri vb.)

Öğretim programları (hedefler, içerik, süreç, değerlendirme)

Okulun konumu, imkanları, yöneticilerin tutumu

Staj /uygulama

İşveren tutumu

Mesleki eğitim politikası

10. Görüşmemizin sonuna gelmiş bulunuyoruz. Paylaştığınız bilgiler için çok teşekkür ederim. Bu çalışmaya katkı sağlayacağını düşündüğünüz ve eklemek istediğiniz bir şey var mı?

APPENDIX D: Demographic Information Sheet for Students

Tarih:

Okulun Adı:

Cinsiyetiniz: ☐ E ☐ K

Yaşınız:

Programınızın adı:

Sınıfınız: ☐ 1 ☐ 2

Mezun olduğunuz lisenin türü: ☐ Düz Lise

☐ Meslek Lisesi/Teknik Lise

☐ Anadolu Lisesi/Fen Lisesi

☐ Diğer (Lütfen belirtiniz)……..

Şu anki not ortalamanız: ……..

APPENDIX E: Semi-Structured Interview Schedule for Focus Groups

Okul-Grup:_____ Tarih: _____

Başlangıç Saati:_____ Bitiş Saati:_____

Araştırma Soruları:

1. Öğrencilerin etkili öğretime yönelik algıları nelerdir?

2. Öğrencilerin etkili öğrenmeye yönelik algıları nelerdir?

3. Öğrencilerin etkili öğretim ve öğrenmeyi zorlaştıran etmenler konusundaki algıları nelerdir?

4. Öğrenciler etkili öğretim ve öğrenmeyi zorlaştıran etmenlerle nasıl başa çıkmaktadır?

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Kimlik bilgileriniz araştırmacılar dışında kimse ile paylaşılmayacak ve gizli tutulacaktır. Görüşme süresince verdiğiniz cevaplar araştırma raporunda isimleriniz belirtilmeden yansıtılacaktır.

Bu görüşmenin yaklaşık iki saat süreceğini tahmin ediyorum. Görüşmemizin gidişatına göre bu süre uzayabilir. Görüşme sırasında cevaplamak istemediğiniz soru olursa cevaplamayabilir ya da görüşmeyi istediğiniz zaman bırakabilirsiniz. Ek olarak;

1. Söylediklerinizin hiçbirini kaçırmamak için görüşmeyi kaydetmek istiyorum. Bunun sizin için bir sakıncası var mı?
2. Başlamadan önce sizleri daha iyi tanıyabilmem için "Demografik Bilgi Formu"nu doldurur musunuz?
3. İzin verirseniz sorulara başlamak istiyorum. Başlamadan önce, eklemek ya da sormak istediğiniz bir şey var mı?

Sorular

1a. Aldığınız meslek dersleri arasında en etkili/iyi öğrendiğiniz ve sonucundan memnun olduğunuz bir ders gününü/saatini düşündüğünüzde bu derste;

Sonda: a) öğretmeniniz dersi nasıl işledi?

- Öğretim strateji, yöntem ve teknikleri

- Sınıf içi/ sınıf dışı etkinlikler

- Materyal/kaynak

-Araç-gereçler

-Ödev

-Geri bildirim alma şekli/sıklığı

-Sınıf içi iletişim/etkileşim (Sözel-sözel olmayan davranışlar, öğretmen-öğrenci iletişimi)

-Değerlendirme

b) öğrenciler ne yaptı?

-Derse ve etkinliklere katılım

-Sınıf içi iletişim/etkileşim (Sözel-sözel olmayan davranışlar, öğrenci-öğretmen, öğrenci-öğrenci iletişimi)

1b. Sizce bu dersi etkili/iyi kılan şey/şeyler nelerdi? Neden?

Sonda: *Öğretmen kaynaklı*

Öğrenci olarak sizden kaynaklı

Sınıf ortamından kaynaklı (fiziksel ortam, sınıf mevcudu, donanım)

Kullanılan araç-gereçten kaynaklı

Öğretim programından kaynaklı (hedefler, içerik, değerlendirme)

Okuldan kaynaklı (konum, imkanlar, yöneticilerin tutumu vb.)

1c. Anlattığınız bu dersin daha etkili/iyi/başarılı olması için başka neler yapılabilirdi? Neden?

Sonda: *Öğretmenin yapabilecekleri*

Öğrenciler olarak sizin yapabilecekleriniz

Sınıf ortamındaki değişiklikler (fiziksel ortam, sınıf mevcudu, donanım)

Kullanılan araç gereçlerdeki değişiklikler

Öğretim programındaki değişiklikler (hedefler, içerik, değerlendirme)

Okulda yapılacak değişiklikler (konum, imkanlar, yöneticilerin tutumu vb.)

2a. Peki bu dersin aksine, etkili/iyi bir öğretim ve öğrenmenin gerçekleşmediği ve dersin sonunda iyi/etkili öğrenemediğinizi düşündüğünüz bir ders gününüzü/saatinizi ele alalım. Bu derste;

Sonda: a) öğretmeniniz dersi nasıl işledi?

- Öğretim strateji, yöntem ve teknikleri

- Sınıf içi/ sınıf dışı etkinlikler

- Materyal

-Araç-gereçler

-Ödev

-Geri bildirim alma şekli/sıklığı

-Sınıf içi iletişim/etkileşim (Sözel-sözel olmayan davranışlar, öğretmen-öğrenci iletişimi)

-Değerlendirme

b) öğrenciler ne yaptı?

-Derse ve etkinliklere katılım

-Sınıf içi iletişim/etkileşim (Sözel-sözel olmayan davranışlar, öğrenci-öğretmen, öğrenci-öğrenci iletişimi)

2b. Sizce bu derste etkili/iyi öğretim ve öğrenmeyi ne/neler zorlaştırdı? Neden? Siz ve öğretmeniniz bu zorluklarla başa çıkabilmek için ne yaptınız?

Sonda : *Öğretmenden kaynaklı*

Öğrenciler olarak sizden kaynaklı

Sınıf ortamından kaynaklı (fiziksel ortam, sınıf mevcudu, donanım)

Okul kaynaklı (konum, imkan ve şartlar, yönetici tutumu vb.)

Program/Alandan kaynaklı

Öğretim programından kaynaklı (hedefler, içerik, değerlendirme)

2c. Sizce etkili/iyi öğrenmenizi engelleyen bu sıkıntı/zorluk/engellerin yaşanmaması için ne yapılmalı/önerirsiniz? Neden?

Sonda: *Öğretmenin yapabilecekleri (öğretim, iletişim, öğretim programı, alan/meslek bilgisi vb.)*

Öğrenciler olarak sizin yapabilecekleriniz (ilgi, tutum, katılım, öğrenme stratejileri vb)

Yöneticilerin yapabilecekleri (fiziksel imkan ve şartlar, eğitim desteği vb.)

3. Sizce, etkili/başarılı/verimli geçen ders ile bahsettiğiniz gibi sorunlarla/zorluklarla geçen dersi karşılaştırdığınızda sizde yarattığı etki bakımından bu iki ders arasında ne tür farklılıklar gözlemliyorsunuz?

Sonda: *Kısa vadeli etki*

Ders sırasında ve sonrasındaki tepkiniz

Derse ve aktivitelere katılımınız

İlgi, bakış açısı, motivasyonunuzdaki vb. değişim

Sınav ve uygulamadaki performansınız

Uzun vadeli etki

Gerçek hayatta kullanma/Hayata geçirme

4a. Etkili/iyi öğrenebildiğiniz ve öğrenemediğiniz dersleri anlattınız. Bunlardan yola çıkarak etkili / iyi öğreten bir meslek yüksekokulu öğretmenini nasıl tarif edersiniz/ tanımlarsınız? Neden?

Sonda: *Kişilik özellikleri*

Pedagojik bilgi ve öğretim becerileri

Alan/meslek bilgisi

Öğrenci/öğrenen özellikleri bilgisi

Sınıf yönetimi

Sınıf içi/dışı davranışlar (iletişim becerileri, tutum, yaklaşım vb.)

Teknoloji bilgisi ve kullanımı

Tecrübe (sektör tecrübesi, öğretmenlik tecrübesi)

4b. Etkili/iyi bir meslek yüksekokulu öğretmeni size nasıl bir katkı sağlıyor/etki yapıyor? Kendiniz ve arkadaşlarınıza yönelik gözlemleriniz nelerdir*?*

Sonda: *Kişiliğiniz üzerinde*

Öğrenmeniz üzerinde

Hedefleriniz, inançlarınız ve motivasyonunuz üzerinde

Mesleki gelişiminiz/hayatınız üzerinde

4c. Peki öğretmenleriniz bahsettiğiniz bu özelliklerin hangilerini taşıyor? Tarif ettiğiniz gibi iyi/etkili öğreten bir öğretmen olabilmeleri için sizce ne yapmaları gerekiyor? Neden?

Sonda: *Sınıf içinde*

Sınıf/okul dışında

4d. O halde, etkili/iyi mesleki öğretim sizin için ne anlama geliyor?

Alternatif: Sizce etkili/iyi mesleki öğretim nedir?

5a. Etkili/iyi bir meslek yüksekokulu öğretmeni böyleyken etkili/iyi öğrenen bir meslek yüksekokulu öğrencisini nasıl tarif edersiniz/tanımlarsınız?

Sonda: *Kişilik özellikleri (karakter, inanç, hedef, sosyo-ekonomik düzey vb.)*

Ön bilgi/Öğrenim geçmişi (genel ve mesleki bilgi ve beceri)

Öğrenme stratejileri/yöntemleri (sınıf içinde/dışında)

Sınıf içi/sınıf dışı davranışları (katılım, aktif öğrenme)

Motivasyon düzeyi

Aile (sosyo-ekonomik düzey, tutum vb.)

5b. O zaman sizce etkili/iyi mesleki öğrenme sizin için ne anlama geliyor?

Alternatif: Sizce etkili/iyi mesleki öğrenme nedir?

6. Bütün bu konuştuklarımızı düşünürseniz meslek yüksekokullarında öğretimin ve öğrenimin daha etkili/ iyi / başarılı olması için ne tür değişiklikler önerirsiniz? Neden?

Sonda: *Öğretmen özellikleri/davranışları (Öğretim metodu, bilgi düzeyi, kişilik vb.)*

Öğrencilerin özellikleri/davranışları

Öğretim programları (hedefler, içerik, süreç, değerlendirme)

Okulun konumu, imkanları, yöneticilerin tutumu

Staj /uygulama

İşveren tutumu

Mesleki eğitim politikası

7. Görüşmemizin sonuna gelmiş bulunuyoruz. Paylaştığınız bilgiler için çok teşekkür ederim. Bu çalışmaya katkı sağlayacağını düşündüğünüz ve eklemek istediğiniz bir şey var mı?

APPENDIX F: Informed Consent Form

Bu çalışma, ODTÜ Eğitim Bilimleri Bölümü öğretim üyesi Prof. Dr. Ali Yıldırım'ın danışmanlığında ODTÜ Sosyal Bilimler Enstitüsü Eğitim Programları ve Öğretim Anabilim Dalı doktora öğrencisi Yelda Sarıkaya Erdem tarafından yapılan bir çalışmadır. Çalışmanın amacı, meslek yüksekokullarındaki etkili öğretim ve öğrenme uygulamalarının incelenmesi ve bu doğrultuda meslek yüksekokulunda çalışan öğretmenlerin ve öğrencilerin etkili öğretim ve öğrenmeye yönelik algılarını öğrenmek, etkili öğretim ve öğrenme sürecinde karşılaştıkları zorluklarla ilgili olarak ne düşündüklerini ve bu zorluklarla nasıl başa çıktıklarını ortaya çıkarmaktır.

