SCIENTIFIC CAREERS AND IDEOLOGICAL PROFILES OF SCIENCE OLYMPIAD PARTICIPANTS FROM FETHULLAH GÜLEN AND OTHER SECONDARY SCHOOLS IN TURKEY

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ABSTRACT

SCIENTIFIC CAREERS AND IDEOLOGICAL PROFILES OF SCIENCE
OLYMPIAD PARTICIPANTS FROM FETHULLAH GÜLEN AND OTHER
SECONDARY SCHOOLS IN TURKEY

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This study attempts to explore the scientific careers and ideological profiles of former Olympiad participant scientists. The research carried out via the Internet is to understand the differences in reproductive function of different high school types. Firstly, it elaborates on the transformation of the education field into an area of struggle together with the alteration in the policies of the State as to educational understanding. Secondly, it focuses on the education understanding of the Gülen Community, which has become a part of struggle in education field to affect the reproductive function of education. Lastly, this study aims to depict the varieties in their scientific careers and ideological profiles of the former Olympiad participants who graduated from different types of high schools.

Keywords: Education, Science, Islam, Fethullah Gülen.

ÖZ

TÜRKİYE' DE FETHULLAH GÜLEN OKULLARINDAN VE DİĞER ORTA DÜZEY OKULLARDAN MEZUN BİLİM OLİMPİYATLARI KATILIMCILARININ BİLİMSEL KARİYERLERİ VE İDEOLOJİK PROFİLLERİ

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Bu çalışma daha önceki bilim olimpiyatlarına katılan bilim insanlarının bilimsel kariyer ve ideolojik profillerini incelemeyi hedefliyor. Internet aracılığıyla gerçekleştirilen araştırmanın amacı, farklı lise türlerinin yenidenüretim işlevlerindeki farklılıkları anlamayı hedefliyor. İlk olarak, çalışma eğitim alanının çatışma alanı haline gelmesini göstermek amacıyla devlet politikalarındaki değişime yoğunlaşıyor. İkinci olarak, eğitimin yenidenüretim işlevini etkilemek amacıyla eğitim alanındaki çatışmanın bir parçası olan Gülen Cemaatinin eğitim anlayışını incelemeyi merkez alıyor. Son olarak, Türk eğitim sisteminin beş lise türünden mezun olmuş eski olimpiyat katılımcısı bilim insanlarının bilimsel kariyer ve ideolojik profillerindeki farklılıkları göstermeyi amaçlıyor.

Anahtar Kelimeler: Eğitim, Bilim, İslam, Fethullah Gülen.

Aileme…..

ACKNOWLEDGMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

FIGURES

CHAPTER 1

INTRODUCTION

In this study, I will investigate the scientific careers and ideological profiles of former science Olympiad participants from Turkey. I think that type of high schools giving a special science education for intelligent students to prepare for science Olympiads affects the scientific careers and ideological postures of them in successive years. The variety of high schools participating in science Olympiads in Turkey displays an appropriate base for the comparison of these effects among them. In this sense, public high schools, secular private high schools and Gülen denominational high schools compose the sample of this study. Among these schools, Gülen schools is in pivotal point because of the education understanding of the community putting a special emphasis on knowledge of modern sciences, Islam, and Turkish- Islamic tradition.

My interest in topic was triggered by the presentation of the success of the students of Gülen schools in national and international science Olympiads on TVs and in newspapers. Science Olympiads are the most prestigious competitions that define the level of adequacy in knowledge of science and students from different high schools participate to display success of their schools in science education. Gülen denominational high schools have participated in these Olympiads and have acquired significant success for the last two decades. This success is surprising because of the perceptions about these schools. It is argued that they are making religious education and having nonscientific education strategies, which are dependent on memorizing. Olympiad success of these schools has displayed their adequacy in science education. In this sense, Gülen schools could harmonize the teaching of Islam and science in its education strategies. Hence, I questioned if these students continue their careers in scientific sphere; their scientific careers and ideological postures

1

display differences when a comparison is made with other former Olympiad participant scientists. In other words, whether these schools reproduce identities working in the scientific sphere parallel to the worldviews of the community aiming to bring up a generation having knowledge of modern sciences, Islam, and Turkish-Islamic tradition. Considering their scientific success during the high school years, I wanted to shed light upon this issue with the perspective emphasizing reproductive role of education and in accordance with this turning of the education field into an area of struggle.

This study has a particular concern on the reproductive role of education. With the formation of nation- state, schools acquired the functions of selecting and bringing up of individuals for the division of labor and the transmission of ideology. This study mainly focuses on the role of education in transmission of ideology and in accordance with this turning of the education field into an area of struggle. Schools have a social and cultural reproductive function by acquiring the role of transmitting the dominant ideology into the next generation in a social formation. In this sense, the arguments of Althusser evaluating the social reproductive role of education with his concept of Ideological State Apparatus (ISA) and Bourdieu explaining the cultural reproductive role of education with his concept of habitus display a significant framework in analyzing the reproductive role of education in transmission of dominant ideology.

Althusser sees schools as ideological apparatuses of the state by emphasizing their role in continuity of social formation carried out through the reproduction of the productive forces and the existing relations of production (Althusser 124). According to him, continuity of a social formation through the reproduction of the relations of production made possible by the state apparatuses including the 'Ideological State Apparatuses (ISAs)' functioning by *ideology* and the 'Repressive State Apparatuses (RSAs)' functioning by *violence*. For him, school as an ISA has the dominant role in the reproduction of the relations of production among the ISAs (Althusser 146). In this sense, schools contribute to this process by teaching basic and specific knowledge and techniques, and attitudes that are applied according to the job in the division of labor, and forming individuals as Subjects. First of all, schools teach

basic and specific knowledge and techniques that are directly useful in jobs of the division of labor. In doing this, schools categorize and filter the children from every class of society at different ages and different levels of 'know- how.' Each section of the children that has same age and level of 'know- how' are equipped with the tools demanded by capitalist social formation. In this sense, most of the children, in their early ages, leave the school to fulfill the role of the worker or small peasant in the production structures. Some children go scholastically further and then depart from the school to implement the posts of small and middle technicians, white- collar workers, small and middle executives, petty bourgeois of all kinds. The some segment of the children reaches the peak of the educational process and becomes either intellectual semi- employment or intellectuals of the collective labourer; the agents of exploitation including capitalists and managers; the agents of repression like soldiers and policemen; and the professional ideologists including all sorts of priests (Althusser 147). Besides learning the basic and specific knowledge and techniques, children also learn the attitudes necessary for their jobs in schools.

Teaching the expected attitude from every agent in terms of their job responsibilities is one of the aims of the schools. For Althusser, schools actually teach the children the rules of respect for the socio- technical division of labour and ultimately the rules of the order established by the class domination. Therefore, the reproduction of labor power through the schools carries out not only a reproduction of skills but also a reproduction of submission to the ruling ideology for the workers and a reproduction of the ability to manipulate the ruling ideology correctly for the agents of exploitation and repression (Althusser 127- 128). Efforts of schools in teaching necessary skills and proper attitudes lead to the formation of students as Subjects in schools.

According to Althusser, schools are the institutions in which the material existence of the ideology occurs and is practiced. The existence of ideology in practices of schools targets students in forming them as Subjects. Therefore, the aim of functioning of ideology in schools is to constitute concrete individuals as concrete subjects by hailing or interpellating. In other words, schools 'call' individuals in particular ways. This 'calling' enforces individuals thinking in specific ways about

their identities, relationships with other individuals, and their connections to social institutions and then acting accordingly (Wolff 4). Besides transforming concrete individuals into concrete subjects, schools also aim to convince subjects thinking that their subjectivities are freely generated by themselves. Therefore, subjects freely obey to the commandments of the Subject and accept their subjection (Althusser 169). They imagine that their subjectivities are internally self- generated, freely generate their belief systems, their actions, and their social institutions (Wolff 4).

Bourdieu, who expanded the social reproductive role of education by emphasizing cultural reproductive role of it, points to the early socialization period of students and selective approach of the schools in explaining reproductive function of education with his peculiar concept of habitus. According to him, habitus of a student which results from early socialization experiences in which external constraints and possibilities are internalized and acquired through continues exposure to particular social conditions and conditionings (Wacquant 5) provides the favorable bases in reproduction function of schools. For Bourdieu, habitus makes the mediation between past influences and present stimuli possible, that is, it is structured by the patterned social forces that produced it, and structuring that it gives form and coherence to the activities of an individual across the separate spheres of life (Wacquant 6). Therefore, students come to the schools with their peculiar habitus through which they judge 'what is possible or unlikely' in their educational career. Since, children develop unconsciousness ideas about their chances of success relative to their social class or social groups throughout their socialization period. Their ideas or dispositions canalize them into acting for reproducing the prevailing structure of their life chances and status distinctions through the education. Therefore, for Bourdieu, educational choices of children are dispositional rather than conscious. The parent's or other group members' educational experiences and cultural life determine children's expectations with regard to education. Thus, children of working class families do not aspire to high levels of educational attainment, because they have internalized themselves to the limited opportunities for success that exist for those without much cultural heritages (Swartz 197). Their habitus or dispositions canalize them into low-level education that they do not see chance for themselves for

high levels of education. Education field has also contributed to this perception of children with its peculiar regulations.

For Bourdieu, schools as a resource of cultural capital contribute this perception of children with its peculiar selective regulations that award the students coming from certain kinds of cultural heritages. According to Bourdieu, students' levels of success are related to their parents' cultural heritages or cultural capital. Since, students bring their cultural heritages to schools (Swartz 198). These cultural heritages include the resources such as verbal facility, general cultural awareness, aesthetic preferences, information about the school system, and the educational credentials (Swartz 75), which are effective in the successes of the students in school. Therefore, students belonging to families that have a significant amount of cultural capital are more inclined to be successful in schools or throughout their educational career. Thus, schools privilege those who have a significant amount of cultural capital or cultural heritage by separating them from those having inadequate cultural capital (Bourdieu 40). In this sense, for Bourdieu, education system reproduces social power relations by reinforcing the unequal distribution of cultural capital and performs a legitimation function by consecrating the cultural heritage it transmits and by contributing to the misrecognition of its social reproduction function (Swartz 191). Though the education system has objectivity and uniformity argument for all the citizens of a country, all students do not respond in the same way to this uniformity principle of the education system because of the differences in cultural heritages. Some students could not respond the expectations of schools because of their cultural heritages or capital. Therefore, schools protect the order by reproducing unequal distribution of cultural capital. By doing this, it opens the way for high levels of education for students having cultural heritage. Schools ratify the existing social classifications under the appearance of technical neutrality. Reproduction function of school is supported by its legitimating function. In other words, education system ratifies the social distinctions by constituting them as academic distinctions (Swartz 203- 204). It legitimates its divisions by presenting them as unsuccessful and lacking in capacity to respond to the expectations of school. In this classification, children of working class could not respond to expectations because of their cultural heritages that could

not open the way for success in education field whose regulations are likely to award students belonging to families having considerable amount of cultural capital.

In Althusser's and Bourdieu's analysis, education is an important instrument of the dominant ideology, capitalism, in reproduction of the class based inequalities. In this sense, dominant ideology, that is the ideology of ruling classes, plays an important role in shaping of the education system for the benefit of itself. Education becomes an institution through which the state, thus its ideology, institutionalizes itself in both societal structures and cognitive structures, and thus presents itself neutral with all aspects (Bourdieu 107). This function of education in transmission of the dominant ideology led to the appearance of antagonist ideologies or worldviews in the field of education with the purpose of shaping the social formation for the advantage of themselves.

The instrumentality of education in the transmission of the ideology turned the education field into an area of struggle. Varied political and social groups evaluate education as an instrument of transferring their ideology. Therefore, they struggle to frame the education apparatus in accordance with their ideology. In this sense, political and social groups aim to designate the meaning of legitimacy and desirable society paralleling to their worldviews through education (İnal 49). They struggle to be effective in the reproduction of social formation within the field of education. This struggle affects the kind of knowledge and values taught in schools.

The struggle of social groups aiming to frame the education apparatus in accordance with their ideology with the dominant ideology affects the curriculum and schoolbooks in the field of education. Knowledge that would be transferred in curriculum and schoolbooks are the result of struggles of certain classes, races, sexes and religious groups (İnal 11). In this process, the ideas and viewpoints of less powerful social groups are integrated into the discourse of dominant groups (İnal 50). Dominant groups integrate the ideas of less powerful groups in their educational discourses and policies.

6

Considering the reproductive role of education, education field in Turkey has become the area in which different religious oriented groups have struggled to form the education apparatus paralleling to their worldviews, and thus affect the process of reproduction. The educational activities of the Gülen community having a significant place in this study are one of the sides of this struggle. The community entered the education field with its schools and aimed to affect the process of reproduction.

The central question of this study is 'whether high schools affect the scientific careers and ideological profiles of their graduate scientists, who take a special science education starting from their high school education,' In other words, this study aims to analyze the reproductive role of education by comparing the success and ideological profiles of scientists graduating from different high school types.