Bu araştırmaya katılım gönüllük esasına dayanmaktadır. Görüşme sonucunda elde edilecek veriler sadece araştırmacı tarafından kullanılıp analiz edilecek ve tez çalışması kapsamında ve bilimsel yayınlarda kullanılacaktır. Görüşme formunda kimliğinizi ortaya çıkaracak sorular sorulmamaktadır ve kimliğinizi ortaya çıkarabilecek bilgiler gizli tutulacak ve kullanılmayacaktır.

Görüşme formu, kişisel rahatsızlık verecek soruları içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz. Böyle bir durumda, görüşmeye devam edemeyeceğinizi söylemek yeterli olacaktır. Görüşme sonunda, bu çalışmayla ilgili sormak istediğiniz sorular cevaplanacaktır. Çalışma hakkında daha fazla bilgi edinmek için **sarikayayelda@gmail.com** adresinden ve 0541 497 13 67 numarasını arayarak iletişim kurabilirsiniz. Bu çalışmaya katıldığınız için şimdiden teşekkür ederim.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Ad- Soyad Tarih İmza

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APPENDIX G: Debriefing Form

Bu çalışma, ODTÜ Eğitim Bilimleri Bölümü öğretim üyelerinden Prof. Dr. Ali Yıldırım'ın danışmanlığında ODTÜ Sosyal Bilimler Enstitüsü Eğitim Programları ve Öğretim Anabilim Dalı doktora öğrencisi Yelda Sarıkaya Erdem tarafından yürütülen "Meslek Yüksekokullarında Öğretim ve Öğrenme: Öğretim Elemanları, Öğrenci ve Yöneticilerin Algıları ve Deneyimleri Üzerine Bir Olgubilim Çalışması" başlıklı doktora tez çalışmasıdır. Bu çalışmada, meslek yüksekokullarında etkili öğretim ve öğrenmeye atfedilen anlamın ortaya çıkarılması amaçlanmaktadır.

Bu çalışmada, meslek yüksekokullarındaki öğretmenlerin ve öğrencilerin etkili öğretim ve öğrenme uygulamaları, deneyim ve beklentilerinin ve etkili öğretim ve öğrenmeyi olumlu ve olumsuz yönde etki eden etmenlerin belirlenmesinin mesleki yükseköğrenim planlamasına ve uygulamasına ışık tutacağı düşünülmektedir. Bu doğrultuda, Nevşehir ilindeki Nevşehir Hacı Bektaş Veli Üniversitesi'ne bağlı meslek yüksekokullarında ve bir vakıf meslek yüksekokulu olan Kapadokya Meslek Yüksekokulu'nda görev yapan yöneticiler, öğretim elemanları ve öğrencilerin katılımıyla gerçekleştirilecektir. Çalışmada veri toplamak için, yöneticiler ve öğretmenler ile bireysel görüşmeler yapılacak, öğretmenlerin dersleri gözlenecek ve gözlemlerin ardından öğretmenler ile bireysel, öğrenciler ile odak grup görüşmeleri yapılacaktır. Çalışmaya 7-8 yönetici, 15-20 öğretmen ve 60-80 öğrenci katılması planlanmaktadır.

Bu çalışmadan elde edilen bilgiler sadece bilimsel araştırma ve yazılarda kullanılacaktır. Çalışmanın sonuçlarını öğrenmek ya da bu araştırma hakkında daha fazla bilgi almak için aşağıdaki isimlere başvurabilirsiniz. Bu araştırmaya katıldığınız için tekrar çok teşekkür ederiz.

Prof. Dr. Ali Yıldırım (Tel: 0312 210 40 27; E-posta: aliy@metu.edu.tr)
Doktora Öğrencisi Yelda Sarıkaya Erdem (Tel: 0541 497 13 67; E-posta: sarikayayelda@gmail.com)

APPENDIX H: HSEC Approval Forms

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

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Sayı: 28620816/294

05 Mayıs 2017

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof. Dr. Ali YILDIRIM ;

Danışmanlığını yaptığınız doktora öğrencisi Yelda SARIKAYA ERDEM' in ***"Meslek Yüksekokullarında Öğretim ve Öğrenmeyi Etkili Kılan Etmenler Nelerdir? Öğretim ve Öğrenme Uygulamalarının Öğretmen ve Öğrencilerin Gözünden Değerlendirilmesi"*** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay 2017-**EGT-086** protokol numarası ile **15.05.2017 – 30.12.2017** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Yrd. Doç. Dr. Pınar KAYGAN
Üye

Yrd. Doç. Dr. Emre SELÇUK
Üye

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
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08 ŞUBAT 2018

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof. Dr. Ali YILDIRIM ;

Danışmanlığını yaptığınız doktora öğrencisi Yelda Sarıkaya ERDEM' in ***"Meslek Yüksekokullarında Öğretim ve Öğrenmeyi Etkili Kılan Etmenler Nelerdir?: Öğretim ve Öğrenme Uygulamalarının Öğretmen ve Öğrencilerin Gözünden Değerlendirilmesi"*** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2017-EGT-086** protokol numarası ile **26.02.2018 - 30.09.2018** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Yrd. Doç. Dr. Pınar KAYGAN
Üye

Yrd. Doç. Dr. Emre SELÇUK
Üye

APPENDIX I: Curriculum Vitae

PERSONAL INFORMATION

Surname, Name:	Sarıkaya Erdem, Yelda
Nationality:	Turkish
Date and Place of Birth:	17 June 1984, Kaman
Marital Status:	Married
Phone:	+90 541 497 13 67
email:	sarikayayelda@gmail.com

EDUCATION

Degree	Institution	Year of Graduation
MS	METU Social Policy	2011
BS	Hacettepe University English Language and Literature	2007
High School	Gaziçifliği High School, Ankara	2002

WORK EXPERIENCE

Year	Place	Enrollment
2007- 2016	Cappadocia Vocational College	Instructor

FOREIGN LANGUAGES

Advanced English

PUBLICATIONS

1. Ok, A., **Sarıkaya-Erdem, Y**., & Çilsalar, H. (2014). Kapadokya Meslek Yüksekokulu Restorasyon programının etkililiğinin paydaşların algılarına göre değerlendirilmesi. [Evaluation of Restoration program at Cappadocia Vocational College: according to the perceptions of stakeholders]. *Uluslararası Eğitim Programları ve Öğretim Çalışmaları Dergisi,* 4 (8), 1-21.

2. **Sarıkaya-Erdem, Y**., & Çilsalar, H. (2015, September). *A meta review on self-efficacy beliefs of pre-service, novice and in-service Turkish teachers [Türkiye'deki öğrenmen adaylari, öğretmenliğe yeni başlayan ve deneyimli öğretmenlerin özyeterlik inançlari üzerine bir meta değerlendirme]*. Paper presented at European Conference on Educational Research (ECER), Budapest.

APPENDIX J: Turkish Summary/ Türkçe Özet

Yükseköğretim seviyesindeki mesleki eğitim ve öğretim, bireylerin meslek edinmelerini veya hâlihazırdaki işgücünün bilgi ve becerilerinin iyileştirilmesi ve güncellenmesini sağlamakta (OECD, 2012) ve işgücü piyasasının ihtiyaç duyduğu kalifiye işgücünün yetiştirilmesinde kilit rol oynamaktadır (OECD, 2014). Genel olarak, "bireylere belirli mesleklerin ya da daha geniş anlamda işgücü piyasasının gerektirdiği bilgi, know-how, beceri ve yetkinlikleri kazandırmak" (CEDEFOP, 2011a, s. 7) olarak tanımlanan mesleki eğitimi yükseköğretim seviyesinde tanımlamak, dünyadaki farklı uygulamalar ve bu uygulamalar arasındaki farklılıkların net olmaması sebebiyle oldukça zordur. Bu nedenle, bu çalışmada, Türkiye'deki mesleki yükseköğretimi tanımlamak için Uluslararası Standart Eğitim Sınıflandırması (ISCED, 2011) temel alınmıştır. Bu sınıflandırmaya göre, Türkiye'deki meslek yüksekokullarında verilen eğitim ISCED 5B düzeyine tekabül etmektedir. Bu düzeyde verilen kısa dönemli eğitim, "uygulama ağırlıklı" ve "meslek odaklı" olup bireylere profesyonel bilgi, beceri ve yeterlilikleri sağlamayı amaçlamakta ve eğitim programları meslek liselerine göre daha fazla, lisans programlarına göre daha az düzeyde kuramsal bilgi içermektedir.

"Mesleki" "mesleğe yönelik", "meslekle ilgili" olarak nitelendirilmesine rağmen, bu eğitimi veren kurumlar ve amaçları, hitap ettikleri öğrenciler ve eğitim programlarındaki farklılıklar sebebiyle mesleki eğitimin amacı ve rolüne yönelik farklı algılayışlar söz konusudur (Billett, 2011, aktaran CEDEFOP, 2017). Bunun yanında, etkin mesleki öğretim ve öğrenmenin temel boyutları uluslararası boyutta belirlenememiş (UNESCO-UNEVOC, 2014) ve halihazırdaki uygulamaların etkinliği hakkında gerekli araştırmalar yapılmamış ve kuramsal altyapı oluşturulamamıştır (Lucas vd., 2012). Lucas'a göre (2014) mesleki pedagoji, tam anlamıyla anlaşıldığı ve geliştirildiği takdirde, etkin mesleki öğretim ve öğrenme modellerinin ve araçlarının gelişmesini sağlayacaktır.

Bu belirsizliği ortadan kaldırmak ve kuramsal bir çerçeve oluşturmak amacıyla, Lucas ve diğerleri (2012) "mesleki pedagoji" kavramını ortaya atmış ve

mesleki öğretim ve öğrenimde etkin olabilecek yaklaşımları (CAVTL, 2013) ve modelleri (Faraday vd., 2011) belirlemeye çalışmışlardır. Lucas ve diğerleri (2012, s. 14) mesleki pedagojiyi, "bireyleri mesleki yaşamları için hazırlamaya yönelik öğretme sanatı, bilimi ve zanaatı" olarak tanımlamaktadır. Yetişkin Mesleki Öğretim ve Öğrenim Komisyonu (2013) raporunda da belirtildiği gibi, etkin mesleki öğretim ve öğrenme; mesleki uzmanlık için gerekli olan mesleki özelliklerin edinimi, uygulamalı problem çözme ve yansıtma yoluyla edinilen gerçek ya da simüle iş deneyimi, işyerlerinde kullanılan son teknolojik uygulamaların farkında olma, işyerlerinde kullanılan dönüt ve ölçme yöntemlerinden yararlanma, gerçek ya da simüle işyeri, sınıf ve atölye gibi farklı öğrenme ortamlarından yararlanma ve kolektif öğrenme yoluyla dinamik meslek standartlarını takip etmeyi gerektirmektedir.