Research of this study was applied via the Internet because most of the participants were continuing their scientific studies abroad. However, there were only few responds to my questionnaire. Besides the disadvantage of the Internet application which was the length of the questionnaire compared to their lack of time, the doubts about the questions related with their political and religious postures would affect the reply rate. In this sense, I countered very strict profiles that surprised me very much. For example, one of the graduates of Gülen community schools claimed that my study was not scientific because of my search for linkage between science and religion. Therefore, he claimed that I was disguising my real aim, and I was covering my study with the posture of science and was aiming to present as if it is something scientific. He concluded that he was lucky to be in USA for his scientific studies instead of dealing with the problems in Turkey. Since in Turkey, he would always have to face with researchers like me. This answer surprised me very much, because of Gülen's discourse putting special emphasis on science and nationalist- Islamist values. These difficulties led me to search other resources to acquire data about former Olympiad participants through the Internet. Therefore, I benefited from the curriculum vitas and web-pages of the scientists to acquire the data about the demographic profiles of them. Besides this, I searched the number of their articles and citations in ISI Citation Index. In this way, I thought that the number of articles

and citations would give an idea about the contributions of scientists to the scientific field.

This study is composed of five chapters. While the first chapter explains the method of the study, the second chapter gives a brief history of the instrumentality of education in the State policies related to Islam. State's policies towards the place of Islam in political and societal context were reflected through the instrumentality of education. This part illustrates how the nature of the State's policies towards the place of Islam in political and societal context affects the educational policies of the State. In the first part, instrumentality of education in social change efforts of the new Republic is presented through the educational policies of the State displaying nationalist and secularist characters. In the reformation period, the State changed the education system having dichotomous and multiplicity characters into centralized national education system to (re)produce the national subjects rather than religious subjects. In this way, education became an important apparatus of the State to spread its dominant nationalist ideology. In the next part, instrumentality of education in pragmatic policies of the State in multiparty period is presented through the educational policies of the State that integrated an Islamic tone to its dominant nationalist ideology. Complaints of some sections of society about the secular policies of the State led to the pragmatic concerns of the governments to benefit from these complaints for electoral support rather than democratic concerns. Therefore, the State integrated an Islamic tone to its nationalist discourses and policies, and educational policies became an instrument of the State in this way. State added religious courses to curriculums of the schools within the framework of its dominant nationalist ideology. In the last part, the effects of the neo- liberal policies and the idea of the Turkish- Islamic synthesis of the State on the increasing visibilities in the activities of the Islamic movements and in the appearance of the Islamist intellectuals are presented.

Third chapter focuses on the educational understanding of Gülen community founded by Fethullah Gülen. Gülen Community differs from other religious communities because of its special emphasis on education and widespread education network expanding abroad. First part of this chapter gives a brief history of the

enlargement in the educational activities of the community. The community began its education activities during the 1960s by organizing summer camps for students of Kur'an courses and its activities expanded during 1990s when it opened schools abroad. Paralleling to the expansion of education activities, Gülen's discourse lived a kind of transformation. His nationalist- Islamist discourse embraced the concepts of tolerance and dialogue. Second part focuses on the ideas of Gülen on education shaped by the ideas of his predecessor Said Nursi and his peculiar nationalist-Islamist posture, the features of the Community schools and Gülen's ideas on science Olympiads. Gülen envisages bringing up a generation, 'golden generation', that has the knowledge of Islam, modern sciences, and the Turkish- Islamic tradition. Education is evaluated as an important instrument for bringing up of this generation. For this aim, the Community schools embrace both the State curricula and the teaching ethics through the good representation of teachers (temsil) embodied in the behaviors of them as an education strategy. Lastly, efforts of the Community schools in science Olympiads are the practical aspects of Gülen discourse on education. Ideas of Gülen on the success of the Community schools in science Olympiads reflect his ideas on the importance of the instrumentality of education for the Community.

1. 1. The Purpose of the Study

This study intents to analyze scientific careers and ideological profiles of genius scientists of Turkey according to their high school types. In this analyze their generational features are also taken into consideration. They are the former science Olympiad participants who took special science education in the early days of their educational life by participating in the Olympiad training camps organized by TÜBİTAK (The Scientific and Technological Research Council of Turkey). First question is whether their high school type affected their contributions to scientific field. Second question is whether their high school type affected their religious and political posture.

1. 2. Field and Sample

The sample of this study is composed of scientists who are interested in basic and applied sciences and were the participants of the science Olympiad camps and

competitions organized in national level leading to participation in international level. Actually, they were the graduates of five main high school types of the Turkish education system. To reach the names of participants, I investigated the archives of BAYG (Scientists Upbringing Group), founded in the structure of TÜBİTAK to watch the talented youths proving themselves during and after their education and throughout their vocational life; to help their improvements; to provide scholarships at home and abroad and organize competitions (BAYG 3). BAYG is responsible for the arrangements of National Science Olympiads leading participation to International Science Olympiads (see Appendix A and B).

BAYG archives provided the data about the names, schools and branches- mathematics, physics, chemistry, informatics- of Olympiad participants from 1974 to 2004. So, I was able to access an enormous number of participant, school and branch names from 7 regions of Turkey and Northern Cyprus between 1974 and 2004. However, I realized that there were 23 schools frequently involved in the selection and participation processes of these competitions. These schools are located in three big cities of Turkey- Istanbul, Ankara and İzmir. Thus, students of these schools formed my investigation target in relation to the career of these scientists. These 23 schools range from public science high schools to public Anatolian high schools, normal public high schools, secular private high schools and Gülen denominational private high schools. I explored the names of 1196 students from 23 schools taking part in science competition organizations. During this exploration, I benefited from the Internet search engines including google, yahoo and alta vista to learn the future careers of these names. I reached 241 names choosing scientific career in basic and applied sciences for their future life. These names include the names of scientists participating in Olympiads from 1980 to 2000. I sent them my questionnaire through the Internet because of the distance of their locations. However, there were only a few response. Only 24 % of the scientists answered my questionnaire. The percentages of total respondents varied to a great extent for each high school type.

Table 1.1: Responses from School Types

School Types	Total Sending (TS)	Total Respondents (TR)	(TR) / (TS) %
Public Science High School	97	27	27. 83
Public Anatolian High School	44	10	22. 72
Normal Public High School	14	2	14. 28
Secular Private High School	40	9	22. 5
Gülen Denominational Private High School	46	9	19. 56
Total	241	57	23. 65

In the distribution of total respondents according to school types, the graduates of public science high schools (27.8 %) took the first place among others and they were followed by the graduates of public Anatolian (22.7%) and secular private (22.5%) high schools respectively. On the other hand, the lowest percentage of total respondents was attained from the graduates of normal public high schools (14.2%) and this lowest percentage was followed by the percentage of the graduates of Gülen denominational private high schools (19.5%) contrary to expectation.

This inefficiency of statistics lead me to think of other ways to search more about these scientists. I could just use Internet data sources including web- pages, cvs, and databases and indexes. I searched their web- pages and cvs from the Internet engines including google and yahoo. I reached 156 (65 % of total scientists) scientists' web- page information or cvs including the names of scientists replying my questionnaire. These data sources gave the information about their birth dates, academic stages and degrees, present- day university or science institution and department names, bachelor of science, master of science and phd university and department names besides their publications. Data about their birthplaces, marital status and education of spouse were very limited. In addition, I benefited from ISI Citation Index database to reach the number of 156 scientists' articles and citations. These would offer a way to analyze the studies of these scientists and would be a criterion to measure the success of these people. I could achieve to access nearly all of the articles and citations of each scientist with the help of information from their web- pages and cvs. Below, Table 1.2 displays the distribution of attained cv and web- page information according to high school types.

Table 1.2: CV and Web- page information of School Types

School Types	Total Sending (TS)	Total CV and Web- page information (CVs+WP info)	(CVs+WP info)/ (TS) %
Public Science High School	97	61	62. 88
Public Anatolian High School	44	26	59. 09
Normal Public High School	14	7	50. 00
Secular Private High School	40	18	45. 00
Gülen Denominational Private High School	46	44	95. 65
Total	241	156	64. 73

The percentage of scientists whose information was collected from web- pages, cv s and data bases and indexes was 65 %. In other words, the information of more than half of the scientists were attained through the internet. The percentage of Gülen schools' graduates among other schools was the highest (96 %) in this data collection process. The visibility of scientists' information from these schools is a sign of their excessive familiarity with internet. Surprisingly, the secular private high schools' graduates (45 %) took the last place in reaching the data about scientists through internet.

Table 1.3: Participation of School Types

School Types		Birth Dates			Total
		1962- 1969	1970- 1976	1977- 1982	
Public Science HS	N	15	21	25	61
	%	34. 1	36. 8	45. 5	39. 1
Public Anatolian HS	N	12	7	7	26
	%	27. 3	12. 3	12. 7	16. 7
Normal Public HS	N	5	2	-	7
	%	11. 4	3. 5	-	4. 5
Secular Private HS	N	12	6	-	18
	%	27. 3	10. 5	-	11. 5
Gülen Denominational Private HS	N	-	21	23	44
	%	-	36. 8	41. 8	28. 2
Total	N	44	57	55	156
	%	100. 0	100. 0	100. 0	100. 0

P< .05

Among the former Olympiad participant scientists, public science high school's graduates took the first place by composing 39 % of total participants. They were followed by the graduates of Gülen denominational private (28.2%), public Anatolian (16.7%), secular private (11.5%) and normal public (4.5%) high schools. However, the distribution of the participants according to birth dates displayed the

changing nature of school types participating in Olympiads yearly. The number of scientists graduating from normal public and secular private high schools and born after 1969 declined sharply in Olympiads towards the 1990s, while surprisingly the number of scientists graduating from Gülen denominational private high schools started to increase. The decline of the normal public and secular private high school graduates would be the result of the decrease of the science education quality in these schools. The success of the Gülen schools in Olympiads from early years of their foundation was thanks to their hardworking for advertising their schools. Therefore, the frequency observed in the participation of public science high schools depends on these schools' high quality in science education.

In preparation of the questionnaire, I benefited from previous questionnaires of Prof. Bahattin Akşit that were applied to different high schools in his studies (Akşit and Coşkun 133) besides my additional open-ended questions. I sent the first draft of questionnaire to 90 scientists to evaluate the applicability of the questionnaire and possible critiques, but this draft was criticized because of its length, 11 pages and its contents. Scientists complained about the length of the questionnaire compared to their short time to answer it. In addition, they were very doubtful about the questionnaire including questions about their political and religious inclinations. I tried to persuade them about the scientific aspect of this study. Some of them were convinced, but most of them not. I reorganized the questions by taking the complaints about its length into consideration. The question form is in the appendices part of this study.

The questionnaire included questions about demographic and socio- economic profile, causes of high school and occupation selection, effects of high school education on the personality, and attitudes aiming to understand religious and political attitudes of the scientists.

1. 3. Data Analysis

Questionnaire data of this research analyzed by using chi- square and one- way ANOVA tests in SPSS program besides benefiting from open- ended questions.

Besides the questionnaire data, the information collected from web- pages were added to the analysis of the research.

In some part of the analysis, SPSS analysis did not give significant results because of the inefficiency of the respondents. In this case, I sometimes added the results to analyze because of the importance of the tendency for the study.

CHAPTER 2

EDUCATION IN SECULAR TURKISH STATE

In Turkish modernization history, educational policies of the State were affected by the nature of its policies towards the place of Islam in political and societal context. During the reformation efforts of early Republican period and leading single party period, multiparty period and post- 1980s, education became an instrument of the State in its discourses and policies about Islam. In this sense, the nature of the link between Islam and secular State were reflected in the educational policies of the periods. In the reformation period, reforms aimed to embody a national secular identity that replaced the traditional Muslim identity (Sayyid 66) through the instrumentality of education. In these identity construction efforts, Islamic codes were linked to the nation definition as one of the constituent elements of the nation. In this sense, Islam was defined as rational religion that did not oppose to progress in western type. During the multiparty era, education became the instrument of pragmatic policies and discourses of governments in which a considerable amount of Islamic tone was integrated into nationalist discourse because of pragmatic concerns related to 'fear of communist ideology import' or 'voting anxiety.' Post- 1980 periods witnessed the increasing visibilities of Islamic movements and the firmly settlement of religious education in education system because of the neo- liberal policies and the idea of Turkish- Islamic synthesis. In these periods, excessive emphasis on Islam in the State discourses and policies led to the conservative posture of education system.