Mesleki öğretim ve öğrenme yaklaşımları dikkate alındığında, ilgili güncel alan yazın, mesleki öğretim ve öğrenme uygulamalarının bağlamsal yapısından dolayı, mesleki bilgi ve becerilerin gerçek bir bağlamda ve uygulama grupları içerisinde yapılandırılması gerektiği üzerinde durmuştur (Evans vd., 2009; Lucas vd., 2012; Orr & Robinson, 2013), çünkü mesleki öğretim ve öğrenme, farklı bağlamlarda ve öğrenme ortamlarında gerçekleştirilen (Black & Yasukawa, 2013; Evans vd., 2009; Mcrone vd., 2015; Moodie & Wheelan, 2012), "dönüt, sorgulama, uygulama, yansıtma ve gerektiğinde kuramsal modellerin açıklamasını gerektiren, uygulamalı, yaparak öğrenmeye dayalı, deneyim odaklı, gerçek dünya ile ilişkili" bir olgudur (Lucas vd., 2012, s. 9). Bu doğrultuda, mesleki öğretim ve öğrenme uygulama grupları içerisinde gerçekleştiği ve bağlama özgü olduğu için, Evans ve diğerleri (2009) etkin mesleki öğretimin yeniden bağlamsallaştırma gerektirdiğini savunmuşlardır. Evans ve diğerlerine göre, yeniden bağlamsallaştırma, bir bağlamda üretilen bilginin başka bir bağlamda etkin olabilmesi için alan temelli bilginin pedagoji aracılığıyla iş temelli bilgiye entegre edilmesidir ve yazarlar, dört tür yeniden bağlamsallaştırma önermektedir: içerik (program geliştirme yoluyla yeniden bağlamsallaştırma), pedagoji (öğretim ve öğrenme ortamı oluşturma yoluyla yeniden bağlamsallaştırma), işyeri (bilginin işyerinde yeniden bağlamsallaştırılması) ve öğrenci (bilginin anlamlandırma yoluyla yeniden bağlamsallaştırılması). Diğer bir deyişle, yeniden bağlamsallaştırma, bilginin

aktarımına, yani bir bağlamda üretilen ve edinilen mesleki bilgi ve becerilerin diğer bir bağlama tercüme edilmesi ve o bağlamda doğrulanmasına odaklanmaktadır.

Bunun dışında, alan yazında meslek öğretmenlerinin bilgi temeli de etkin mesleki öğretimin önemli bir öğesi olarak ele alınmıştır (Barnett, 2006; Chappell, 2003; Harkin, 2012; Lucas vd., 2012; Shulman, 2005; Young, 2004). Shulman'ın (1987) ortaya attığı pedagojik alan bilgisi, etkin meslek öğretmeninin özellikleri arasında sayılmaktadır. Bu görüşe göre, bir meslek öğretmeninin etkin öğretim yapabilmesi için pedagojik bilgiye ve güncel alan bilgisi ve uzmanlığına ihtiyacı vardır. Shulman (2005) bu iki bilgi temelinin entegrasyonunu, "marka pedagoji", Brennan Kemmis ve Smith (2006) "alana özgü pedagoji", Johansson ve diğerleri (2007, aktaran CEDEFOP, 2015) ise "mesleki didaktik" olarak adlandırmaktadır. Aynı zamanda, alan bilgisinin içeriği de alan yazında tartışılmış ve meslek öğretmeninin alan bilgisinin mesleki uygulamaların temelini oluşturan disiplinlerarası bilgi olması gerektiği yönünde görüşler ortaya çıkmıştır (CAVTL, 2013, Chappell vd., 2002).

Davranışçı, bilişsel ve oluşturmacı öğretim yaklaşımları da etkin mesleki öğretim kapsamında ele alınmıştır. Mesleki eğitimin planlanması, öğretimi ve değerlendirmesi çoğunlukla davranışçı öğretim ve öğrenme yaklaşımları etkisi altında kalmıştır (Darwin, 2007; Doolittle & Camp, 1999); ancak, öğretmen-merkezli yaklaşımlardan öğrenci-merkezli yaklaşımlara geçiş olması sebebiyle, oluşturmacı ilkeler ve yaklaşımlar (durum odaklı öğrenme, deneyim odaklı öğrenme, üretken öğrenme, dönüştürmeci öğrenme vb.) mesleki eğitimde taban kazanmaya başlamıştır. Ancak, etkin mesleki öğretim için, bir yaklaşımın diğer bir yaklaşıma tercih edilmesinden ziyade, mesleki eğitimin farklı bağlamlara ve değişken öğrenci kitlesine hitap etmesi sebebiyle eklektik ve pragmatist bir öğretim yaklaşım gereklidir (CAVTL, 2013; Chappell, 2003; Cullen vd.., 2002; Harkin, 2012; Lucas vd., 2012).

Bu görüş aynı zamanda Lucas ve diğerleri (2012) tarafından da destenlenmiştir. Etkin mesleki öğretim ve öğrenme için bir model geliştiren Lucas ve diğerleri mesleki pedagoji için beş kilit aşama belirlemişlerdir. Bu aşamalar: (1) mesleki eğitimin amacının netleştirilmesi, (2) mesleki eğitim programının gerekliliklerinin ve yapısının anlaşılması, (3) çıktıların kapsamının belirlenmesi, (4)

bağlama göre öğretim ve öğrenme yöntemlerinin harmanlanması ve (5) öğrencilerin doğası, öğretmenin uzmanlığı ve öğrenme ortamı gibi bağlamsal faktörlerin dikkate alınmasıdır. Benzer şekilde, Faraday ve diğerleri (2011), etkin mesleki öğretim ve öğrenme çerçevesi geliştirmiştir ve bu çerçevede yer alan beş unsur; öğretim becerileri (araçları seçme ve kullanma), öğretim ilişkileri (öğretmen ve öğrenci roller, ilişkileri ve tepkileri), öğretmen yansıtması (dersin nasıl iyileştirilebileceği hakkında), öğretim modelleri (dersin hedeflerine ulaşmak amacıyla etkinliklerin sıralanması) ve öğretim bağlamıdır (destek sistemleri, kaynaklar ve imkanlar, öğrenci ihtiyaçları vb.).

Etkin mesleki öğrenime yönelik yaklaşımlar dikkate alındığında ise, alan yazındaki tartışmaların, bir kazanım olarak öğrenme ve bir katılım olarak öğrenme olmak üzere iki karşıt eksende toplandığı görülmektedir. Bu iki bakış açısını birleştirerek, Catts ve diğerleri (2011) etkin mesleki öğrenmeyi, mesleki bilginin edinimi ve edinilen bilginin bağlamsal (sosyo-politik ve kültürel) uygulaması olarak tanımlamıştır.

Lave ve Wenger (1991) tarafından ortaya atılan durum odaklı öğrenme, uygulama grupları yaklaşımı sebebiyle etkin mesleki öğrenme hakkındaki tartışmalarda en çok öne çıkan tema olmuştur (Barnett, 2006; Catts vd., 2011; CAVTL, 2013; Evans vd., 2009; Smith & Blake, 2005). Bu görüşe göre, mesleki eğitim alan öğrenciler, işyerindeki çalışan ve eğitmenler ve okuldaki öğretmen ve akranlardan oluşan uygulama grupları içerisinde, topluluk üyeleri ile etkileşime girerek mesleki bilgi ve becerilerini yapılandırır. Bu sebeple, öğrencilerin kendi öğreniminin sorumluluğunu alacakları durum odaklı bir öğrenme ortamı yaratmak etkin mesleki öğrenim için vazgeçilmez bir öğedir (CAVTL, 2013).

Ayrıca, mesleki eğitim farklı öğrenme bağlamlarıyla özdeşleştiğinden okul ve işyeri öğelerini içeren öğrenme ortamlarının oluşturulması (Schaap vd., 2011; Zitter & Hoove, 2012), öğrenmenin yeniden bağlamsallaştırma yoluyla aktarımı (Evans vd., 2009) ve okul temelli deneyimlerin işyeri ve benzeri bağlamlara aktarılması (boundry crossing) (Akkerman & Bakker, 2012) okuldan işe ya da işten okula etkin bir geçisin sağlanması ve kuram ve uygulamanın entegrasyonu için gereken aşamalar arasındadır. Bu entegrasyon ve geçiş sürecinde, deneyim odaklı öğrenme kapsamında da ele alınan (Kolb, 1984) yansıtma ve dönüt, etkin mesleki

öğrenme için önemli öğeler arasında yer almaktadır. Bunun dışında, Lucas ve diğerleri (2012), yansıtma, dönüt ve kuramı vurgulayarak çoğunluğu deneyim odaklı öğrenme metodu olan etkin mesleki öğrenmeyi sağlayacak öğrenme yöntemlerini belirlemişlerdir. Bu yöntemler, izleyerek öğrenme, taklit ederek öğrenme, uygulayarak öğrenme (deneme-yanılma), dönüt yoluyla öğrenme, karşılıklı konuşma yoluyla öğrenme, öğreterek ve yardım ederek öğrenme, gerçek hayattaki problemleri araştırma yoluyla çözerek öğrenme, eleştirel düşünerek ve bilgi üreterek öğrenme, dinleyerek, not alarak ve hatırlayarak öğrenme, çizerek ve taslak çıkararak öğrenme, yansıtarak öğrenme, sorarak öğrenme, koç yardımıyla öğrenme, yarışarak öğrenme, sanal ortamda öğrenme, simulasyon ve rol canlandırma yoluyla öğrenme ve oyun aracılığı ile öğrenmedir (s. 61).

Bunlara ek olarak, etkin mesleki öğrenim ile öğrencilerin öz algısı arasında bir ilişki olduğu görüşü ortaya atılmıştır (Smith & Kling, 2011). Mesleki öğrenme ve öz algı ilişkisini betimleyen bir ilişki ağı tanımlayan Smith ve Kling (2011) öğrencilerin öz algı seviyesi arttıkça öğrenme düzeyinin ve başarısının arttığını ve kartopu etkisiyle, artan başarının öz algıyı daha da yukarı çektiğini savunmuşlardır.

Mesleki öğretim ve öğrenmeye yönelik yaklaşımların dışında, bu süreçler iç ve dış faktörlerin etkisi altındadır. Mesleki öğretimi etkileyen dış faktörler, işgücü piyasasının değişen ihtiyaçları, hızlı gelişen teknoloji (CEDEFOP, 2012; OECD, 2012; Robertson, 2008); değişken iş ortamı (Chappell & Hawke, 2008; Chappell & Johnston, 2003); bilgi, beceri ve öğrenmeye yönelik değişken algılayışlar (Chappell, 2013) ve mesleklerin sürekli değişen yapısı ve organizasyonudur (Chappell vd., 2002). Mesleki öğretim ve öğrenmeyi etkileyen iç faktörler ise, meslek öğretmeninin profesyonel kimliği (Lucas vd., 2012; Orr & Simmons, 2010), meslek öğretmeni yetiştirme programları (UNESCO-UNEVOC, 2014), meslek öğretmeni bilgi ve becerileri (Chappell & Hawke, 2003; Lucas, 2015; CAVTL, 2013; UNEVOC, 2014); öğretmeden öğrenmeye geçiş (CEDEFOP, 2015; Chappell, 2003), değişken öğrenme ortamları (Faraday vd., 2011; Robertson, 2008), değişken öğrenci özellikleri (Fletcher vd., 2012; McCrone vd., 2015; Robertson, 2008; Smith, 2005); eğitim sistemi ve politikaları (Atkins, 2010; CEDEFOP, 2018a; Grubb, 2006; Hyland, 2017; Lucas vd., 2010); mesleki bilgi ve becerilerin arz ve talebindeki uyuşmazlık (Bartlett, 2013; CEDEFOP, 2015; 2018b;

Günay & Özer, 2016); ve mesleki eğitimin yüksek giderleridir (Grubb, 2006; Hoeckel, 2008).

Aynı zamanda, alan yazın, uluslararası arenada mesleki öğretim ve öğrenmeye yönelik araştırmaların çoğunlukla nitel çalışmalar olduğunu ve bu araştırmaların etkin mesleki öğretim ve öğeleri; etkin meslek öğretmeninin yetkinlikleri, kişisel özellikleri ve yeterlikleri; mesleki eğitimde kullanılan öğretim ve öğrenme yöntemleri; öğrenci tercihleri ve öğrenme yaklaşımları ve öğretim ve öğrenme süreçlerini olumsuz etkileyen faktörlere odaklandığını göstermektedir. Ulusal bağlamda ise, ilgili alanda çoğunlukla nicel çalışmalar yapılmış ve araştırmalar örgütsel ve yönetimsel olgulara, sorunlar ve çözümlere ve öğrenci ve öğretmen tutumları üzerinde yoğunlaşmıştır. Bu sebepten ötürü, alan yazın taraması Türkiye bağlamında etkin mesleki öğretim ve öğrenme olgusunu anlamak ve derinlemesine irdelemek için nitel araştırmalara ihtiyaç olduğunu göstermektedir.

Ayrıca, Bedi and Germein (2016) ve Mitchell, Chappell, Bateman ve Roy (2006) da etkin mesleki öğretim ve öğrenme ile ilgili politika ve araştırma söylemlerinin, öğretmenler ve öğrenciler arasındaki pedagojik deneyimlerden ziyade çoğunlukla dış faktörlere odaklandığını belirtmişlerdir. Mesleki eğitim kurumlardaki öğretmenlerin, araştırma yapmak gibi bir yükümlülükleri olmadığı için kendilerini öğretime adamaları beklenmektedir (Vaughn, 2006). Ancak, meslek öğretmenlerinin etkin öğretim yapıp yapmadıkları ve öğretimlerini etkin kılacak bilgiye sahip olup olmadıkları ampirik olarak desteklenmemiştir (Palmieri, 2004; Shepherd, 2009). Aynı şekilde, Chappell, Solomon, Tennant ve Yates (2002) varış noktasının mesleki yetkinliğe giden yoldan ve yolculuktan daha fazla önemsendiğini belirtmiş ve mesleki eğitime yönelik çıktı-odaklı yaklaşımı eleştirmişlerdir. Halbuki, bir eğitim sisteminin etkinliği ağırlıklı olarak öğretmen ve öğrenciler arasındaki ilişkilere ve etkileşimlere dayanmaktadır (UNESCO-UNEVOC, 2014). Lucas ve diğerleri de (2012) etkin mesleki öğretim ve öğrenmenin temelinde pedagoji bilgisi ve anlayışı olduğunu savunmaktadır. Bu sebeple, mesleki öğretim ve öğrenme uygulamalarını anlamak ve bu süreçlere ışık tutmak, talep edilen öğrenim çıktıları ve yeterlikleri sağlayan süreçleri belirlemek ve bu süreçleri kolaylaştıran ve zorlaştıran etmenleri tespit etmek gerekmektedir.

Bu ihtiyaçtan yola çıkarak, bu çalışmada, yükseköğretim seviyesindeki mesleki eğitim kurumlarındaki öğretim ve öğrenme süreçlerinin derinlemesine irdelenmesi amaçlanmıştır. Daha spesifik olmak gerekirse, bu çalışma (1) yönetici, öğretmen ve öğrencilerin meslek yüksekokullarındaki etkin öğretim ve öğrenmeye yönelik algılarını, (2) yönetici, öğretmen ve öğrencilerin görüşlerine göre etkin öğretim ve öğrenmeyi engelleyen zorluları ve (3) bu zorluklarla baş etme yollarını incelemektedir. Bu amaç doğrultusunda, aşağıdaki araştırma soruları oluşturulmuştur:

1) Meslek yüksekokullarındaki öğretmen, öğrenci ve yöneticilerin etkin mesleki öğretim ve öğrenme konusundaki algıları nelerdir?
2) Meslek yüksekokullarındaki öğretmen, öğrenci ve yöneticilerin mesleki öğretim ve öğrenme süreçlerinde karşılaştıkları zorluklar nelerdir?
3) Meslek yüksekokullarındaki öğretmen, öğrenci ve yöneticilerin mesleki öğretim ve öğrenme süreçlerinde karşılaştıkları zorluklarla nasıl baş etmektedirler?

Bu araştırma sorularını cevaplamak amacıyla, nitel araştırma metodu uygulanmış ve meslek yüksekokullarındaki öğretmen, öğrenci ve yöneticilerin etkin mesleki öğretim ve öğrenmeye yükledikleri anlamı, bu olguya yönelik algılarını ve deneyimlerini belirlemek amacıyla olgubilim (fenomonoloji) araştırma deseni kullanılmıştır.

Veri toplama araçları olarak yarı-yapılandırılmış görüşme formları ve ders gözlem formu alan yazın taraması ve uzman görüşü alınarak araştırmacı tarafından geliştirilmiş ve görüşme formlarının 2017 yılının Mart ve Nisan aylarında, iki meslek yüksekokulunda 2 yönetici, 3 öğretmen ve 2 öğrenci odak grubunun katılımıyla pilot uygulaması yapılmıştır. Pilot uygulamaya katılan yönetici, öğretmen ve öğrencilerin önerileri ve araştırmacının gözlemleri doğrultusunda görüşme formlarında bazı soruların sırası ve soru ifadeleri değiştirilmiş ve sonda eklenmiş veya çıkarılmıştır. Veri toplama araçlarının final versiyonları Nisan 2017'de Orta Doğu Teknik Üniversitesi Etik Kurulu onayına sunulmuş ve onay Mayıs 2017'de alınmıştır.

Araştırma, Mayıs 2017 – Mart 2018 tarihleri arasında Nevşehir il merkezinde, Avanos, Gülşehir, Hacıbektaş, Kozaklı ve Ürgüp ilçelerinde ve

Mustafapaşa kasabasında bulunan toplam sekiz meslek yüksekokulunda yürütülmüştür.

Veri, yarı-yapılandırılmış görüşme formları ile meslek yüksekokullarında görev yapan yöneticilerden, kartopu ve maksimum çeşitlilik örnekleme stratejileri ile seçilmiş öğretmen ve öğrencilerden toplanmıştır. Ayrıca, ders gözlem formu ile görüşme yoluyla toplanacak veriyi desteklemek ve doğrulamak amacıyla araştırmaya katılan öğretmenlerin verdiği bazı meslek dersleri gözlemlenmiştir.

Araştırmaya toplamda 8 yönetici, 16 öğretmen ve 16 öğrenci odak grubu (70 öğrenci) katılmış ve 3 ya da 4 saatlik ders gözlemleri sonucunda toplamda 58 ders saati gözlemlenmiştir. Elde edilen veriler, Ağustos-Eylül 2018 tarihleri arasında yazıya dökülmüş ve Ekim 2018-Şubat 2019 tarihleri arasında içerik analizi ile analiz edilmiştir.

Elde edilen bulgular, etkin meslek öğretimi ve etkin meslek öğrenimine yönelik anlayışlar, öğretim ve öğrenme sürecinde karşılaşılan zorluklar, bu zorluk ve problemlerle baş etme yolları ve mesleki öğretim ve öğrenmenin etkin olabilmesi için yapılan öneriler olarak dört başlık altında toplanmıştır.

Etkin meslek öğretimi ve etkin meslek öğrenimine yönelik anlayışlarla ilgili sonuçlar, etkin mesleki öğretime yönelik anlayışlar, etkin mesleki öğrenime yönelik anlayışlar, etkin meslek öğretmenin özellikleri, etkin meslek öğrencisinin özellikleri, etkin meslek yüksekokulu programının özellikleri ve mesleki yükseköğrenimin amaçları olmak üzere altı tema altında toplanmıştır.

Sonuçlar, etkin mesleki öğretim ve etkin meslek öğreniminin hem bir süreç hem de bir ürün olarak algılandığını ortaya çıkarmıştır. Etkin mesleki öğretim, çoğu öğretmen ve öğrenci ve birkaç yönetici tarafından öğrencilerin mesleki bilgi ve beceri kazandıkları bir süreç olarak görülmektedir. Bu süreçte, öğretmenin rolü, bilgisi, eğitim programı, konu sunumu ve anlatımı ve öğrenme ortamının düzenlenmesinin etkin öğretim uygulamalarına katkı sağladığı düşünülmektedir. Diğer yandan, benzer sayıdaki katılımcı etkin mesleki öğretimi bir ürün olarak algılamış ve etkin mesleki öğretimi mesleki yeterliklerin kazandırılması olarak görmüşlerdir.

Benzer şekilde, öğretmen, öğrenci ve yöneticilerin etkin öğrenmeye yönelik algılayışları bir ürün olarak mesleki öğrenme ve bir süreç olarak mesleki öğrenme

olmak üzere iki alt tema ortaya çıkarmıştır. Katılımcıların çoğu, etkin mesleki öğrenmeyi bir ürün olarak değerlendirmiş ve mesleki yeterliklerin ve eğitim programı hedeflerinin edinimi olarak algılamışlardır. Katılımcılar, bu çıktılara, kuramı uygulamaya dökerek, işyerinde uygulanacak ve geliştirilecek bilgi ve becerileri kazanarak, öğrencinin işi yapamama korkusunu yenmesini ve öğrencilerin karar verecek/yargıda bulunabilecek düzeye gelmesini sağlayarak ulaşılacağını belirtmişlerdir. Etkin mesleki öğrenmeyi bir süreç olarak değerlendiren öğretmen ve öğrenciler, bu süreçte öğrencilerin mesleki bilgi ve becerileri, uygun öğrenme stratejilerini uygulayarak ve gerekli kişilik özelliklerine sahip oldukları takdirde edindiklerini düşünmektedirler.

Etkin meslek öğretmeninin özelliklerine yönelik elde edilen bulgulara göre, etkin öğretmenin özellikleri öğretmen bilgisi, öğretmen rolleri ve öğretmen özellikleri olmak üzere üç alt tema altında toplanmaktadır.

Etkin bir meslek öğretmeninin bilgisi, katılımcılara göre, alan bilgisi, pedagojik bilgi, teknoloji bilgisi ve bağlamsal bilgiyi içermelidir. Çoğu öğretmen, öğrenci ve yönetici meslek öğretmeninin bilgi temelini, öğretmenin rolleri ve diğer özelliklerinden daha fazla önemsemişlerdir.

Çalışmanın sonuçları, etkin meslek öğretmeninin alan bilgisinin konu bilgisi ve mesleki bilgiyi içerdiğini göstermiştir. Yönetici, öğretmen ve öğrencilere göre, öğretmenlerin mesleki bilgiye sahip olabilmeleri için işyeri tecrübesine, meslek bilgisine, işyerinde kullanılan araç ve malzemelerin bilgisine sahip olmalı, meslekle ilgili gelişmelerden haberdar olmalı ve bu gelişmeleri sürekli olarak takip etmelidir. Konu bilgisine gelince, katılımcılar, etkin meslek öğretmenlerinin konu bilgisinin meslek bilgisi ve mesleki bilginin temelini oluşturan disiplinlerarası bilgiyi içermesi gerektiğini düşünmektedirler. Bu çerçevede, neredeyse tüm katılımcılar iş deneyimi ve meslek bilgisine büyük önem vermişlerdir.