2. 1. Reformation Period: Education as Instrument of Social Change
The founders of the Turkish Republic, raised on the ashes of Ottoman Empire on October 29, 1923, evaluated the modern Western states as model of modernization in

the formation of the new nation- State. In this evaluation, imperialistic pressures witnessed during the last dates of Ottoman Empire and National Independence War were effective. According to them, an underdeveloped nation had to endeavor to make itself equal to the developed nations of the world if it did not want to continue to be exploited by them. Therefore, reforms had to aim to develop the country along the lines of Western civilization (Berkes 463). In their eyes, West proved its military, political, economical and cultural leading position among the civilizations of the world. Thus, new nation- State had to be founded according to Western standards to make its continuity possible without imperialistic pressures. In this sense, *all* political and societal institutions had to be changed and reformed by taking modern Western states into consideration. The ultimate aim had to be *'Westernized'* so as to be a modern state.

Westernization as a way of reformation in the changing global order was not a new idea in Turkish political context at that time. The Westernization movements, started in the first half of the 18th century and improved in the 19th century, in the Ottoman Empire, had also evaluated the Westernization as a way of reformation for the protection and the recreation of the Empire (Toker and Tekin 82). In the Empire, the first field for which the necessity for reformation had been felt was the military because of the leading position of Western states in regional wars. Parallel to the military field, the reformations for the political/ administrative centralization and the educational amelioration had been seen as necessity as cures for the weakness of the Empire. Westernization efforts had occurred in the political, administrative and military fields. However, these efforts had envisaged the partial reformation activities for the problems of the Empire (Toker and Tekin 82). At the end of the 19th century a new reformation understanding had been organized around the total reformation program called Westernism which was embodied by the foundation of the new Turkish Republic (Toker and Tekin 83).

Mustafa Kemal, founding father of Turkish Republic, and his stuff foresaw the *'total Westernization project'* rather than *'partly Westernization project'* in formation of the nation- State. Westernization project of the founders aimed to neutralize traditional institutions of the Ottoman past and establish new order similar to

political and societal institutions of the West. Thus, total reformation process encompassing all political and societal institutions was started with the declaration of the Republic in 1923. The reformation project of the founders aimed to establish national secular state and to embody national secular identities like the modern Western states. In their reformation efforts, *secularism* was in a pivotal point to neutralize the traditional institutions of the Ottoman past. The importance of secularism originated from their attributes to the *reason*. According to them, the leading position of the modern West was depending on the reason (Toker and Tekin 83) circumstanced by secular way of life (Kurtoğlu 206). Thus, reformation projects of founders were based on secularism, which was evaluated as the way of freeing the reason. In this way they envisaged that breaking the determinative effects of Islam in societal life would embody the secular way of life that would ensure the freedom of reason, which led to pioneer role of the modern Western states among the world's civilizations.

In their efforts aiming to break the determinative effects of Islam on cultural life of the people, reformers displayed *'double Islam'* understanding. On the one hand, Islam was defined as 'artificial and full of superstitions.' According to them, this definition of Islam was contrary to the essence of Islam and an obstacle to the progress of the Islamic world. Thus, the aim of reformation was pointed as removing this understanding of Islam. On the other hand, Islam was defined as a religion that 'does not oppose consciousness or preclude progress' (Sakallıoğlu 236). It was this definition of Islam emphasized in the secular discourse of the reformers. Likewise, their policies in some aspects performed political, legal and educational restrictions upon religion while in some others, such as the existence of a Department of Religious Affairs within the government and the expenditure of public funds on religious affairs they accommodated religion within politics. This 'double Islam' understanding of the reformers was evaluated as inconsistent to the doctrine of secularism in critiques of reformation period. Critiques argued that secularism understanding of reformers was inconsistent that it did not separate state from religion, and it did not lead religion have its own autonomous existence. According to Berkes (480), these aspects appearing as incompatible with secularism proved the products of a process of severance, without which neither a secular state nor a non-

political religion could ever come into existence on the basis of *din- u devlet*, the legacy of medieval Islam. For him, the misjudgment of these critiques originated from the uncritical acceptance of two propositions of French secularism that there were two institutions called Church and the State, and these had to be separated. However, the development of separation between the state and religion taking place throughout the Tanzimat and Meşrutiyet periods (two reformation periods of the Empire) was not in the direction of severance of ties between two distinct spheres of life, that were religion and state. Rather, for Berkes (480), it was one bifurcating a whole through occurrence of a series of change in one sector of life while another sector of life remained static that was religious sector. Change occurring in the first sector did not lead to adaptation to change in the second but led to an opposition to change (Berkes 480). In Turkish case, the institutions of the state and religion had been part of a whole rather than distinct institutions and the secularism understanding of reformers led to the severance of ties between these two institutions. In this sense, according to Berkes (482), reforms of the period were far from launching a program of extermination, reformers took measures to promote the finding of an outlook and organization within which religion could not be destroyed. For him, this unique feature of the question of secularism in Turkish context was determined partly by the nature of Islam, partly by conditions of Turkey and partly by the probing of the moral question of Revolution (Berkes 482). According to Mardin (62), ideas of Mustafa Kemal related to religion displayed consistency rather than contradiction because of his conceptions about 'nation' and 'Western civilization' as parts of his future project. Therefore, contradictions in his ideas on Islam were tactical and this posture was meaningful because of his concentration on future project (Mardin 62). Discourses of reformers displayed a tactical character against Islam that means reformers applied to Islam tactically in Westernization- modernization efforts.

Reformers attributed an enlightened and progressive meaning to Islam for the success of reformation project aiming to embody rational and secular identities that would replace traditional Muslim identity. Islam was presented as rational religion that was not obstacle to progress. Mustafa Kemal asserted in his talks that Islam was a creed worthy of human beings, it was natural and rational; it had been corrupted by the 'play actors of religion' (Berkes 483). Therefore, for Mustafa Kemal, the essence

of Islam was rational, but it was corrupted by the leading religious people. By emphasizing enlightened version of Islam, reformers aimed to embody rationalist and secular identities of nation state rather than traditional Muslim identities. Karpat also argues that reforms aimed to bring up rational secular individuals rather than traditional ones.

> " The real aim of Atatürk reforms is to change the Turkish society's life style that is traditional, sensitive and custom into rational and modern ideas and thus modernize them. The individual Republican regime wants to bring up is to be an individual approaching all issues intellectually and objectively, rationalist, far from tradition and secular" (qtd. in Eskicumalı 22).

So, reforms aimed to change both society's life style and individuals. Secularizing reforms of the period aimed to change traditional way of life and individual identities. The target was to embody objective, rational and secular individuals of society.

Secularization blow of the reformation process comprised all political and societal institutions of society to break the determinative role of Islam in politics and society. The aim of the reformation project was to carry out social change with all institutions of society. Therefore, the efforts were not limited to the political institutional changes; they also included the cultural codes of everyday life of the people. In other words, suitable to the total Westernization project, all institutions were incorporated into the reformation process. The political institutional reforms were applied by the approval of the Turkish Grand National Assembly to legitimize the reforms. In the framework of these efforts, a series of reforms were made to remove the political institutional ashes of the Ottoman past. The reformer government abolished the Sultanate, the Caliphate, the office of Şeyh-ül-Islam that was the highest religious authority in the Ottoman Empire, and the Shari'a courts from 1922 to 1924. The secular Swiss civil code of law was adopted in 1926 and the second article of the 1924 constitution, which designed Islam as the state religion, was annulled in 1928. The last legal blow of the reformation process was the insertion of the principle of

secularism into the constitution in 1937 (Sakallıoğlu 233- 234). These reforms made the base of the institutionalization of secularism in Turkish context possible.

In addition to the reformation attempts on the state apparatuses, total reformation efforts of the founders also aimed to reform the cultural codes of society to embody the secular subjects of the nation state. In this sense, reforms also tried 'to penetrate into the lifestyle, manners and behavior and daily customs of the people, and to change the self- conception of the Turks' (Göle, Authoritarian 21). The reformation attempts like outlawing Fez that was originally European and not Muslim headgear but was attributed religious value later, voting rights of women and adaptation to the secular Swiss civil code, and the visibility of reformers within their Western clothes could be evaluated as efforts of reformers to change the cultural codes of society according to Western standards. Reforms aiming to Westernize cultural codes of society were not a new condition, the reformation efforts of Sultan Mahmud II (1808- 39) had also aimed to replace certain traditional cultural codes of society by West oriented ones besides his acceptance of the superiority of the material features of the West. Mahmud II had opened the way for the acceptance of Western attire, and specific social practices relating to taste and like. He had been an enemy of long beards, and traditional Turkish saddles and style of riding; he had appeared before the people and became a public orator and ribbon cutter; and he had begun to learn French; and he had imported European musicians. Some people had followed his ideas on cultural matters. The turbans, ample trousers and old- fashioned shoes had been dropped, beards had been shortened or shaved completely, and European pants had been adopted (Berkes 122). According to Berkes (468), unlike to the reforms of the last decades of the Empire on cultural codes of society, Republican reforms aimed to make unification in cultural life possible. Prior reforms had created a series of dichotomies based on separation. However, Republican reforms aimed at unification. The writings of the period criticized the dichotomies in life, ranging from law to musical taste and personal attire (Berkes 468). Therefore, reforms aimed to make unification among the cultural codes of society possible. For Göle (Authoritarian 22), penetrating attempts of Republican reforms in cultural codes were directly related to the civilization perception of the Westernist reformers who evaluated modernization as conformation of Western civilization with both spiritual,

cultural and material, technological aspects. Both spiritual and material aspects of the Western civilization had to be confirmed to 'reach the level of contemporary civilization, that is, the level of Western civilization' (Göle, Authoritarian 22). Confirmation of the cultural codes of Western civilization necessitated the penetration of the reforms into lifestyles, manners, and daily customs of the people. The penetrating effects of the project were felt in identity construction, and the definition of ethics and the aesthetics. The Westernist civilization project of the reformers defined the 'civilized' and 'uncivilized' manners in the daily lives of the people. Ideal behaviors of the civilized Republican individuals defined as 'wearing neckties, shaving beards and mustaches, going to the theater, eating with fork, husband and wife walking hand- in- hand in the streets, dancing at balls, shaking hands, wearing hats in the street, writing from left to the right, and listening to classical Western music (Göle, Authoritarian 23). The definition of the 'civilized manners in daily lives' foresaw the Western standards as an appropriate way to be a culturally modern individual. In embodiment of the individual equipped with the spiritual and material tools of the Western civilization and the success of the transformation, reformers attributed education an important role.

Education was seen as an important tool in transforming society and bringing up the new generation suitable to values and needs of new society (Eskicumalı 22). Therefore, it was thought as an instrument of being a modern society which transformed its religious collective identity into national collective identity (İnal 26) or Muslim subjects into secular national subjects. The importance attributed to the education system in reformation project necessitated the change of education system itself. Education system of the Ottoman Empire had been in separated character. It was displaying a dichotomous character with its religious and secular educational institutions, and having multiplicity in educational authority owned by the Muslims, non- Muslims and foreigners separately. There had been three educational institutions called, *mektep, medrese* and *enderun* besides the schools of minorities and foreigners. *Mekteps* were the schools which taught Kur'an and were supported by the Vaqıfs. *Medreses* were the places in which the considerable amount of religious education was given and brought up the members of ulema and the teachers necessary for other educational institutions. *Enderun* had an elite structure when it

was compared with the medreses and was bringing up polite and knowledgeable men for the service of palace. While the statesmen were brought up in enderun, ulema was being educated in medreses. In addition to these school types, mosques and tekkes (the lodges of the Sufi orders) functioned as education institutions for the education of common people (Akşit and Coşkun 397). In this sense, dichotomous character of education institutions, and multiplicity in authority of education were evaluated as obstacles for the goals of reforms aiming to increase national and secular values in the framework of modern nation- State. Therefore, the first attempt of reformers was to unify and consolidate the education system under the control of the nation- State. *The Law of Tevhid-i Tedrisat* (the Law of the Unification of Education), affirmed on March 3, 1924, terminated the dichotomous and multiple character of the education system in new nation- State. The unification of the education system under the Ministry of the Education was made possible with this Law. The multiplicity of education institutions under the divisions of religious and secular schools, and of Muslim, non- Muslim minority and foreigner schools was terminated with unification of the education institutions.

Tevhid-i Tedrisat was a radical law aiming to unify all education institutions of new nation- State. At the first moment, even secondary and high schools of military became to be governed under the authority of the Ministry of Education. However, a year later military schools were put under the authority of the Ministry of National Defense. For Sakaoğlu (169), the execution that put military schools under the authority of the Ministry of Education aimed to make the closure of medreses (religious schools) by themselves possible, since it was impossible to see medreses under this kind of authority. The Law permitted the opening of secondary level schools aiming to bring up imam and hatip. However, 26 İmam- Hatip schools closed until 1934 though there were not any restrictions upon them (Sakaoğlu 170). Within three years after the acceptance of the Law, the religious courses and the teaching of Arabic and Persian language were removed from the curricula. The religious symbols and religious doctrines aiming to inculcate different national feelings were prohibited in colleges and other foreign schools. The courses of history, geography, knowledge of homeland (Yurt Bilgisi), and Turkish besides foreign language or

minority language became obligatory courses in minority and foreign schools (Sakaoğlu 172).