Etkin meslek öğretmenlerinin pedagojik bilgisine ilişkin bulgular, etkin bir meslek öğretmeninin sınıfı etkin yönettiğini, konuyu etkin ve uygun öğretim yöntemleri ve teknikleri uygulayarak anlattığını, öğrencileri, ihtiyaçlarını ve özelliklerini iyi bildiğini ve eğitim programı planlama ve uygulama bilgisine sahip olduğunu göstermiştir. Alan bilgisi ve pedagojik bilgiye ek olarak, katılımcılar, etkin bir meslek öğretmeninin teknoloji bilgisine sahip olması gerektiğini

düşünmektedirler. Bu görüşe sahip katılımcılara göre, meslek öğretmenleri hem eğitim teknolojilerini bilmeli hem de mesleği öğretirken çeşitli teknolojik araçları kullanabilmelidir.

Aynı zamanda, bağlamsal bilgi de etkin meslek öğretmenlerinin özellikleri arasında sayılmıştır. Meslek öğretmenleri, bağlamsal bilgi çerçevesinde okul çevresi ve iş çevresinden haberdar olmalı ve öğrencilerden bu doğrultuda talepte bulunmalı ve yönlendirmelidir.

Öğretmenlerin bilgi temeline ek olarak, üstlenmesi gereken rollerden de bahsedilmiştir. En fazla vurgulanan rollerin, danışmanlık, koçluk ve rol model olmak olduğu görülmüştür. Diğer bahsedilen roller ise, liderlik, mesleki bilgi kaynağı olmak ve işveren veya işyeri yöneticisi gibi davranmaktır.

Etkin meslek öğretmeninin özellikleri konusunda, kişilik özellikleri, kişilerarası iletişim ve etkileşim ve profesyonel sorumluluk ortaya çıkan temalardır. Meslek öğretmenlerinin etkin olabilmesi için sabırlı, adil, disiplinli, tatlı ama sert, esprili, öğretmenlik tecrübesi olan ve mesleğini seven kişiler olması gerektiği savunulmuştur. Aynı zamanda, etkin meslek öğretmenlerinin etkin iletişim becerileri olması ve öğrencilerle açık ve etkin bir şekilde iletişim kurmaları gerektiği söylenmiştir. Çalışmaya katılan öğretmen, öğrenci ve yöneticilerin belirttiği gibi, etkin bir meslek öğretmeninin profesyonel sorumlulukları ise derse hazır gelmek, ders saatleri dışında ulaşılabilir olmak, öğretmede ısrarcı ve motive olmak, kendini geliştirmek ve öğrencilerin iş bulmasına yardımcı faaliyetler düzenlemektir.

Etkin meslek öğrencisinin özelliklerine yönelik bulgular ise, öğrencilerin giriş özellikleri, duyuşsal özellikleri, bilişsel özellikleri ve kişilik özellikleri olmak üzere dört alt tema altında toplanmıştır. Giriş özellikleri kapsamında, etkin meslek öğrencisinin meslek yüksekokulunda verilen eğitim için gerekli olan ön bilgiye sahip olması gerektiği düşünülmektedir. Bunun için, ilgili meslek lisesinden mezun olmak ve temel düzeyde Türkçe, İngilizce ve Matematik bilgisine sahip olmak gerektiği vurgulanmıştır. Ayrıca, mesleğe kişilik ve yetenek bakımından uygun olmak ve bu doğrultuda bir program seçmek etkin meslek öğrencisinin özellikleri arasında sayılmıştır.

Meslek öğrencilerinin etkin öğrenebilmeleri için sahip olması gereken duyuşsal özellikler de ilgili olmak ve motive olmak olarak listelenmiştir. Bilişsel özellikler bakımından, öğrencilerin mesleği öğrenirken gerekli öğrenme stratejilerini uygulamalarının etkin öğrenmeyi sağlayacağı belirtilmiştir. Bahsedilen stratejiler, araştırma yapmak, ilgili mesleği öğrenmek için part-time olarak bir işyerinde çalışmak ve atölye ve laboratuvarlarda daha fazla vakit geçirmektir. Ders etkinliklerine katılmak ve içeriği ders öncesinde ve sonrasında tekrar etmek de bahsedilen diğer stratejilerdir.

Son olarak, çalışmanın sonuçları, etkin meslek öğrencisinin kişilik özelliklerinin öğrenmeye ve gelişime istekli, yaratıcı, gözlemci, meraklı, sabırlı, düzenli, sorumluluk sahibi olmak ve zamanı iyi yönetmek ve problem çözme becerilerine sahip olmak olduğunu ortaya çıkarmıştır.

Ayrıca, elde edilen veriden meslek yükseköğreniminin amaçları da ortaya çıkmıştır. Katılımcılara göre, meslek yükseköğreniminin amacı bireylerin kişisel, mesleki ve entelektüel iyi oluş halini desteklemektir. Çoğu yönetici ve öğretmen, meslek yüksekokullarının öğrencilerin mesleki iyi oluş hallerini geliştirmeyi amaçladığını belirtmişlerdir.

Meslek yüksekokullarının amacı gibi, etkin bir meslek yüksekokulu programının özellikleri de bu çalışmanın ortaya koyduğu sonuçlar arasındadır. Elde edilen sonuçlara göre, bir meslek yüksekokulu programının etkinliği kişisel, okul bazlı ve sistem bazlı faktörlere dayanmaktadır.

Bu çalışmanın sonuçlarına göre, kişisel faktörler, öğrenci ve öğretmen özelliklerine dayanmaktadır. Bir programın öğrencileri, ön bilgiye ve daha yüksek düzeyde bilişsel becerilere sahipse o programın daha başarılı olduğu düşünülmektedir. Öğretmenlerin ise, mesleki ve öğretmenlik tecrübesine sahip olmaları ve akademik olarak lisansüstü eğitim çalışmaları yapmaları durumunda program etkinliğe katkı sağladıkları belirtilmiştir.

Okul temelli etmenler olarak, eğitim-öğretim programı ve okul bağlamı meslek programlarının etkinliğinde rol oynamaktadır. Eğitim-öğretim programının işgücü piyasasının ihtiyaçları doğrultusunda tasarlanması, işbaşı eğitim etkinlikleri içermesi, öğretimde gerçek materyal ve araçların kullanılması ve daha fazla uygulamalı ders verilmesi durumunda meslek yüksekokulu programlarının etkin

olacağı savunulmuştur. Aynı zamanda, okullarda atölye ve laboratuvar bulunması, okulların ilgili sektörün bulunduğu ve işyerlerine yakın yerlerde kurulması ve işverenlerin eğitime destek vermesi okul bağlamının program etkinliğine katkısı olarak değerlendirilmiştir.

Sistem temelli faktörler ise, programa öğrenci kabulünde, dikey geçişlerde ve mezuniyet sonrası iş imkânları bakımından program etkinliğini belirlemektedir. Daha yüksek puanlarla meslek yüksekokulu programlarına yerleşen, önceden belirlenmiş kriterlere göre seçilen ve bilinçli tercih yapan öğrencilerin program başarısını üst düzeylere çektiği düşünülmektedir. Ayrıca, dikey geçişte daha fazla seçeneği olan programlara daha ilgili ve hedefi olan öğrencilerin yerleştiği ve böylece başarı düzeyinin yükseldiği düşünülmektedir. Benzer şekilde, daha fazla ve geniş yelpazede iş imkânı sunan programların öğrencileri motive ettiği ve öğrencilerin iş korkusu yaşamadıkları için derslere ve mesleğe daha fazla ilgili olmalarından dolayı daha başarılı oldukları ve böylece program etkinliğini de artırdıkları savunulmuştur.

Yönetici, öğretmen ve öğrencilerin mesleki öğretim ve öğrenme süreçlerinde karşılaştıkları zorluklara ilişkin sonuçlar ele alındığında, bu zorlukların öğretmen, öğrenci, eğitim programı, eğitim sistemi, bağlamsal, işveren ve aile kaynaklı olduğu ortaya çıkmıştır.

Bulgulara göre, öğretmen kaynaklı sorunlar meslek öğretmenlerinin bilgi eksikliği ve özellikleri ile ilişkilidir. İlk olarak, katılımcılar etkin öğretememe ve öğrenememe sebepleri olarak öğretmenlerin alan bilgisi, pedagojik bilgi ve teknolojik bilgi eksikliklerini göstermişlerdir.

Elde edilen veriler, öğretmenlerin alan bilgisi eksikliğinin hem mesleki bilgi eksikliğini hem de konu/içerik bilgisi eksikliğini kapsadığını göstermiştir. İş tecrübesi ve mesleki bilgisi olmayan ve alan bilgisini mesleki bilgiye göre bağlamsallaştırmayan öğretmenlerin etkili öğretim yapamadığı ve bu yüzden öğrencilerin etkin öğrenemediği belirtilmiştir. Pedagojik bilgi eksikliği de öğretmenlerin öğrenci bilgisi eksikliği, etkin olmayan sınıf yönetimi ve konu anlatımı, eğitim programı tasarlama ve uygulama eksiklikleri şeklinde baş göstermiştir. Öğretmenlerin öğrenciler hakkında yeterli bilgiye (psikolojik, fizyolojik, sosyo-ekonomik durum ve öğrenme ihtiyaçları) sahip olmaması, grup

özelliklerini dikkate almamaları ve bireysel farklılıkları göz ardı etmelerinin öğretimi ve öğrenmeyi olumsuz etkilediği savunulmuştur. Aynı şekilde, öğretmenlerin sınıfı etkin yönetmedikleri ve konu anlatımı yaparken öğrencilerin ihtiyaçları dikkate almadıkları için çeşitli öğretim yöntemleri kullanmadıkları raporlanmıştır. Bunların dışında, öğretmenlerin eğitim programlarını kendi bilgi ve ilgi alanlarına göre tasarladıkları ve bu sebeple işgücü piyasasının ihtiyaçlarına karşılık verilmediği de düşünülmektedir. Ayrıca, ölçme ve değerlendirme bilgisi olmayan öğretmenlerin adil ve geçerli ölçme yapmadıkları ve tek tip sınav (yazılı sınav) uyguladıkları belirtilmiştir.

Diğer bir bilgi eksikliği yaşandığı düşünülen alan, teknoloji bilgisidir. Birkaç öğretmen ve öğrenci grubuna göre, öğretmenlerin eğitim teknolojileri konusunda eksik bilgiye sahip olmaları ya da bilgisiz olmaları konu anlatımını etkin bir şekilde tasarlanmamış powerpoint sunuları üzerinden yapmalarına neden olmaktadır.

Mesleki öğretimin ve öğrenmeyi engelleyen öğretmen özelliklerine yönelik sonuçlar ise öğretmenin öğrencilere ve mesleğe karşı olumsuz tutumu, olumsuz mesleki davranış biçimi, mesleki eğitim, meslek öğrencileri ve meslek yüksekokulları hakkındaki inançları ve iletişim ve işbirliğine yönelik beceri eksikliklerinin öğretimi ve öğrenmeyi olumsuz yönde etkilediğini göstermiştir.

Çalışmaya katılan öğretmen, yönetici ve öğrencilerin görüşlerine göre, öğrenci kaynaklı sorunlar, öğrencilerin giriş özellikleri, bilişsel ve duyuşsal davranışlarından kaynaklanmaktadır.