The Law of Tevhid-i Tedrisat was planned to form a unified education system whose aim was to embody national and secular identities of the modern state. The sign of the contents of the Law was given during the National Independence War. On June 1921, Mustafa Kemal convened an educational convention in Ankara. He emphasized the embodiment of national education for the future.

> "… I firmly believe that our traditional educational methods have been the most important factor in the history of our national decline. When I speak of national education I mean an education that will be free from all traditional superstitions as well as from all foreign influences, Eastern or Western, that are incompatible with our national character" (qtd. in Berkes 476- 477).

As understood from the words of Mustafa Kemal, reformers envisaged a *'national education'* rather than religious education or education under the influence of foreigners/ foreign ideologies. The education system of the new nation- State would be in national character aiming to bring up new national identities. In this sense, the Law achieved the foresights about the form of the education system. It removed the religious educational institutions called medreses, and put the all Muslim, non-Muslim, minority and foreign schools under the authority of national education system.

Parallel to this national education understanding, schoolbooks were changed in 1924. In this alteration, subjects related to the Ottoman Empire were removed while the subjects related to National Independence War and the declaration of the Republic were added to the curriculum and schoolbooks. Likewise, the subjects of schoolbooks of 1930s included the presentation of Mustafa Kemal and new regime, the party program and the successes of the Republican People's Party, Turkish Revolution and the principles of the constitution. In addition, ideas related to Turkish History Thesis and Sun- Language Theory having racist tones and unscientific character were added to the schoolbooks (İnal 28). During the reformation period,

the schoolbooks were in nationalist character and in some cases this nationalism was expanded to racism with the addition of racist subjects into the schoolbooks.

Besides the unification of the educational system agreeable with the secularist and nationalist ideals, the mediums of education were also reformed. In that sense, the replacement of the Arabic script by the Latin script in 1928, the purification of the Turkish language from Persian and Arabic influences, the recreation of the Öztürkçe language (pure Turkish) secured by the Turkish Linguistic Society in 1932 (Göle, Secularism 49- 50) were the reforms aiming to change mediums of education.

Among the reforms on mediums of education, the replacement of the Arabic script by Latin script was the most radical reform. It was said that the main aim of this reform was to make *mass education* possible. Since the Latin script was plain and simple, it was seen satisfactory to make an increase in literacy rate possible (Sakaoğlu 190). After the change in script, government started a mass education program including all citizens of the State. Since, reformers evaluated the expansion of literacy for the guarantee of the reforms (Ahmad 101). Compulsory primary education was initiated for children. Besides this, the people between the age of 15 and 45 became students of the National Schools (Millet Mektebi) to learn new script (Sakaoğlu 192). Literate people were called to teach the Latin script to illiterates (Ahmad 101). Besides the government, military also contributed to this mass education program by teaching Latin script to the soldiers who were from villages and fulfilling compulsory military duty. When these soldiers returned to their villages, they taught it to other villagers (Ahmad 103). Thus, with the change in alphabet, literacy was disengaged from privileged position. In other words, all people from cities and villages could become literate persons (Sakaoğlu 189). By accelerating the process of literacy and education, this reform radically affected the structure of the Turkish society. The literacy rate increased rapidly in successive years of the replacement. In the first years of the Republic the literacy rate was extremely low. According to 1927 census of population, less than 9% of people were literate (Ahmad 101). Latin script and mass education program made the increase in literacy rate possible. The literacy rate was above 20% in 1935, while it was above 30% after 1945 (Ahmad 102).

According to Ahmad (100), the replacement of the Arabic script by Latin script was the most radical reform that runs counter to the tradition in reformation context. Since, with the replacement, the literate people were broken off from their Ottoman pasts and became illiterate persons with this change of the script. Therefore, for Ahmad (100), this was an alienated practice that broke the ties with past. For Sakaoğlu (193), despite the successes of mass education program, the government and the Ministry of Education disregarded the final conditions of this apolitic literacy movement. People forgot what they learned because of the intensity of their working terms in uneasy economic conditions. In addition, they could not acquire newspapers or journals in their villages (Sakaoğlu 193). They lived deficiency of time and material to improve their education after learning the Latin script.

Behind these reformations on the education system and the mediums of education, there was an expectation of founders related to the instrumentality of education in increasing secular and national values (Akşit and Coşkun 395). Education system would have a role to change the religious oriented thoughts, the traditional Ottoman lifestyle and to replace these thoughts and lifestyles with secular and modern value systems and lifestyle. Therefore, this education system would embody a new generation having secular and national identities rather than communitarian-Ottoman identities (Eskicumalı 23). Unified education system of the era focusing on bringing up a generation that had strong national identities and civilized manners passed over the religious education which lost its value, in Bourdieu's sense, as a resource of cultural capital.

However, the appearance of an opposition party called Democrat Party (DP) with the beginning of the multiparty period in 1946 as a powerful opponent to the Republican People's Party (RP), governed the country as single party during the reformation years, and the increasing societal demands coming from some sections of society about the religious education enforced the government to take measures about religious education with the sense of voting anxiety. The deficiency of religious education created dissatisfaction among the society and this dissatisfaction was reflected in National Assembly through the deputies. People complained about the lack of imam (prayer leader) that could be summarized by motto of 'I could not find

a man to wash the dead!' (Kafadar 354). This complaint was considered seriously by the government of Republican People's Party because of the entity of the opposition party in the National Assembly in the atmosphere of the multiparty period. By taking into consideration these complaints, a commission from National Assembly approved the bringing up of imams within ten-month courses in 1948. In addition, weekly two- hour optional religious courses out of curriculum for fourth and fifth grade primary school students depending on the consent of family were added to educational program and Faculty of Divinity in the structure of Ankara University was opened in 1949 (Sakaoğlu 256). Beginning of the regime of the multiparty in 1946 enforced the Republican People's Party governance to make a concession (Sakaoğlu 256) regarding its secular posture in educational matters against the opposition of the Democrat Party because of its voting anxiety.

2. 2. The Multiparty Period: Education as Instrument of Pragmatic Policies

The governments of the Republic in multiparty period made a concession on secular educational policies of the reformation years from 1950 when the Democrat Party (DP) won the first elections of the multiparty period to 1980 when the politics of Turkey lived third military intervention. During these years, the policies of two right-wing, conservative party governments including the Democrat Party (DP) and the Justice Party (JP), and one left- wing, democratic party government that was Republican People's Party (RP) opened the way for integration of religious education in curriculum of the schools. In this way, pragmatic policies of governments originated from 'voting anxiety' were effective.

The policies of the governments of two right- wing conservative parties related to religion were arranged by taking into account pragmatic expectations rather than democratic concerns. Their pragmatic expectations that defined the policies towards Islam in their governance originated from the 'fear of communist ideology import' and the 'voting anxiety.' During the governance of DP and JP governments, the policies aiming the prevention of import of communist ideology from the neighbor Soviet Union composed the political agenda of the State. Turkish societal context was suitable for the expansion of the communist ideology because of the uneven economic development that was gone through. Industrialization process started in

26

1950s caused the unequal distribution of wealth and hardened the socio- economic inequality among the social classes. Therefore, dissatisfaction among the disadvantaged groups expanded and composed the suitable climate for possible communist ideology import. Anti- communist stances of these two right- wing governments evaluated Islam as a counter balance to the possible communist ideology import. Islam was seen as a counter balance to the import of the ideology of communism (Sakallıoğlu 231- 251).

Second pragmatic approach that determined their policies towards Islam was the 'voting anxiety' of the politicians. The DP and JP governments benefited from Islamic discourse to increase their chances in elections. These parties used Islam in their discourses to expand the number of their electorate and reply the expectations of their bases in placing the Islamic cultural codes in political context. Electoral base of these parties consisted of unsatisfied people, especially villagers, complained about the policies of the single party period. Therefore, discourses and policies of these parties took into consideration the demands of their bases. In addition, their closeness to the religious orders, tarikats, could also be evaluated as a result of their 'voting anxiety.' The adherents of tarikats, especially Nurcus, were seen as possible supporter electorates. In this sense, these parties attributing importance to winning their sympathy used Islamic discourses (Sakallıoğlu 231- 251).

In Turkish political history, multiparty era and especially the start of the government of the DP was usually signed as the beginning date of the relapse of the Islam in political sphere contrary to secular policies. The DP's policies and discourses making the appearance of Islamic codes in political sphere possible were the source of these interpretations. Therefore, DP was accused of being tolerated against Islam and therefore undermining the secularist stance of the State. These accusations were supported by the policies of the Party taking into consideration pragmatic concerns. These policies taking critiques were the expansion in the budget of the Directorate of the Religious Affairs, the broadcasting of Kur'an readings over the state radio and the lifting of the ban on the call of the *ezan* (call to prayer) in Arabic (Toprak 123). For Çavdar (29), these policies were the result of the DP's 'populist policies' that led to abuse of religious sentiments of the people. 'Voting anxiety' of the Party

addressed to the religious sentiments of the people to make the support of people from different social classes possible. Nevertheless, policies of the DP government related to Islam did not target the political institutions of the State rather the place of Islamic codes in official politics of the country (Sakallıoğlu 237) within its populist aspect. In this sense, the DP polices did not aim to change the political institutions of the Republican State that was exemplified by pursuing court cases against reactionaries, Islamist publications, and Said Nursi the leader of the Islamic Nurcu group and passing an 'Atatürk Bill' to fight the oppositions towards the policies of the Mustafa Kemal (Sakallıoğlu 237). Therefore, it would be said that the policies of the DP related to Islam targeted the place of Islamic codes in politics rather than political institutions. In this matter, 'voting anxiety' and 'the fear of danger of communism' were effective in its use of Islamic discourse.

Education policies of the Party were a reflection of the instrumental role of education in using an Islamic discourse for pragmatic concerns. These pragmatic concerns led to the 'show oriented' policies about education, thus caused stagnation in educational system that had been improved by the policies of the reformation period. For example, opening of İmam- Hatip schools in 1951 was represented by the demagogy of 'rescue from an atheist governance' rather than the cause of providing the needs of Muslim people (Sakaoğlu 259). During the governance of the Party, İmam- Hatip schools (preacher schools) were set up in İstanbul, İzmir and Konya in 1951. These schools had two terms vocational school status including four years secondary school and three years high school (Sakaoğlu 263). The religious courses whose election depended on the family's will were taken into curricula of fourth and fifth classes of primary schools. In 1956- 1957 education year, elective religious courses were put for the first and second classes of secondary schools (Sakaoğlu 263). In 1959, High Islam Institute (Yüksek İslam Enstitüsü) was opened in İstanbul to bring up teachers to İmam- Hatip and secondary schools (Kafadar 354). In addition to these reforms, school types started to vary after 1950s, which would live its peak level by establishment of Gülen denominational private schools in 1980s. Furthermore, the Kur'an courses started to appear during the DP's governance with the argument that their aim was to bring up more concentrated hafızs (familiar with Kur'an by hearth). This development was contrary to Law of Tevhid-i Tedrisat. The doors of the

courses were opened illegally for small children who were at the age of compulsory primary school education. These children could read Kur'an but not Arabic and Turkish, and they had to pass an examination for primary school degree to have full employment in the state institutions (Sakaoğlu 266).

The serious thinking of reformation period on education came to an end during the DP's governance. The DP's period witnessed the unplanned opening of schools with the voting anxiety (Sakaoğlu 259). Therefore, the quality of education was disregarded while the quantity of it regarded. The number of schools deprived of staff and building and educational facilities was increased. Thus, the number of unemployed young people aiming to enter university increased (Sakaoğlu 266- 267). Besides the increase in the number of unqualified high schools, the schoolbooks of the period reflected conservative character rather than democratic concerns. In the schoolbooks, the cast of the 'traditional person' displaced the profile of the 'self-confident citizen' of the reformation period's schoolbooks; such as the woman was pictured as a housewife, a mother and a wife in traditional sense. Though the word of democracy was seen many times in schoolbooks (İnal 30); the glorification of traditional values displayed the vague character of the word of democracy in schoolbooks.

The pragmatic concerns in policies and discourses of the DP governance continued also during the governments of the JP. Islam was seen as a counterbalance to communism and a medium to expand the electorate base of the Party. Education was also evaluated as an instrument in using an Islamic discourse for pragmatic concerns. The JP promised obviously that it would expand the religious education during its governance. In its program, the first JP government declared that the government would attach importance to the religious education, work for bringing up well educated religious men and improve their life conditions (Kaplan 234- 235). According to the JP, loyalty to its nation and religion was inevitable character of the Turkish nation. Therefore, it presented itself as defenders of this loyalty and argued that they were the representatives of an understanding opposing to the interferences to this loyalty right with their laws and philosophy (Kaplan 237). Parallel to its discourse on Islam and religious education, the number of İmam- Hatip schools was

increased at its governance periods. Though there were only twenty- six İmam- Hatip schools until 1965, the JP opened forty- six new İmam- Hatip schools between 1965 and 1971, when it was only power in government, and 147 between 1975- 1977, when it led a coalition government (Sakallıoğlu 239). In addition, optional religious course was added to high school curriculum in 1967- 1968 education years (Kafadar 354). The JP integrated a considerable amount of Islamic tone to its nationalist discourse and policies obviously because of its pragmatic concerns, and education was an instrument of it in its integration of an Islamic tone to its nationalist discourse.