Öğrencilerin öğretimi ve öğrenmeyi olumsuz etkileyen giriş özellikleri, ön bilgi eksikliği, bilinçsiz okul ve program seçimi ve öğrencilerin düşük sosyo-ekonomik düzeyidir. Çoğu katılımcı, öğrencilerin meslek yüksekokullarında etkin öğrenememe sebebinin ön bilgi eksikliği olduğunu düşünmektedir. Özellikle öğretmen ve yöneticiler, meslek yüksekokuluna kayıt yaptıran öğrencilerin Matematik, Bilgisayar, Türkçe ve İngilizce alanlarında bilgi ve becerilerinin eksik olduğunu belirtmişlerdir. Ayrıca, bazı öğrencilerin ilgili meslek lisesinden mezun olmaması sınıf ortamında ön mesleki bilgi bakımından düzey farklılıkları yaratmakta ve öğretimi ve öğrenmeyi güçleştirmektedir. Bunun dışında, katılımcılara göre, öğrencilerin bilinçsiz tercih yapması ve kayıt yaptırdıkları

program, eğitim programı ve okul hakkında bilgi sahibi olmamaları öğrencilerin motivasyonunu olumsuz etkilemekte ve ilgi eksikliğine sebep olmaktadır. Öğrencilerin düşük sosyo-ekonomik düzeylerinin de bilinçsiz tercih yapmalarına sebep olduğu ve farklı etnik gruplardan gelen öğrencilerin Türkçe'yi etkin kullanamaması sonucu öğretim ve öğrenmenin olumsuz yönde etkilendiği de düşünülmektedir.

Süreci olumsuz etkileyen duyuşsal davranışlar ve özellikler arasında, öğrencilerin motivasyonunun düşük olması, okula ve programa karşı olumsuz tutum içerisinde olmaları, ilgi eksikliği ve meslek yüksekokulu öğrencisi olarak ikincil ve dışlanmış hissetmeleri sayılmıştır. Öğrenci kaynaklı, öğretim ve öğrenmeyi engelleyen bilişsel davranışlar ise öğrencilerin kavrama ve uygulamada yaşadıkları sıkıntılardır. Öğretmenler, öğrencilerin kavrama sıkıntısı yaşadıkları, anlamlandırma yapamadıkları, bilgi arasında bağlantı kuramadıkları ve bu sebeple ezbere yönlendiklerini belirtmişlerdir. Ön bilgi eksikliğinin de özellikle sayısal ve kuramsal derslerde başarısız olunmasına neden olduğu düşünülmektedir.

Eğitim programından dolayı yaşanan sıkıntılar ele alındığında, öğretmenler, öğrenciler ve yöneticiler, bu zorlukların eğitim programı geliştirme, içerik seçimi, öğretim-öğrenme süreci, ölçme-değerlendirme, kaynak ve değerlendirme ile ilgili olduğunu belirtmişlerdir.

Eğitim programı geliştirme sürecinde, ihtiyaç analizi yapılmaması, paydaşların sürece dahil edilmemesi ve eğitim programına ayrılan sürenin fazla ya da az oluşu etkin bir eğitim programı tasarlanamamasına neden olmaktadır. Katılımcılardan bazıları, ihtiyaç analizi eksikliğinin ve öğretmenlerin program geliştirmede yegane söz sahibi olmalarının programın işgücü piyasası ihtiyaç ve taleplerine cevap verememesine yol açtığını düşünmektedirler. Temelinde bu problem olan program kaynaklı sorunlar, uygun olmayan içerik seçimi ve bu sorunun beraberinde getirdiği eğitim programının entegrasyonu, kapsamı ve dengesi gibi başka sorunlara da yol açmaktadır. Güncel olmayan içeriklerin seçimi, meslek liseleri ve meslek yüksekokullarında uygulanan eğitim programları arasındaki uyumsuzluk, kapsamın uzmanlaşmaya yönelik olmaması veya çok dar tutulması, dört yıllık yükseköğrenim programlarının içeriklerinin meslek yüksekokullarında verilmeye çalışılması ve İngilizce derslerinin konuşma

becerilerinden ziyade dilbilgisi ağırlıklı olması bahsedilen sorunlar arasındadır. Eğitim programının uygulanma sürecinde karşılaşılan sorunlar ise anlatım biçimi ve öğretim yöntemleri ile ilişkilidir. İngilizce derslerinin online olarak verilmesi ve öğretmenlerin farklı öğretim yöntem ve teknikleri yerine ağırlıklı olarak konferans tekniğini kullanması görüşmeler sırasında en çok bahsedilen sorunlar olarak ortaya çıkmıştır.

Diğer bir tema ise eğitim programlarının ölçme değerlendirme ayağı ile ilgilidir. Öğretmenlerin genellikle yazılı sınav tercih etmesinden dolayı öğrencilerin kuramsal bilgiyi ezberlemek durumunda kaldıkları ve uygulama gerektiren mesleki becerilerin uygulama sınavları ile ölçülmediği savunulmuştur. Aynı zamanda, öğretmenlerin değerlendirme kriteri olmadığını, şahsi değerlendirmeler yaptığı ve adil olmadıkları düşünülmektedir.

Eğitim programından kaynaklanan bir diğer sorun da kaynak eksikliğidir. Uygulama dersleri için gereken araç ve gereçlerin bulunmaması, var olan malzemelerin güncel olmaması ve işyerlerinde kullanılmaması ve bazı programlarda mesleki yazılı kaynakların eksik olması gibi sorunlardan bahsedilmiştir. Ayrıca, zamana ilişkin sorunlar da ortaya çıkmıştır. Meslek yüksekokullarındaki eğitim programları için ayrılan iki yıllık standart sürenin her program için uygun olmadığından söz edilmiştir. Bazı programlarda daha fazla süreye ihtiyaç varken bazı programlarda iki yıllık sürenin fazla olduğu belirtilmiştir. Ek olarak, kuramsal derslere ayrılan sürenin uygulama derslerinden daha fazla olmasının öğrencilerin uygulama becerilerini kazanmasını engellediği düşünülmektedir. Son olarak, bazı katılımcılara göre, program değerlendirme eksikliği sebebiyle programların etkinliği gözden geçirilememekte ve ihtiyaçların karşılanıp karşılanmadığını tespit edilememektedir.

Bir diğer sorun alanı olarak eğitim sisteminden kaynaklı sıkıntılardan bahsedilmiştir. Bunlar, ilk ve orta eğitim kademelerinden kaynaklı sorunlar, öğrenci seçimi ve yerleştirmesine ilişkin sorunlar, mesleki eğitimin planlanmasında ve uygulanma şeklinde dair sorunlar ve politika yapma ile ilgili sorunlardır.

İlk ve orta eğitim kademelerinden kaynaklı sorunların yükseköğretimden önceki kademelerdeki öğretim ve öğrenimin öğrencilere temel düzeyde bilgi ve

beceri kazandıramaması ve bu kademelerde verilen rehberlik ve danışmanlık hizmetlerinin eksik veya başarısız olmasından kaynaklandığı düşünülmektedir.

Bazı katılımcılar, öğrenci seçme ve yerleştirme sistemindeki aksaklıklar ve yanlış politikaların etkisinden bahsetmiştir. Öğrencilerin mesleki bilgi ve ilgilerinden ziyade genel bilgi testiyle seçilmeleri, meslek lisesi öğrencilerinin meslek yüksekokullarına doğrudan geçişinin kaldırılması ve öğrencilerin uygun olmayan alanlardan (sayısal, sözel ve eşit ağırlık) tercih yapmaları meslek yüksekokullarındaki öğretim ve öğrenme süreçlerini olumsuz etkilemektedir.

Mesleki yükseköğretimin planlanmasına ilişkin sonuçlar, okul yerinin seçimi ve ihtiyaç analizi eksikliğinin öğretim ve öğrenmeyi güçleştirdiğini ortaya çıkarmıştır. Meslek yüksekokullarının merkez kampüsten uzakta, kasaba ve ilçelerde, ilgili sektörün olmadığı ve işyerlerine uzak yerlerde kurulması öğrencilerin işyeri eğitiminden ve merkez kampüs imkânlarından yeterince yararlanamamasına ve bu yerleşkelerde yürütülen faaliyetlere katılamamasına sebep olmaktadır. Ayrıca, katılımcılar, ihtiyaç analizi yapılmadığından programların kontenjanlarının kapasitenin üzerinde artırıldığını, programlar açıldıktan ve öğrenci alımı yapıldıktan sonra öğretim elemanı alındığını ve araç gereç ihtiyaçlarının giderildiğini belirtmişlerdir.

Uygulamada ortaya çıkan ve öğretim-öğrenme sürecini olumsuz etkileyen etmenlerin iki yönlü olduğu görülmüştür. Bunlar, okul temelli uygulamalar ve işgücü piyasası uygulamalarından kaynaklanan problemlerdir. Öğretim ve öğrenmeyi olumsuz etkileyen okul temelli uygulamaların, dikey geçiş programları ile meslek yüksekokullarında uygulanan eğitim programları ve program adı ve içeriği arasındaki uyumsuzluk ve uygulama gerektiren mesleki programların uzaktan öğretim yoluyla verilmesi ile ilgili olduğu ortaya çıkmıştır. Etkin öğretim ve öğrenime engel yaratan işgücü piyasasındaki uygulamaların ise, benzer eğitimlerin sertifika programları aracılığı ile verilmesi ve meslek yüksekokulu diploması ile sertifikaların işveren tarafından bir tutulması olduğu belirtilmiştir.

Tesis ve malzeme eksiklikleri, insan kaynaklarının yetersizliği, finansal kısıtlamalar ve eğitim-öğretim süresi de kaynak sorunları olarak gün yüzüne çıkmıştır. İki yıllık standart eğitim-öğretim süresi ve uzun yaz tatili zamansal problemler arasında yer alırken yetersiz yurt kapasitesi ve tesislerin, malzemelerin

ve araç gereçlerin öğrenci alımından sonra temin edilmesi veya tamamlanması temel barınma ve öğrenim ihtiyaçlarının karşılanamamasına sebep olmaktadır. Sınırlı bütçe olması da öğrencilerin alan gezilerine gidememesine, laboratuvar ve atölye kurulamamasına ve gerekli malzemelerin alınamamasına yol açmaktadır. Aynı zamanda, öğretmenlerden bazıları, mali sıkıntılardan dolayı öğrencileri staj süresince işyerinde denetleyemediklerinden bahsetmiştir. Finansal sıkıntılar, ayrıca, maaş düzeyindeki farklılıklar sebebiyle uzmanların meslek öğretmeni olarak istihdam edilmesini de zorlaştırmaktadır.

Katılımcılar yanlış mesleki eğitim politikalarının da ön lisans düzeyindeki mesleki eğitimi olumsuz etkilediğini düşünmektedirler. Görüşmelerde, özellikle meslek yüksekokulları, işyerleri ve kamu kurumları arasındaki işbirliği eksikliği, meslek yüksekokullarının ticaret yapmasının yasaklanması, benzer programların açık öğretim üniversitelerinde açılması ve yürütülmesi, öğretmenlerin mesleki gelişimlerinin teşvik edilmemesi ve öğretmen istihdamında akademik çalışmaların işyeri deneyimi olarak sayılması gibi düzenleme eksiklikleri gibi sorunlardan bahsedilmiştir.

Beşinci tema olarak ortaya çıkan bağlamsal problemler, okul çevresi, kaynak eksikliği ve yönetimsel sorunlar olarak üç alt tema altında toplanmıştır.