The educational policies aiming to teach religion in schools were not only policies of the right- wing conservative governments but also the governments of the RP under the presidency of Bülent Ecevit took decisions in this way in multiparty period. The government program of the RP in 1974 emphasized that ethics education would be suitable to the traditional and national characters of Turkish nation. In this sense, the RP tacitly accepted the teaching of religious values besides the national values. The government of the RP in 1974 decided to put obligatory ethics courses to the curricula of the primary and secondary schools. Therefore, the RP government did not avoid the teaching of religion in schools (Kaplan 245). The government program of the second Ecevit government that could not receive a vote of confidence in National Assembly in 1977 evaluated religion as a secret source in provision of national unification, development efforts, interior peace, and improvement of fraternity. The government program of the RP integrated nationality and religion, and attached importance to religion in societal life; therefore, the RP labeling itself as democratic leftist party gave a special emphasis to religion like its predecessors (Kaplan 252) in its nationalist discourse and voting anxiety was effective in its discourses and policies related to education.

In sum, Islam became an important part of the policies and discourses of the governments between 1960 and 1980. The pragmatic expectations taking into consideration electorate base were important in integration of an Islamic tone to nationalist policies and discourses. In this sense, education took an instrumental role in integration of an Islamic tone to the nationalist discourses and policies of

governments. Unlike to the policies and discourses of the reformation period in which religion depended on the individual consciousness, the policies and discourses of the multiparty period use an Islamic tone for pragmatic purposes in public sphere. Therefore, education became an important instrument of the governments in their pragmatic concerns. Schools became the places in which religion was taught besides the national values.

2. 3. Post- 1980s: Education Under Neo- Liberal Waves

During the 1980s the liberalization wave affected the world politics with its emphasis on market economy and individualism. Turkey as a third world country took its place in this liberalism stream by adjusting its policies to liberalism. The State's policies acquired a liberal character with the effects of the global conjuncture. Liberal policies of the term increased the demands of the ethnic, and Islamic social and political groups that challenged the modernization formula of the national capitalist state and its bureaucratic domination, and state- society linkage. These social groups insisted on a new social consensus based on cultural differences. Therefore, in new liberal conditions, state had to reestablish its legitimacy on a new basis rooted less in the secular- modernist project and more in local identity, Islam (Sakallıoğlu 245). For this aim, the idea of Turkish- Islamic synthesis was embodied. The idea of Turkish- Islamic synthesis envisaged the empowering of Islam as an unchanging genuine of culture within the boundaries of national unity and culture by taking the advantage of consoldative role of Islam and by protecting Islam's statue as a national source that feeding the societal ethical and cultural values (Kafadar 355). In other words, the State tried to form a national culture that was based on Islam to be protected from the devastating effects of liberalism on culture in the idea of Turkish- Islamic synthesis. The idea was effective in the policies of the military regime in power from 1980 to 1982 and succeeding Motherland Party (MP) governments from 1983 to 1991.

In this sense, the idea of the Turkish- Islamic synthesis was reflected in educational policies that led to the conservative character of education. Religious education was placed in national education system firmly. The Law of National Education accepted in 1973 was changed in 1983 with an act. In this change religious education, which

was elective in original form, was made mandatory in the curriculums of primary, secondary and high school education (Kaplan 268). In addition, the graduates of İmam- Hatip schools (preacher schools) given the high school status with the Law of National Education accepted in 1973 had right to enter the all branches of university education besides the faculty of divinity, except military schools (Kaplan 269- 270). Furthermore, religious orders including Süleymancı, Nakşibendi and Nurcu increased their informal education activities. They were allowed to open Kur'an courses and youth hostels to educate the poor children coming from provincial and rural areas to be educated in the cities (Sakallıoğlu 244). In addition to this, Gülen religious community started its formal educational activities by opening private schools and their education activity increased enormously in successive years. Therefore, post- 1980s witnessed the struggles of different religious oriented groups in education field. Religious communities entered the education field with their peculiar worldviews and education methods. In addition, the dominant ideology of the State integrated religious worldviews firmly in the form of obligatory religious courses, paralleling to the demands coming from some sections of society embodied under the effects neo- liberal policies. The field of education became a struggle field in which different groups tried to be effective in social reproduction process.

Parallel to increasing visibility of Islam in educational sector, a new generation Islamist intellectuals appeared in this period with their alternative visions of modernity and Islam. These intellectuals were different from the proceeding Islamist with their modernity visions and educational background in which they acquired the cultural capital.

The modernity understanding of this new generation of Islamist intellectuals was different from the late 19th and early 20th century modernist Islamists who were in Bulaç' s definition 'ulema- aydın' (Bulaç 56) and supported the *partly Westernization project* as a cure for the weakness of the Empire against the Western states. While the first generation Islamist intellectuals was looking after the answers of the questions that 'why was the Islamic world in backwardness?', 'how was an accommodation to be reached between Islam and the West?', 'how were Western science and technology to be integrated within an Islamic society by excluding the

socio- cultural aspect of the West?', they rejected any attempt to justify Islamic principles from the standpoint of Western perspective that lead to apology position for Islam (Meeker 190; Bulaç 53- 59-60). According to them this justification attempt of the first generation was paradoxical in looking after Western concepts like individualism, secularism nation- state within Islamic concepts and means like Sünnet, içtihat, and cihad (Bulaç 60). Therefore, they tried to explain modern concepts and theories in order to criticize and falsify them and then to propose alternative ideas derived from Islam. In this effort, they questioned the terminology used by both the secularists and the Islamists and indicated that this terminology was embedded in a modernity that is profane and secular, a product of an alien culture and civilization (Dağı 137). Their modernity vision and anti- Westernist stance differentiated them from the first generation Islamist intellectuals and the secular elites of the Republic, who evaluated the 'partly/ total Westernization.'

Besides their definition of modernity, these two generations of Islamist intellectuals were also differentiated according to their early socialization conditions and cultural capital acquired by education. The first generation of Islamist intellectuals like Namık Kemal, Mehmet Akif (Ersoy), Said Nursi, Ali Suavi, Ziya Paşa acquired the deep-rooted and strong Islamic knowledge embraced Islamic sciences like Kur'an, tefsir, hadis, kelam, fıkıh, tasavvuf, siyer and history; for Bulaç that signed their ulema character. In addition to this, they used the parameters of Western enlightenment like progress, rationalism or other philosophical concepts and analysis; for Bulaç that indicated their 'aydın' character. They took traditional or modern education in acquiring this intellectual equipment (Bulaç 56). However, second generation Islamist intellectuals like Ali Bulaç, Rasim Özdenören and İsmet Özel called as aydın had not extensive mastery in Islamic sciences as the first generation. They were usually engineers, lawyers, writers, journalists, and politicians that acquired cultural capital in Western type of schools (Bulaç 67). This second generation was the product of socio- economic conditions of 1950s in which a big migration wave was lived towards the urban centers that made access to secular education and opportunity of upward social mobility possible (Göle, Secularism 52- 53). Therefore, these intellectuals as children of peripheral groups had a degree from one or more programs of secular higher education in universities of Ankara and

Istanbul, and knew one or more European or Middle Eastern language other than Turkish, and also had a serious interest in Western literature, philosophy, or social history. Thus, in their works there was more reference to Western writers and Western scholarship than to Islamic authorities or the sources, though they discussed the latter in detail (Meeker 190-191). For Göle (Secularism 54), these new Islamist intellectuals were the sign of the embodiment of the paradoxical and ambivalent nature of contemporary Islamist movements. Since, the modern secular education system and the Islamist movements to which they belong made their professional identity and social visibility possible (Göle, Secularism 54). They are the products of secular education of Republic and Islamic identity of their provincial background. These second waive Islamist intellectuals brought to secular schools their peculiar habitus whose parameters were defined by their provincial background affecting their early socialization period. Though continuing effects of external world that was secular school environment on habitus, the effects of early socialization period on habitus did not disappear during their scholastic career. The relative autonomy of education field defining its own hierarchical regulations opened the way for the successful students, having provincial background and adopting the norms of education field.

The increasing visibilities of Islam in political and societal spheres brought about the fourth military intervention called as a post- modern intervention on February 28, 1997. This was the result of the danger perception of military from the increasing visibilities of Islam in public sphere that led the government of an Islamic oriented party called Welfare Party (WP). Intervention affected the field of education with its new policies. As a result of the decisions of the National Security Committee of February 28, eight years uninterrupted primary education became law in August 18, 1997. By this law, İmam- Hatip high schools, which were qualified as the backyard of the Welfare Party, came to harm because of closure of its secondary branches. The increasing number of İmam- Hatip schools since 1950s was seen as the cause of WP government. By the application of eight years uninterrupted primary education, the number of the İmam- Hatip schools and their students decreased rapidly in the successive years. While the number of the İmam- Hatip schools was 601 in the beginning of the 1996- 1997 education year, it was 558 at the end of 2002. Likewise,

while the number of the students in İmam- Hatip schools was 192.727 in the beginning of the 1996- 1997 education year, it was 71.583 in 2001- 2002 education year. This was the result of the increasing state control on the İmam- Hatip schools to prevent their improvement (Akşit and Coşkun 401).

Changing of the educational policies according to nature of politics towards Islam is the sign of the instrumentality of education in politics. In this sense, policies of the State towards Islam in general and education in particular have displayed variability according to balance of power in politics. Therefore, the State has presented opportunities in education field according to socio- political conjuncture. This led to the transformation of education filed into the field of struggle by the multi party period.

CHAPTER 3

FETHULLAH GÜLEN EDUCATIONAL MOVEMENT

Post- 1980s neo- liberal policies and the idea of 'Turkish- Islamic synthesis' led to the increasing visibilities in activities of Islamic movements in public sphere. Gülen Community departed from the Nurcu Community benefited from the opportunities presented by the political sphere with the help of its nationalist- Islamist, pro- State posture. The community continuing its existence until that time through informal networks appeared in the public sphere with its economical, educational and media activities.

3. 1. Enlargement of the Gülen Community

Fethullah Gülen, spiritual leader of the Community, was born in 1938 in Korucuk, a village of Erzurum and brought up in the classical system of education. He received Medrese education (religious school) and visited the tekke (the lodges of the Sufi orders). In 1957, he was introduced to the Said Nursi's writings and became the follower of Nursi (Agai 32) founder of the Nurcu religious community. Besides the writings of Nursi, he read the books of socially conservative, politically nationalist intellectuals such as Necip Fazıl Kısakürek, Nurettin Topçu and Sezai Karakoç (Yavuz, Towards 593).

 Most of Gülen's life passed in İzmir where he was appointed as imam (preacher) by the State. His fame disseminated during these years because of his effective sermons. These sermons were very sensitive in which he was using his senses while he was speaking. Supporters of him began to gather around him during this time. He organized summer camps for students of Kur'an courses in 1968, 1969, and 1970 in İzmir. Gülen resembled these camps to barracks in which the future generation was

brought as disciplined as soldiers (Başkan 852). He taught the students basic Islamic principles, classical Islamic knowledge, the writings of Said Nursi, and the ways to maintain one's Islamic identity in a secular environment in these camps (Agai 32). For Gülen, these camps became like medreses because Arabic was the education language and many books were read there. In addition, he defined these camps as disciplined and organized units in the struggle against communism (Başkan 852). In the successive years, Gülen attracted people who supported his ideas financially and contributed the movement with their labor. They built community houses, *light houses*, where Islamic education was taught on the basis of Nursi's writings and Gülen's teachings (Agai 32). The nucleus staff of the community who were strongly anti- communist and nationalist was trained informally in the summer camps and 'light houses' (Yavuz, Neo-Nurcular 303). For Başkan (852), Gülen's discourse to communism was intolerant and undemocratic during the 1960s and 1970s. He and his friends established an 'Association to Fight Communism.' He writes in his memoirs that: "there was a demonstration with banners depicting Marx and nobody interfered with this demonstration. My blood ran cold in the face of this demonstration. I asked myself 'where is the military? Where are the police'" (Başkan 852). Gülen's desire to see the military or police interference to prevent a Marxist demonstration was the sign of his undemocratic and intolerant posture during 1960s and 1970s. The first media organ of the community the journal 'Sızıntı,' which promoted a synthesis of scientific knowledge and Islam, was started publication by students of the light houses in 1979. Through this journal Gülen expressed his views to a broader public, because the journal was not limited to the Gülen or Nurcu Community but attracted a large popular readership. Therefore, Gülen's discourse shifted from individual- oriented approach to society- oriented approach (Agai 33). Gülen's views about education and its possible role in Turkey started to be framed in these years. His education oriented approach to the conditions of Turkey and expansion of community network on this way led to the fragmentation of Gülen Community from Nurcu Community (Agai 33).

During the 1980s, Gülen Community displayed a fast development in the fields of education and media sector with the help of neo- liberal policies and Turkish- Islamic synthesis idea of the State that led to the attach of an Islamist aspect to the State's

discourse. Gülen's support of 1980 military coup and the idea of Turkish- Islamic synthesis made the activities of the Community in the public sphere easy without facing the State's opposition. Since, Gülen's Islamist, nationalist, and pro- state discourse was in accordance with the policies of the State (Agai 34). Post- 1980 governments permitted the operations of denominational private schools within the secular institutional milieu. Gülen urged his followers to establish private elementary and high schools whose instruction language is English rather than supporting public religious schools, namely İmam- Hatip schools or founding Kur'an courses (Şen 101). According to Gülen, educating new elite in secular schools influenced by his ideas was very important, because the elite would be in a position to shape society through their activities (Agai 33). The policies permitting private educational institutions led to the establishment of private schools, dormitories, and "dershanes" of the Community. Besides the permissive policies of time, the neo- liberal market orientation made the appearance of businessmen groups supporting these educational activities possible. In this period, the vakıf belonging to the Community made investments in education sector by building private schools, dormitories and 'dershanes'. In addition, the media organs like the newspaper 'Zaman'; the journals of 'Aksiyon,' 'Ekoloji,' 'Yeni Umut' and 'The Foundation'; the television station 'Samanyolu'; the radio channels 'Burç FM,' 'Dünya Radyo'; and the news agency 'Cihan Haber Ajansı' were also founded (Şen 101; Balcı 151- 177).

The economic, educational, and media activities of the Community expanded to abroad in 1990s. The collapse of the Soviet Bloc in 1990s paved the way for the Community to spread their activities in Central Asia. Gülen expressed the cause of his choice for Central Asia as filling the vacuum occurred there after the disintegration of the Soviet Union at the end of the 1980s. He said that, if his group could not support the people of Central Asia with their educational and cultural activities, the people coming from other parts of the world would exploit Central Asian people. Therefore, according to him, it was necessary to bring both educational facilities, and industrial and commercial activities to Central Asia (Başkan 856). This approach to issues of the Central Asia held the danger of 'being a dominator' on the part of the Community. As Sarıbay pointed to 'danger of domination' in Westernization critique of the Community, in Central Asian case, there was a danger

of desire in the form of 'we should indoctrinate rather than others' leading to 'why do not we dominate rather than others' in the activities of the Community (Sarıbay 87). Moreover, activities of the Community led to the questions about the nature of its activities in abroad. It was questioned whether the activities of the Community had missionary character as in the case of Christian missionary activities or not.

Labeling the educational activities of the movement as missionary works of the community in abroad was a widely discussed issue in Turkish intellectual context. On the one hand some evaluated these activities as missionary activities, on the other hand some opposed these arguments. According to Kılıçbay (68), though he was not sure, the mission would be to expand a kind of Turkish- Islam affected by the ideas of Fethullah Gülen and formed in the priority of Turkish over Islam. For Aktan (40), the missionary work of the Community was not uncovered missionary work like in Christianity, rather this was the presentation of Islam, the informing of the people about Islam. Therefore, according to him, they did not say 'come to my religion' rather they were informing the people about Islam. For Ortaylı (48), there was not any missionary work in the educational activities of the Community. He argued that the community members loved the civilization and the country in which they worked and the important thing for them was to adopt that country's culture and worldview, and took sides in favour of that country in politics and worldviews. Therefore, for Ortaylı, this situation would lead to the embodiment of *türkofil* generations (Ortaylı 48- 49) supporting Turkey in international context rather than conversion to Islam. According to Bostancı (177), doing a missionary work, propagation of Islam, openly or secretly within countries having different religions and beliefs, and using these schools chosen by high level politicians and bureaucrats for the education of their children as the places of missionary work were impossible because of the societal profile of these countries and the family characteristics of students. In Gülen's discourse these schools are called as *'peace islands'* that would make tolerance and dialogue possible between different cultures (Gündem). Gülen evaluated these schools as a way of presenting Turkish- Islamic identity to make dialogue possible between different cultures. However, his calling of his followers as *'kolonizatör dervishes'* displays controversial posture of Gülen about the nature of the activities in abroad. Since, kolonizatör dervishes are historical figures working for the expansion

of Islam from the East to the West where there was not any Muslim. Presenting the schools as peace islands and calling the followers as kolonizatör dervishes are contradictory arguments of Gülen's discourse related to the nature of activities in abroad.

Meanwhile, the educational activities of the Gülen community in Central Asia took the support of the Turkish State. The support of Turgut Özal, Süleyman Demirel and Bülent Ecevit to educational activities of the Community in Central Asia was widely known in Turkish political context. In addition to this presidential support, Turkish authorities in Central Asian states also gave logistic, diplomatic and bureaucratic, informal support to educational activities (Aktay 301). Gülen also accepted the importance of the State's support in his community's activities. For him, sharing of the same goals and ideas with the Turkish nation, government, Foreign Ministry, and intelligence organization led to the accomplishments of his and his community in Central Asia (Başkan 856).

During the 1990s, Gülen's discourse lived a kind of transformation parallel to the enlargement of the Community's activities to abroad. Gülen started to emphasize the concepts of *tolerance* and *dialogue* frequently. He integrated these concepts in his nationalist- Islamist discourse while evaluating the developments both inside and outside of Turkey. According to him, Turkish nation could have the dangers of possible divisions originating from the absence of consensus in the future, and tolerance would be the most effective weapon against these divisions (Başkan 853). In this sense, emphasis should be on the common values of Turkish citizens to enable the development of dialogue among them. Therefore, for him, the emphasis should not be on the differences between the Alevi and Sunni people, between the Turkish and Kurdish people, and between the right and the left (Başkan 853) rather it should be on the common values of these people. Besides this local definition, these concepts also had universal connotations in the discourse of Gülen. For him, there were shared values among all kinds of humans because of having the same creator. Therefore, dialogue would be able to point those shared values of all kinds of humans, that is, humans would detect the shared values through dialogue. He asserts that, despite the shared values, some differences would occur among the values of

the humankind. In that case, humans had to practice tolerance (Agai 43). In this sense, Gülen presented the idea of global tolerance and dialogue as an antidote to the idea of clash of civilizations. According to him, dialogue and tolerance was a different representation of Islam whose image was wounded by the activities of Islamist fundamentalism. He evaluated his concepts of dialogue and tolerance as a way of expressing Islam and his schools as 'peace islands' aiming to prevent people who wanted to create the clash of civilizations, cultures and different religious companions (Gündem).

In Gülen's discourse, tolerance necessitated 'to overlook the faults of other people, to respect different philosophies, to forgive others' faults, not to be vindictive about injustices towards us even when our rights are violated, not to retaliate in kind in the face of even the crudest ideas and uncivil thoughts (Başkan 853).' Gülen's suggestion that 'not to be vindictive about injustices even the rights are violated' has not democratic tone because of the acceptance of the subordinated position rather than equality in conditions on controversial matters. Having tolerance signs the accepting undemocratic manners in national and international contexts.

The integration of the concepts of tolerance and dialogue to nationalist- Islamist discourse of Gülen has become problematic issue in analyzing the discourse of Gülen. While the emphasis is on the possible ways of taking place among the world powers parallel to his nationalist posture, pointing the concepts of tolerance and dialogue implying to accept subordinated position in universal matters has acquired a controversial character.

3. 2. Fethullah Gülen and Education

Among the activities of the Gülen Community, its educational works including building private schools, 'dershanes' and dormitories have composed one of the most controversial subject in Turkish intellectual context. Opponents and proponents of these educational activities belong to the different political wings of Turkey. It is possible to see proponents among the secular Kemalist wing or opponents among the Islamist wing. Opponents of the activities have approached the subject suspiciously. They appreciate the works as a danger for secular regime of Turkey or condemn the

pro- state, nationalist posture of education. Proponents of the Community's activities point to the successes of these schools in the fields of university entrance exams and science Olympiads. Under the shadow of these discussions, Gülen community has accelerated its educational works since 1980s in Turkey and 1990s in abroad. By 1999, Community had approximately 150 private schools, 150 'dershanes' which were educational centers offering additional courses for the university entrance examination and larger number of student dormitories in Turkey and by 1997, community had over 250 educational institutions abroad (Agai 27).

Gülen's ideas on education have been shaped by the ideas of his predecessor Said Nursi and Gülen's peculiar nationalist- Islamist posture. Gülen, like Nursi, tries to prove the compatibility of science and Islam in the context of modernity. In this attempt, there is a desire for Turkish- Islamic community that takes its place among the powerful states of the world.

Gülen Community schools are practical or action side of the Gülen's ideas on education, science and powerful nation. For him, education should be the most important tool in the way of taking part in modernity. Rising the future's generation equipped with the knowledge of Islam and modern sciences would open the way for this aim. He is hopeful about his ideas because of the successes of these schools in university entrance examinations, and national and international science Olympiads.

3. 2. 1. Continuing Vision of Said Nursi

The ideas of Gülen on the place of Islam and the importance of education in the context of modernity are strongly effected by his predecessor Said Nursi who was born in 1873 in Nurs, a village situated in the province of Bitlis and whose life spans the last dates of the Ottoman Empire, early period of Republic, one party era and multiparty era. Said Nursi witnessed the decline of Ottoman Empire in martial, political and economic fields, the colonization process of Islamic world by the West, and the Westernization projects of young Turkish Republic in political and societal levels.

Nursi as a well educated religious man familiar with both Islamic studies and Western studies framed his thoughts on the possible responses of Islamic world in the context of modernity. He tried to prove the compatibility of Islam with modernity in general and science in particular in his discourse. He criticized the positivism that neglected religion and became the source of social engineering process in the late Ottoman Empire and in the Turkish Republic and aimed to raise the consciousness of Muslims (Yavuz, Nur Study 299). Against these destroying effects of positivism on religion, he conceived a profound transformation in the construction Muslim identity and in the techniques of Islamic reproduction (Bilici 173).

In Nursi's discourse faith, which could be empowered by raising Islamic consciousness, composed the main point in his formula on the reconstruction of Islamic identity. Nursi tried to empower Muslim consciousness with a new form of reasoning to resist positivism. He searched to create a synthesis of faith and reason. By using reason, Nursi aimed to restore faith in God and to shift from faith by imitation (taklid-i iman) to faith by questioning certainty (tahkiki iman) (Yavuz, Nur Study 299). In his synthesizing efforts, proving the compatibility between science and Islam composed the main point. According to Said Nursi there are three bases of knowledge including the Kur'an, the Prophet, and the universe. Among these bases 'universe' makes the linkage of science and religion/Islam possible. Universe indicates the existence, ability and accomplishments of God (Yavuz, Nur Study 299). Therefore, scientific discoveries reveal the depth of Kur'an's message (Yavuz, Nur Study 300). He thought that science and religion were interrelated and tried to locate the study of science inside religion and argued that science should be practiced to understand the laws of nature and the art of its creator: God (Agai 31). He believed that education is the most important tool for the improvement of Islamic consciousness or construction and reproduction of Islamic identity. He neither supported the medrese education nor mektep, but wanted to form a mixture of them (Balcı 152). He wanted to build an Islamic university like Al- Azhar but his ideas were not supported by the Ottoman Empire. The foundation of the Turkish Republic excited Nursi about the possible role of Islam in new modern state but new secular Turkish elites disappointed him with their positivist stances and neglect of the determinative character of religion in new Turkish Republic. Nursi canalized his

efforts into writing and teaching Islam. He thought that this goal could be achieved through education. He developed *'dershanes'* as informal education networks for his followers. 'Dershanes' were places where the writings of Said Nursi were collected under the title of Risale-i Nur (Letters of the Light) and were read by the followers called *'Nur Talebeleri.'* Nur Talebeleri established a network throughout the country to spread the ideas of Nursi and constituted the *Nurcu Movement.*

After the death of Nursi the Nur Talebeleri divided into various sub communities in the 1960s and 1970s because of political, religious, ethnic and generational reasons (Balcı 152). Among these sub communities Gülen's community has constituted the most striking group with its widespread educational and economical activities. Gülen group has differentiated itself from other Nurcu groups with their devotion to the Said Nursi's ideas on the importance of education and with their nationalist understanding of Islam.

3. 2. 2. Education in Gülen's Discourse

Gülen's ideas on education have been shaped by his nationalist- Islamist posture and by the ideas of his predecessor Said Nursi. He foresees to bring up a generation that is perfect in the fields of both science and religion and has 'Turkish- Islamic' tradition. Education is seen as a perfect tool for constructing new identities having knowledge of Islam and modern sciences, and Turkish- Islamic culture.