Katılımcı görüşlerine göre, okulun fiziksel ortamı ve sosyo-kültürel çevresi çeşitli sorunları beraberinde getirmektedir. Altyapı eksiklikleri olarak, başka amaçlarla inşa edilmiş binaların meslek yüksekokullarına tahsis edilmesi ve eğitim-öğretim amacıyla kullanılması, dar okul binaları ve sınıflar, sınıflardaki sabit masa ve sandalyeler, sınıflardaki ısıtma ve ışıklandırma sorunları, kirli tuvaletler ve kantinlerden bahsedilmiştir. Aynı zamanda, okulun bulunduğu il ve ilçede bulunan işyerlerinde stajyerler için yeterli kapasite bulunmaması, staj yapılabilecek işyeri sayısının yetersiz olması, ders materyallerini alabilecek mağazaların eksikliği, okul çevresinde kafe olmaması, sıhhi olmayan ve pahalı kantinler ve öğrenci yemekhanesinde sunulan kısıtlı yemek çeşidinin sorun teşkil ettiğinden söz edilmiştir.

Okulun fiziksel ortamında, tesis ve altyapı eksiklikleri öğretimi ve öğrenmeyi olumsuz etkilerken yerel halkın öğrenciye ve okula karşı olumsuz tutumu yüksek kiralara ve öğrencilerin yerel halk tarafından dışlanmasına neden

olmaktadır. Ayrıca, meslek yüksekokulları genellikle ilçe ve kasabalarda kurulduğundan bu okullarda öğrenim gören öğrenciler sosyo-kültürel etkinliklerden mahrum kalmaktadır.

Okul bağlamındaki kaynak eksiklikleri, ulusal düzeyde olduğu gibi yeterli öğretim elemanının ve teknik personelin istihdam edilememesine ve laboratuvar ve atölyelerin gerekli malzeme ve ekipman ile donatılamamasına neden olurken ders bazında yazılı kaynakların eksikliği, öğrencilerin alan ve işyeri gezisine götürülememesi ve ring servislerinin olmaması mesleki öğretimi ve öğrenmeyi olumsuz yönde etkilenmektedir.

Okul yönetiminden kaynaklanan problemlere yönelik sonuçlar, yöneticilerin öğrencilere ve programlara karşı olumsuz tutum gösterdiğini, bazı programlara ayrımcı tavır sergilediklerini ve öğrencilerin istek ve şikâyetlerini dikkate almamalarını göstermiştir. Bunlara ek olarak, bazı katılımcılar yöneticilerin ders programlarını etkin bir şekilde planlayamadıklarını ve ders saatlerini düzensiz bir şekilde dağıttıklarını belirtmişlerdir. Ayrıca, bazı katılımcılar program, öğretmen ve öğrenci değerlendirme sistemi eksikliğini vurgularken diğerleri öğretim elemanları arasında gerginlikten bahsetmiş ve yöneticilerin bu gerginliği iyi yönetemediklerini belirtmişlerdir.

Diğer bir alt tema ele alındığında, ortaya çıkan sonuçlar işyeri eğitimi, işyeri özellikleri ve personel seçimi konularında işveren kaynaklı sorunlar yaşandığını göstermektedir. Katılımcılar, işyeri eğitimi sırasında işverenin negatif tutum sergilediğini, stajyerlerin ucuz veya bedava işgücü olarak görüldüğünü ya da yük olarak algılandığını ve mesleki uygulamalar yaptırmak yerine işverenlerin öğrencilere getir-götür işleri yaptırdıkları, fotokopi çekmek ve içecek servisi gibi işlerde çalıştırdıklarını belirtmişlerdir. Aynı zamanda, bazı katılımcılar işverenleri sahte staja izin verdikleri için eleştirmişlerdir. Ayrıca, işverenlerin devlet desteğine rağmen stajyerlere maaş ödemek istemediğini belirtmişlerdir.

İşyerinin sahip olduğu bazı özellikler işbaşı eğitiminin ve 30 iş günü süren işyeri stajını olumsuz yönde etkilemektedir. Bazı öğretmen ve öğrenciler, okulda edinilen ve işyerinde gereken bilgi arasında uyumsuzluk olduğunu belirtmişlerdir. Bu uyumsuzluğun, işyerinin eski alışkanlıklar ile işletilmesi ve işyerindeki geleneksel uygulamalardan kaynaklandığı ve öğrencilerin edindiği bilgi ve

becerilerin işyeri gerekliliklerinin üzerinde kaldığı düşünülmektedir. Ayrıca, işyerinde alaylı olarak çalışan personel ile ön lisans mezunları ve stajyerleri arasında gerilim olduğundan bahsedilmiştir. Bazı katılımcılara göre, alaylı personel, öğrencilerin ve mezunların bilgisini yetersiz görmekte ve küçümsemektedir.

İşverenlerin personel seçimindeki tutum ve kararları da sorun teşkil eden etmenler arasında yer almaktadır. Bazı yöneticiler ve bir öğretmen işverenlerin yeni mezun olmuş öğrencileri tecrübe eksikliğinden dolayı istihdam etmek istemediğini ve genellikle tercihlerini lisans mezunlarından yana kullandıklarını belirtmişlerdir.

Aileden kaynaklanan sorunların ise ailenin ilgisi, değerleri ve öğrencilerin eğitimine dahil olma düzeyleri ile ilgili olduğu ortaya çıkmıştır. Ailelerin mesleki eğitime ve meslek yüksekokullarına düşük düzeyde değer verdiği ve öğrencilerin meslek öğrenmesinden ziyade Kamu Personeli Seçme Sınavı'nda başarılı olmaları ve kamu kurumlarında çalışmalarını istedikleri belirtilmiştir. Bu sebeple, aileler etkin öğretim ve öğrenmeden ziyade diplomaya odaklanmaktadırlar. Ayrıca, bazı katılımcılar, ailelerin öğrencileri genellikle kendi ilgi alanlarına göre yönlendirdiklerini ya da program ve meslek fark etmeksizin çocuklarının bir yükseköğretim kurumuna yerleşmelerini önemsediklerini düşünmektedirler. Bunun aksine, çocuklarını yönlendirmeyen ve rehberlik etmeyen aileler olduğuna dikkat çeken bazı katılımcılar, bu durumda öğrencilerin tek başlarına ve yanlış tercih yaptıklarını belirtmişlerdir.

Elde edilen bulgulara göre, yukarıda bahsi geçen sorunların bazılarına çözüm bulmak amacıyla öğretmenler, öğrenciler ve yöneticiler öncülüğünde bir takım uygulamalar yapılmaktadır.

Öğretmen öncülüğündeki uygulamalar ile ilgili sonuçlar, öğretmenlerin eğitim programı, öğretim, kaynak bulma ve öğretmen dayanışması olmak üzere dört kategoride çözüm geliştirdiklerini göstermektedir.

Öğretmenlerin raporladığı eğitim programı kaynaklı sorunlara karşı geliştirdiği çözümler eğitim programı planlama, içerik seçimi, uygulama, değerlendirme ve eğitim programı dışında etkinlik planlama şeklindedir.

Öncelikle, öğretmenler ihtiyaç analizi eksikliğini gidermek ve işgücü piyasası ile uyumu yakalamak adına ders ve program hedeflerini belirlerken işgücü

piyasasının gerekliliklerini dikkate aldıklarını belirtmişlerdir. Bazı öğretmenler ise eğitim programını piyasadaki değişikliklere göre güncellediğini, bir öğretmen de piyasa ihtiyaçlarını mezun öğrencilerle görüşerek belirlemeye çalıştığını söylemiştir. İçerik seçiminde ise, öğretmenlerin çoğu öğrencilerin eksik olduğu bilgi ve becerilere odaklanarak eksikliklerini kapatmaya çalışmaktadır. Bazı öğretmenler, mesleği tüm yönleriyle öğretmeye odaklanırken bazı öğretmenler kendi tecrübelerini anlatmayı tercih etmektedirler. Diğer uygulamalar ise, kitapta anlatılmayan bilgilerin sunumu, istihdam edilebilirlik becerilerine odaklanma ve işyerinde kullanılan yazılımları öğretmek olarak raporlanmıştır. Eğitim programını uygularken, öğretmenler kalabalık grupları ikiye ya da üçe ayırarak öğrenci başına düşen uygulama zamanını artırmaya çalışmaktadır. Resmi olarak eğitim programına yansıtmasa da bazı öğretmenler uygulama saatlerini artırmakta, programı öğrencilerin ilgi alanlarına göre branşlara ayırmakta ve öğrencilere verilen görevleri öğrenci ilerleyişine göre değiştirmektedir. Ölçme ve değerlendirme uygulamaları ise daha çok geçerlik düzeyini artırmaya yöneliktir. Stajın geçerliğini test etmek amacıyla bazı öğretmenler öğrencilere staj sonrası mülakat yapmakta, işverenle konuşmakta veya staj yerinden fotoğraf gibi kanıtlar istemektedir. Ölçme yöntemlerini çeşitlendirmek isteyen bazı öğretmenler ise yılsonu sergisi, sunum ve araştırma ödevi gibi yöntemlere başvurmaktadır. Ayrıca iki öğretmen, işyerindeki değerlendirmeyi ve eğitimi düzenlemek adına işyerinde öğrenilmesi ve uygulanması gereken bilgi ve becerilerin kontrol listesini oluşturmuş ve staj kayıt defterine eklemiştir. Ek olarak, bazı öğretmenler öğrenimi destelemek amacıyla bazı akademik, sosyo-kültürel ve yerel halkı ve öğrencileri bilgilendirme etkinlikleri organize etmektedirler.

Veri analizi, ayrıca öğretmenlerin öğretim sürecinde de bazı uygulamalara ve çözümlere gittiğini göstermektedir. Bazı öğretmenler, ders planlaması sürecinde, işyeri ihtiyaçlarını dikkate alarak, uygun örnekleri ve materyalleri araştırarak ve derse hazırlıklı giderek öğrenim ihtiyaçlarını karşılamaya çalıştıklarını belirtmişlerdir. Aynı zamanda, konu anlatımı sırasında öğrencileri dersin aşamaları hakkında bilgilendirmek, önyargıyı kırmak için dersin meslek ile olan ilişkisini açıklamak, öğrencilere dersin nasıl işlenmesini istediklerini sormak, gerekli olan ön bilgiyi anlattıktan sonra mesleki bilgiyi sunmak, içeriği basitleştirmek, konu

anlatımı yaparken işyerinde kullanılan jargonu kullanmak ve günlük konuşma dili ile ders anlatmak öğretmenlerin başvurduğu çözümlerdir. Öğretim sürecine ilişkin uygulamalar da öğrencilerin dikkatini işyerinden örnekler vererek çekmek, uygulama yoluyla öğretmek, öğrencilerin yanlışlarını sürekli uygulama yaptırarak düzeltmelerini sağlamak ve kuramsal derslerde soru-cevap yöntemini kullanmaktır. Sınıf yönetimine dair stratejilerin ise öğrencilerin ilgi ve ihtiyaçlarını anlamak ve buna göre davranmak, sınıfta işyeri ortamı yaratmak, ilgisiz öğrencilerle daha fazla ilgilenmek, öğrencilerin görüşleri ve düşüncelerini ifade etmelerine izin vermek ve bireysel farklılıkları gözetmek olduğu belirtilmiştir.

Kaynakların eksikliğini gidermek adına bazı öğretmenler, yazılı kaynak üreterek, laboratuvar ve atölyelere kendi imkanları ile araç-gereç temin ederek, birden fazla kaynaktan yararlanarak ve öğrencilere ders notu hazırlayarak sorunlara çözüm bulmaya çalışmışlardır. Sınıfların dar olmasından dolayı, bir öğretmen uygulama derslerini spor salonunda yaptığını bir öğretmen de yerel yöneticilerden okulun ihtiyaçlarını gidermesi için destek istediğini belirtmiştir. Finansal problemlerin çözümü içinse, bir öğretmen öğrencilerin ekonomik durumuna göre ödev verdiğini bir diğer öğretmen de öğrenciler için burs bulmaya çalıştığını belirtmiştir. Süreden kaynaklanan sorunların çözümü için, bazı öğretmenler öğrencilerin ders saatleri dışında da laboratuvar ve atölyeleri kullanmalarına izin verdiklerini, konuları yetiştirmek için telafi dersi yaptıklarını ve öğrencilerin ilerleme durumuna göre ödev teslim tarihini uzattıklarını söylemişlerdir.

Son olarak, öğretmenlerin eğitim programı ve sınavlara yönelik olarak bir dayanışma içerisinde bulunduğu görülmüştür. Bir grup olarak hareket eden öğretmenler, ders, sınav ve ödev içerikleri konusunda ortak karar almaktadır. Benzer şekilde, bir öğretmen de uzmanlık alanı dışındaki dersleri daha etkin öğretebilmek için tecrübeli öğretmenlerden tavsiye aldığını söylemiştir.

Öğretmenler gibi, öğrenciler de öğretim ve öğrenmeyi engelleyen sorunlarla baş edebilmek için bazı stratejiler geliştirmiştir. Elde edilen bulgular, öğrencilerin akran dayanışması, sınıf-içi ve sınıf-dışı öğrenme stratejileri ve işyeri eğitimine yönelik stratejiler geliştirdiğini göstermiştir. Öğrencilerin çoğu, öğretmenin etkin bir şekilde öğretememesi durumunda akran desteğine başvurduklarını belirtmiştir. Konu anlatımı ve sınava birlikte çalışma şeklinde ortaya çıkan akran

dayanışmasının meslek lisesi ve düz lise mezunları arasında da yaygın olduğu görüşmeler sırasında vurgulanmıştır. Sınıf-içi öğrenme stratejileri olarak öğrenciler derse hazırlıklı gelmek, öğretmeni dikkatle dinlemek ve anlaşılmadığında öğretmenin konuyu tekrar etmesini istemek gibi stratejiler uyguladıklarını belirtmişlerdir. Sınıf dışında ise, öğrenciler öğretmene soru sormak, evde çalışmak, kendi başına öğrenmek, konuyu internet üzerinde araştırmak, konuyu ezberlemek ve mesleği yapan akrabalara danışmak gibi çözümler üretmişlerdir. İşyerinde eğitimi süresince etkin bir öğrenme sağlayamayan öğrenciler, uzmanlara soru sorarak, öğrenme konusunda ısrarcı davranarak ve öğrenimi boyunca part-time bir işte çalışarak bu sorunlarla baş etmeye çalıştıklarını söylemişlerdir.

Yöneticilerinse, öğretim ve öğrenmeyi engelleyen sorunlarla baş etmek için öğrenmeyi destekleyici faaliyetler düzenledikleri, konaklama sorunlarını çözmeye çalıştıkları, öğretmenlerin mesleki gelişimlerini desteklemek için akademik çalışmalarını yapmak üzere öğretmenlere izin verdikleri, kaynak bulmak adına AB projeleri yazdıkları, ulusal düzeyde standart bir eğitim programı tasarlamak için çalışma grubu oluşturdukları, yerel halk ve öğrenci ilişkisini iyileştirmek için etkinlik düzenledikleri ve öğretmen ve öğrencilerin ihtiyaçlarını belirlemek için onlarla görüştükleri belirlenmiştir.

Çalışmanın sonuçları arasında, mesleki yükseköğretimin daha etkin olabilmesi için katılımcıların yaptığı öneriler de ortaya çıkmıştır. Bu önerilerin, öğrenci, öğretmen, eğitim programı, okul bağlamı ve politikalara yönelik olduğu görülmektedir.

İlk olarak, öğrenci merkezli öneriler öğrenci seçme ve yerleştirmeye odaklanmaktadır. Çoğu öğretmen ve yönetici meslek yüksekokullarına öğrencilerin kabulü için mülakat ve beceri testi uygulanması gerektiğini belirtmişlerdir. Bazı katılımcılar ise seçimin bir komite tarafından yapılması gerektiğini düşünmektedirler. Ayrıca, bazılarına göre, öğrenci seçiminde program bazlı kriterlerin belirlenmesi ve öğrencilerin bu kriterlere göre alınması gerekmektedir. Rehberlik ve danışmanlık hizmetlerinin de düzenlenmesi gerektiğine inanan bazı öğretmen, öğrenci ve yöneticiler liselerde bilgilendirme toplantıları yapılması ve kariyer günlerinin organize edilmesi, profesyonel danışman ve rehberlerin liseleri ziyaret etmesi ve lise öğrencilerinin işyerlerine götürülmesini önermiştir.

Öğretmen merkezli öneriler ise öğretmen eğitimi, öğretmen seçimi ve istihdamı ve mesleki gelişime yöneliktir. Bazı katılımcılar, meslek öğretmenlerinin eğitiminde mesleki alan bilgisi, pedagojik bilgi ve öğrenen bilgisine mutlaka yer verilmesi gerektiğini belirtmişlerdir. Ayrıca, meslek öğretmenlerini istihdam ederken, öğretmenler ve öğrencilerin çoğu, kişilik testi ve mesleki yeterlik testi uygulanmasını önermişlerdir. Özellikle işyeri tecrübesi olan öğretmenler meslek yüksekokullarında çalışacak öğretmenlerin en az beş yıllık işyeri tecrübesi olması gerektiğini savunmaktadır. Öğretmenlerin mesleki gelişimleri için pedagojik bilgi ve becerilere yönelik hizmet içi eğitimler verilmesi ve işyerinde çalışarak veya part-time olarak bir işyerine devam ederek öğretmenlerin mesleki alan bilgisinin güncel tutulması da öneriler arasındadır.

Eğitim programına yönelik olarak yapılan önerilere göre, meslek yüksekokullarındaki eğitim programları disiplinlerarası bir bakış açısı ile geliştirilmeli ve branşlaşmaya izin vermelidir. Ayrıca, bir yönetici meslek özelinde standart eğitim programlarının tasarlanmasını önermiştir. Bunun akabinde bir içerik portalı oluşturulmalı ve meslek bazında öğrenilmesi gereken bilgi, beceri ve gerekli kaynaklar bu portalda belirtilmelidir. Toplam eğitim ve staj süresi de program bazında öğrenilecek mesleğin gerekliliklerine göre belirlenmelidir.

Okul bağlamına yönelik öneriler ise planlama ve takip sistemlerine odaklanmaktadır. Planlama konusunda, katılımcılar, ilgisiz derslerin programdan çıkarılması ve öğrenci yükünün azaltılmasını, meslek yüksekokullarının daha merkezi ve işyerlerine yakın yerlerde kurulmasını, meslek yüksekokullarında program geliştirme biriminin kurulmasını, program geliştirme sürecine paydaşların dahil edilmesini ve programa öğrenci almadan önce öğretmen ihtiyacının karşılanmasını önermişlerdir. Mezun takip sisteminin kurulması gerektiğini düşünen bir öğretmen mezunların girdikleri iş ve çalıştıkları işyerleri hakkında bir bilgi havuzu oluşturulması önermiştir.

Ayrıca, meslek yüksekokullarının statüsünün iyileştirilmesi, işyeri eğitiminin yeniden düzenlenmesi, mesleki eğitimin akreditasyonu, dikey geçişlerin düzenlenmesi ve planlanması ve ulusal düzeyde sistematik ihtiyaç analizinin yapılmasına yönelik eğitim politikalarının yapılması önerilmiştir.

Sonuç olarak, bu çalışmaya katılan öğretmen, öğrenci ve yöneticilerin görüşlerine göre, meslek yüksekokullarındaki öğretim ve öğrenim süreçleri öğretmen özellikleri (öğretmenin bilgisi, anlayış ve inançları, işyeri tecrübesi ve bu tecrübenin güncelliği, öğretmen becerileri, davranışları, kişilik özellikleri ve mesleki gelişimi), öğrenci özellikleri (öğrenme amaçları, önceki öğrenme deneyimleri, ön bilgi, öğrenme yaklaşımları, bilişsel ve duyuşsal özellikleri ve kişilik özellikleri), ve eğitim bağlamının (kaynaklar, yönetim, okul ortamı ve çevresi, işveren ve yerel halkla olan ilişkiler, eğitim programı ve işgücü piyasası ile olan tutarlılığı) etkisi altındadır. Tüm etmenler içinde, milli eğitim sisteminin, eğitim politikalarının ve meslek yüksekokulu ve üniversite düzeyindeki yönetimin öğretim ve öğrenme süreçlerini en fazla etkileyen etmenler olduğu görülmüştür. Çalışmada ayrıca, işveren ve ailelerin de bu süreçlere dolaylı olsa da etki ettiği ortaya çıkmıştır.

Bu doğrultuda, bu çalışmanın sonuçları, meslek öğretmenin eğitiminde alan bilgisi ve pedagojik bilgi temellerinin bir arada verilmesi, bu öğretmenlerin mesleki gelişimlerinin sürekliliği için yasal düzenleme yapılması, öğrencilere ilköğretim seviyesinden yükseköğretime kadar profesyonel rehberlik ve danışmanlık hizmetinin verilmesi, ön bilgi eksikliklerinin hazırlık programı ile giderilmesi ve öğrencilerin esnek eğitim programları ile farklı rotada ilerleyebilmesi, mesleki yükseköğretimin merkezi sistemden ziyade bağımsız olarak yönetilmesi ve planlanması, meslek yüksekokullarına araştırma ve danışmanlık desteği verilebilmesi için araştırma merkezlerinin kurulması, materyal ve ekipman temininin pahalı olmasından dolayı il bazında lise ve meslek yüksekokulu öğrencilerinin birlikte kullanabileceği uygulama merkezlerinin kurulması ve meslek yüksekokulu ve meslek liselerinin aynı yerleşkede bulunması gerektiğini göstermektedir.

Bu çalışma, sonraki çalışmalar için de öneriler içermektedir. Alandaki çalışmaların kısıtlı olması sebebiyle, bu çalışmanın mesleki öğretim ve öğrenme anlayışları konusunda yapılacak diğer çalışmalara öncülük etmesi beklenmektedir. Ek olarak, elde edilen sonuçlar, ulusal ve uluslararası bağlamda mesleki öğretim ve öğrenme üzerine daha fazla çalışmaya ihtiyaç olduğunu ve bu karmaşık yapıyı daha iyi anlayabilmek ve daha detaylı ve zengin veri elde edebilmek için nitel

çalışmaların artması gerektiğini göstermektedir. Ayrıca, yerel ve ulusal düzeyde ihtiyaç analizi ve program değerlendirme çalışmalarının yapılması gerektiği görülmektedir.

APPENDIX K: Tez İzin Formu /Thesis Permission Form

ENSTİTÜ / INSTITUTE

Fen Bilimleri Enstitüsü / Graduate School of Natural and Applied Sciences ☐

Sosyal Bilimler Enstitüsü / Graduate School of Social Sciences ☐

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