Like his predecessor Said Nursi, Gülen's ideas on education are shaped by his view on the compatibility of Islam and science. Gülen thinks that schools should reconcile both scientific thinking and religious knowledge in the context of modernity to abolish the false image that science and Islam are incompatible things because of the characteristic of Islam. He agrees with the Nursi's idea that there are two books of God including Kur'an and the book of universe.

> "Kur'an is the interpreter of the universe. One who could not set up the relation between Kur'an and the universe can neither understand Kur'an nor the universe. It seems as is some understand only Kur'an and some grasp the universe. As Einstein said, some of them are blind, some of them are lame" (qtd. in Sevindi 161).

44

Gülen does not evaluate Kur'an and the universe as diversified things, but completing things. Therefore, for him, both of them had to be understood. Since, both Kur'an and the universe are the books of God. In this sense, science, studying to understand the laws of nature, is a way to understand the existence of God. Therefore, study of science is located into religion and appreciated rather than rejected (Agai 31). In this way, the idea about the innate disagreement between science and Islam is tried to be removed by Nursi and Gülen.

Gülen's searches to find a middle way between science and Islam are also seen in his interpretations on *'takva'* meaning to be under the protection of God. In his understanding there are two facets of this protection. In traditional sense, human beings are afraid of God and obey God by complying His orders and avoiding His prohibitions. However, the second facet of 'takva' is that human beings reach knowledge by searching nature and life, and discovering the laws of God, and order his life. Religious life and scientific knowledge should be together to have 'takva' in real sense. (Yavuz and Esposito 167- 168)

According to him, the ideas about the incompatibility of Islam and science in education are based on the false understanding adapting the relation between science and Middle Age Catholic Church to the relation between science and Islam. He asserted that approach of Islam to science is different than Middle Age Catholic Church. The religion Islam gives place science as a way of understanding the existence of God. For him, the removal of science and philosophy from medrese (religious school system) that lead to the regression of scientific researches in the Islamic world in history paved the way for this false image about the relation of Islam and science (Yavuz and Esposito 166). The removal of science from medrese education closed the way to read the book of universe in education system and disregarded the emphasis given to science in Islam. However, for Gülen, mektep (modern school system) following the positivistic education understanding disregarding sacred also developed in the same manner. To combine these two readings of Kur'an and the universe Gülen, like Nursi, envisages the marriage of two school systems that are medrese and mektep. For him, the division of these two school systems is departure of mind and hearth from each other. He sees his

community's schools as candidates of marriage between medrese and mektep in uniting both readings of Kur'an and the universe (Can 79).

The nationalist- Islamist emphasis composes the second facet of Gülen's educational understanding. Gülen aims to restore the nation by 'remembering' its Islamic and Ottoman past (Yavuz, Towards 594). He argues that Turkish- Islamic people are exposed to spirit, meaning, identity, personality and civilization crises at the end of political, cultural and technological relations with the West. These crises caused breaks in Muslim consciousness, perceptions and transfer of tradition. They diverged from their spirits, meanings and historical roots (Ergene 271). For Gülen, this is the obstacle in front of the revival in Islamic world in general and Turkey in particular. In this sense, education is seen as an important tool in remembering process of the Turkish- Islamic community and defining the future goals. Gülen is hopeful about future coming at the end of the educational activities. His peculiar history understanding is reflection of his hopes. According to him, history moves in spiral manner in which nations motion upward and downward. Every downfall is the messenger of next upward (Kömeçoğlu 172). He always emphasizes his hope about the future upward mobility of Turkish- Islamic community like as old powerful dates of Islam and the Ottoman Empire. For this upward mobility, there is a need for a new generation that sacrifices itself to its nation, religion and country. This altruistic staff, for him, would be the carrier of revival (Ergene 290), and would be brought up in the educational institutions of the Community.

Gülen calls the new generation that would be hope for the Turkish- Islamic community as *'golden generation.'* According to Agai, the main characteristics of this golden generation are faith, love, idealism and selflessness. Faith shows the believer his purpose and teaches him responsibility for his deeds. Gülen argues that faith leads to the application of science in a beneficial way to mankind, since faith teaches man what is good and what is bad. Love results from faith leads to loving embracing everything that is created. Idealism and selflessness are traits for transforming moral values together with scientific knowledge into action (Agai 36).

In Gülen's discourse, the golden generation is altruistic staff of future that has scientific knowledge, faith and Turkish- Islamic tradition. They are pictured as the people who will carry Turkey to powerful future with its strong politics, culture, and technology as old powerful days of Islam and the Ottoman Empire.

3. 2. 3. Gülen Community's Schools

Gülen Community schools provide education within the boundaries of formal state curricula and do not provide a special religious education rather the emphasis is on ethics (Agai 27). Considering the aim of bringing up of a generation having knowledge of Islam and modern sciences, the ethics understanding of the schools refers to Islamic ethical values embodied in the behaviors of the teachers as a part of the hidden curriculum. Hence, hidden curriculum is seen as a way of teaching Islam or canalizing the students into learning Islam.

The emphasis of these schools on ethics attracted attention in an educational environment which had ethics and discipline crises reflected in the indiscipline, indifference and failure of the students. Gülen schools controlling and educating the students almost twenty- four hours a day made the comfort of the student's families possible (Aktay 293). Therefore, these schools became an attractive alternative to other school types with their ethics understanding and guarding strategy. Families choosing these schools aimed to prevent indisciplined behavior of their children and therefore made the success of them possible.

Community schools display a selective approach in accepting students to the schools. Students should pass a talent test to be accepted (Laçiner 10; İnsel 71). They choose the clever, easy educated children. The aim is to raise new elites composed by the clever students brought up from the years of childhood (İnsel 70- 71). The selection process based on IQ tests, and the aim of bringing up the elites of the future are the signs of the movement's elitist understanding. In this sense, schools are evaluated as the institutions that make the human resources for the activities of the Community possible. The activities of the Community in economical, educational and media areas have created a social and economic space for these Community's own elites (Şen 102).

In bringing up of the elites having knowledge of Islam and modern sciences, teachers have an important role. The profiles of the teachers of the Community schools display an extraordinary situation because of their educational background and eagerness to work even unfavorable working conditions. Teachers of the Community schools are the graduates of the successful universities of Turkey including the Middle East Technical University, Bosphorus University and Marmara University. They do not work in the Community schools with high salaries despite the unfavorable working conditions. Nevertheless, they display an extraordinary eagerness for working in the educational activities of the Community in Turkey and abroad. For Aktay (297), the choice of these graduates for these schools rather than high salary jobs of the market would be the sign of their high level of willingness and social capital that leads to get together for an upper aim interested the other people rather than individual aims. For Şen (102), this communal energy is created by the devotion of the followers to a 'shared future project,' that is, to restore the power and glory of Islam, and this energy leads to the modern organizational capacity of the Community.

In the Community schools, teachers do not behave like religious teachers, that means they do not inform the students about the norms of religion during the courses. They do not use an Islamic language in their discourses; rather they try to be examples for the students with their behaviors. They say that 'though we do not say anything, they internalize our behaviors, tolerance and feelings and use in their life.' For teachers, *temsil* (good representation) has primacy over *tebliğ* (inform by reporting) in their instruction styles (Kömeçoğlu 170). 'Temsil' understanding of the teachers is the sign of the conviction about the effects of 'hidden curriculum' on the students. This hidden curriculum makes the transfer of Islamic ethical norms and values to the students possible by behaviors or interpretations of teachers.

For Gülen, the teachers perform the duty of *hizmet* (service) that is they devote their lives to the service of the benefit of others, which is beneficial for life after death. The emphasis on death is always present in Gülen's preaching to his followers. Therefore, the fear of judgment day after death is the source of motivation to work hard. Work has a religious connotation in Gülen's discourse (Agai 38). 'Hizmet' is

not limited to teachers working hard in schools to bring up the golden generation, supporting these schools materially is also the part of hizmet. Gülen encourages his followers to support these schools economically. In his discourse, supporting the Community schools economically is a kind of service to the benefit of others. Therefore, working in or contributing to schools became an Islamic deed (Agai 39). Working for the continuity of the educational activities is thought as carrying out a religious duty.

Özdalga points to the similarities between the Gülen's ideas on work ethic that is working hard for salvation and Weber's in worldly asceticism, and calls his perspective activist pietism that is based on activism controlled by pietism. For Gülen, working of man in the service of God is endless (Özdalga, Worldly Asceticism 88). Man should work hard for his salvation. Özdalga compares the activities of the followers of Gülen in education with the activities of nineteenth century Christian missionaries in the foundation of Istanbul Robert College. There are similarities between the conducts of the Protestant missionaries and the Gülen's followers in education including the feeling of self- sacrifice; the enthusiasm for knowledge in general and knowledge of the natural sciences in particular; the will to transfer this knowledge to others; the enterprising spirit to support educational activities; the desire to be active in the service of God; and the will to work in other countries and places around the globe besides native land (Özdalga, Secularizing Trends 66).

On the other hand, according to Şen (149), it is difficult to compare the Gülen Community to the Protestant movement. Since, the Community's drive for economic initiative could not be seen as a contingent meeting of religious values with the spirit of capitalism; rather it could be seen as a religious group's conscious strategy to acquire economic power to construct the power. For Şen (150), the involvement of the Community with economic activities was a product of the complex process of reaction, adaptation and accommodation to the social, political and economic transformations in Turkey, and the Community learned how to use religious knowledge, values and practices as a resource for economic action through this complex process.

Finally, though Gülen Community schools are equipped with the tools of modern education system, these schools are criticized because of their conservative and authoritarian nature of education system. The gender segregation, the centrality of obedience understanding in education, the strict disciplinary manner, the intense moralism, and the high level of nationalist idealism compose the target of critiques (İnsel 72- 73; Yavuz, Towards 598- 599; Yavuz, Neo- Nurcular 301; Ersanlı 226). These highly authoritarian and conservative postures of the Community schools are seen as a danger for critical thinking and for free and pluralist generations of future. The community spirit of the Community, and the highly emphasis upon discipline, morality and nationalist idealism are the weak points of the Gülen's education understanding aiming to bring up future's generation equipped with both modern tools and religious knowledge, and successful in synthesizing them.

3. 2. 4. Fethullah Gülen and Science Olympiads

The activities of the Community schools to bring up students for the success in national and international Olympiads are practical aspects of the Gülen's views on the compatibility of science and Islam and his nationalist- Islamist understanding within the instrumentality of education. In other words, they are the action side of the Gülen discourse practicing the Gülen's ideas in education field.

Gülen gives a special emphasis to success in science Olympiads within the framework of his nationalist- statist discourse. He evaluates the successes as revival of the heyday of the Islamic world and Ottoman Empire, and describes Community's activities for science Olympiad successes as filling the gap that has not been filled by the State.

> "…this problem is not taken as a state policy in these times. Therefore, care of individuals and religious communities that love their state and nation and want to carry them to the future to this problem became an important duty… Connection of the issue with religion is possible. That is, in asr-ı saadet period…this kind of 'ilmi' activities was always encouraged… In the period coming from that day to the Ottomans, the development belonging to the every branches of 'ilim' were followed curiously by everybody and especially sultan or caliphs and successful ones were awarded. Already is not this

understanding and the products of this understanding that made us the part of word's management for many ages?" (Gülen 101- 102)

Gülen complains about the indifference of the State to the science Olympiads and explains his desire seeing the science Olympiads as a state policy. Therefore, he describes community's activities for science Olympiad successes as filling the gap that has not been filled by the State. Moreover, he defines activities as making continuity possible with the time period started in the early days of Islam and continued to the Ottomans. People displaying success in scientific field were awarded at that time, and Gülen asserts that this understanding was the source of the successes of early days of Islam and Ottoman past. Therefore, for him, awarding the successes would be source of leading position of modern Turkey. Awarding the scientific studies is a tool of becoming a powerful state as in the Islamic and Ottoman past.

According to Gülen these successes would function in three ways. First of all these successes have broken the widespread false assumption about the compatibility of Islam and science in general and the incapability of Turkish people to scientific studies in particular.

"..I guess that people that wanted to use us as slaves destroyed our self- confidence that had been so dynamic. I brought up a period of time when our self-confidence sook and scattered like blend. It was said that a Turk definitely could not do a work well, could not make a plane,…, could not make scientific things like Edison and Einstein,.., especially he could not reconcile these things with religion,…, these are displayed as over things that exceeds our nation's capacity, it was argued that we should not deal with this" (qtd. in Sevindi 95- 96).

So, Gülen interprets the successes as proofs of capabilities of Turkish Muslims in scientific sphere in accordance with his nationalist- Islamist discourse. In that sense, successes have broken the image that science and Islam are incompatible. For him, Turkish Muslims interrupted this false image by their successes in scientific sphere. Turkish Muslim students have proved the compatibility of science and Islam.

Secondly, for him, these successes are answers to these schools' critiques attributed these schools only religious education role and belittled their scientific side of the education.

> "Some have called these schools as Kur'an Kursu for many years… However, the foundation aim of these schools does not read Kur'an…Maybe read the book of universe with the language of Kur'an. In other words, starting by Kur'an's reading of universe and universe's reading of Kur'an, it is to have a grasp of events occurring in the physical world, to examine things deeply… And to capture the scope of Kur'an showed by intermediary of Prophet and to submit to the service of humanity. Accession to this aim, even reaching the peak, namely to represent Turkey in international organizations and get successes changes perspectives towards these schools in inside…" (Gülen 103).

Thus, Gülen denies the labeling of these schools as schools giving only religious education and interprets scientific successes as proofs of the scientific character of schools. Yet, religious connotation takes place in his definitions on character of Community schools paralleling to his discourse on education. For him, Community schools are education institutions in which the aim of education is to read the book of universe, one of the book of God, through scientific studies.

Thirdly, for Gülen, these successes are the advertisement sources of these schools. They make new economic supports among the society possible and function to convince people about the mission of these schools while the supports of followers are continuing.

> "In addition, these successes as much as possible relaxed the people who supported these schools economically and sincerely. Yet these people became proud because of their concerns for these schools while they were walking in the markets and bazaars and speaking with their tradesmen friends. Therefore, on the one hand they continued their supports, on the other hand, they had an important card to find other supports" (Gülen 103).

So, Gülen accepts the advertising effects of the successes that would be beneficial for the activities of the Community in education field. Successes trigger the people to

continue their support and make easy finding new resources for the activities in education field.

Lastly, these successes are sees as the sources of hope for the applicability of Gülen's ideas on the compatibility of Islam and science, thus, the upward of Turkish- Islamic community in future.

> "The idea that the 'ilim man could not originate from Muslims' was widespread and paralyzing us. Moreover, this idea penetrated our chromosomes in the form of belief. Almost I as a person who has spoken hope and explained hope for many years believed that. ..yes, these successes obtained with the help of God's blessing destroyed the image that ilim man could not originate from Muslims..." (Gülen 102).

Thus, Gülen interprets successes as the sources of hope for believing the compatibility between science and Islam that would trigger the efforts in scientific studies. The idea about the incompatibility between science and Islam was broken and became a source of hope for the future scientific studies.

In evolution of the community schools' successes in science Olympiads Gülen's nationalistic understanding has won primacy over the religious conations. He gives examples on the possible roles of Turkish scientists in the scientific discoveries of the future as he explains his hopes about the foundation of TÜRKSA like NASA in the near future (Gülen 103- 104).

A PROFILE OF FORMER SCIENCE OLYMPIAD PARTICIPANTS

4. 1. Socio- Demographic Characteristics of Scientists

To understand the triggering factor of their success and religious and political attitudes, we should know the societal characteristics of former Olympiad participant scientists. Therefore, I will analyze the socio- demographic characteristics of them. I will take birth dates and school types as the main independent variables. While the school types will be aggregated under five headings, the birth dates will be collected under three generational periods. In this framework, the variables such as sex and birthplace types will be analyzed. The table below is showing the distribution of sex according to birth dates.

Table 4.1: Generation and Sex

		Sex		Total
		Female	Male	
1962- 1969	N	7	37	44
	%	15. 9	84. 1	100. 0
1970- 1976	N	2	55	57
	%	3. 5	96. 5	100. 0
1977- 1982	N	2	53	55
	%	3. 6	96. 4	100. 0
Total	N	11	145	156
	%	7. 1	92. 9	100. 0

$P<.05$

In this table, the total average percentage of female scientists is extremely lower than that of the male scientists. In other words, the total average of female scientists is 7.1%, while the total average of male scientists is 92. 9 %. This limited number of female scientists does not change year after year. This lack of females among former Olympiad participants and current scientists is the result of lack of women's participation in national science Olympiads. Causes of this lack could be searched in

the selection processes of participants from high schools to science Olympiad camps. During my research in BAYG, I observed that gender related issues play an important role in the selection processes of Olympiad scientific sphere. One of female university student coach of Olympiad organizations confirmed my observation on gender related inequalities in science Olympiad organizations. She said that 'women were seen as incapable of science and scientific thinking and this understanding led to the low level female participation in science Olympiad organizations.' In addition, she argued the applicability of this understanding for her duty as a female university student coach of participants in organizations. She said that 'if there was an efficient number of university student male coach, they did not ask me about the job.' Therefore, gender related issues evaluating science as the job of men in science Olympiad organizations would be one cause of the low level of former Olympiad participant female scientists in scientific sphere. This gender related aspect of the science education and science Olympiad organization should be analyzed in broader context.

Though the lowest rate of female scientists for every school type is expected, looking at the distribution of female scientists according to school types would be beneficial to have an idea on selection processes of high schools. Table 4.2 gives a sense on this manner. First of all, the percentage of the female former Olympiad participant scientists is quiet higher among public Anatolian and secular private high school graduates than the other school types. This would be the sign of relatively moderate support of these schools to female students in participating science Olympiad organizations. Secondly, the profile of public science high schools is surprising in the distribution of male and female scientists. Though the percentage of female scientists graduating from these schools is above the total average with 8. 2 %, this percentage is lower than the expectation. In other words, public science high schools are not adequately successful in bringing up women scientists of oncoming days contrary to expectation assuming the open profile of these schools to all clever students from all sections of the society. Lastly, Gülen private denominational and normal public high schools did not raise any women scientists agreeable to the expectation. In Gülen schools, male oriented education understanding is dominant in raising the future's golden generation. When success is the question, the emphasis is given to success in

occupation for male students and in housework for female students. Therefore, male oriented education understanding of these schools is controversial in intellectual context. These schools are usually criticized for their male oriented viewpoints in education. In normal public high schools, nonexistence of women scientists would be explained by societal gender related inequalities at the cost of female students. Science education takes long years and necessitates the support of family both sensually and materially. Families would venture this effort only in favor of male children rather than female children continuing their education in these schools.

Table 4.2: School Types and Sex

| | | Sex | | Total |
		Female	Male	
Public Science HS	N	5	56	61
	%	8. 2	91. 8	100. 0
Public Anatolian HS	N	4	22	26
	%	15. 4	84. 6	100. 0
Normal Public HS	N	-	7	7
	%	-	100. 0	100. 0
Secular Private HS	N	2	16	18
	%	11. 1	88. 9	100. 0
Gülen Denominational Private HS	N	-	44	44
	%	-	100. 0	100. 0
Total	N	11	145	156
	%	7. 1	92. 9	100. 0

The variable of the birthplace gives information about the character of the birthplace of the scientists. In other words, this would give some clues about the socio- cultural environment in which scientists were brought up. In addition, we would learn the socio- cultural roots of Olympiad participants from three different generations and five high school types. Table 4.3 displays the distribution of birthplaces of scientists according to three generations.

Table 4.3: Generation and Birth Places

| | | Birth Place | | | Total |
		Village	Town	City	
1962- 1969	N	1	-	25	26
	%	3. 8	-	96. 2	100. 0
1970- 1976	N	3	2	21	26
	%	11. 5	7. 7	80. 8	100. 0
1977- 1982	N	1	6	33	40
	%	2. 5	15. 0	82. 5	100. 0
Total	N	5	8	79	92
	%	5. 4	8. 7	85. 9	100. 0

The majority of the scientists are city born (85. 9 %). Moreover, in each three-generation, more than half of the Olympiad participants are city born. This would be the result of the concentration of the scientific activities in the cities and the increasing interest in science in the cities. Looking at the distribution of birthplaces according to school types would be beneficial to give an idea about the relation between socio- cultural roots and selected school types.

While all of the graduates of public Anatolian, normal public and secular private high schools are city born, the graduates of public science and Gülen denominational high schools display differences in birthplace picture. The percentage of city born graduates of public science high schools is lower than Gülen denominational high schools. It would be the sign of interest of village and town born clever students to public science high schools contrary to the idea that rural born clever students mostly choose Gülen denominational high schools. Gülen private denominational high school graduates display heterogeneous profile according to the distribution of birthplaces like public science high school graduates, but city born former Olympiad participant scientists composed the majority in Gülen schools.

Table 4.4: School Types and Birth Places

School Types		Birth Place			Total
		Village	Town	City	
Public Science HS	N	3	6	29	38
	%	7. 9	15. 8	76. 3	100. 0
Public Anatolian HS	N	-	-	14	14
	%	-	-	100. 0	100. 0
Normal Public HS	N	-	-	4	4
	%	-	-	100. 0	100. 0
Secular Private HS	N	-	-	14	14
	%	-	-	100. 0	100. 0
Gülen Denominational Private HS	N	2	2	18	22
	%	9. 1	9. 1	81. 8	100. 0
Total	N	5	8	79	92
	%	5. 4	8. 7	85. 9	100. 0

4. 2. Socio- Economic Peculiarities of Scientists

To have detailed information about the societal roots of scientists, it would be beneficial to examine socio- economic peculiarities of them. The education levels of fathers and mothers, and the class position of the families would give information

about the relation between societal section to which scientists belonged, and generational interest in science and the school type choices. Below table 4.5 displays the distribution of father education levels according to three generations.

Table 4.5: Generation and Father Education

		Father Education		Total
		Low Level Education	High Level Education	
1962- 1969	N	1	11	12
	%	8. 3	91. 7	100. 0
1970- 1976	N	6	13	19
	%	31. 6	68. 4	100. 0
1977- 1982	N	4	24	28
	%	14. 3	85. 7	100. 0
Total	N	11	48	59
	%	18. 6	81. 4	100. 0

With 81.4 %, more than half of the fathers of scientists have high-level education that means they have more than 8 years education level. In each three generation, the percentage of fathers having high-level education is more than that of low-level education. First generation of the Olympiad participants is mostly the children of high-level educated fathers (91. 7 %). In other words, they would be the children of fathers having high level of educational capital and supporting particularly the science education of their children. Then, in the second generation, the percentage of high-level educated fathers declines significantly from 91.7% to 68.4%. This would be the sign of the increasing interest towards education in general and science in particular from different societal sections of the society in which fathers have different levels of educational capital. The percentage of the high- level educated fathers increases to 85.7 % in the third generation again. This would be because of the increasing societal changes and their reflections in education system. The meaning of success has changed during the last years. Well education in general and science education in particular has changed in meaning. Education is seen as equal to owning of a diploma that would open the way for career in market rather than success in science in society. This understanding would be more influential among the low level educated fathers than the high level educated fathers. Table 4.6 gives the distribution of father education levels according to school types to have an idea about the school choices of scientists related to father education levels.

First of all, secular private and public Anatolian high schools are striking the eye with the highest percentages of high-level educated fathers. The percentage of high level- educated fathers among the graduates of secular private high schools is 100 %, while it is 90 % among the graduates of public Anatolian high schools. Secondly the distribution of high- level and low- level educated fathers among normal public high school graduates is equal. Lastly, the percentages of high level educated fathers (77.8% and 72.7%) among the graduates of public science and Gülen private denominational high schools are lower than the total average (81. 4 %). Though the percentages of these two schools are close to each other, the percentage of high-level educated fathers among Gülen school graduates is lower than that of the public science high school graduates.

Table 4.6: School Types and Father Education

| | | Father Education | | Total |
		Low Level Education	High Level Education	
Public Science HS	N	6	21	27
	%	22. 2	77. 8	100. 0
Public Anatolian HS	N	1	9	10
	%	10. 0	90. 0	100. 0
Normal Public HS	N	1	1	2
	%	50. 0	50. 0	100. 0
Secular Private HS	N	-	9	9
	%	-	100. 0	100. 0
Gülen Denominational Private HS	N	3	8	11
	%	27. 3	72. 7	100. 0
Total	N	11	48	59
	%	18. 6	81. 4	100. 0

Besides the father education level, mother education level is also an important variable that would give an idea on the socio- economic position of the scientists' families. This would also be beneficial to analyze the relationship between socio-economic roots of families, and changing generational interest in science and school type choices. Table 4.7 displays the mother education levels according to generations of former Olympiad participants that would define the relation between mother education level and the interest in science.

Table 4.7: Generation and Mother Education

		Mother Education		Total
		Low Level Education	High Level Education	
1962- 1969	N	4	8	12
	%	33. 3	66. 7	100. 0
1970- 1976	N	6	13	19
	%	31. 6	68. 4	100. 0
1977- 1982	N	4	22	26
	%	15. 4	84. 6	100. 0
Total	N	14	43	57
	%	24. 6	75. 4	100. 0

With 75.4%, more than half of the mothers of the scientists have high level education that means they have more than 8 years education level. Though this total average of high-level education is not exceeded in every generation of scientists, more than half of the mothers have high-level education in each generation. In addition, the percentage of high-level educated mothers has increased year after year. This would be the sign of increase in the education level of women in Turkish society. However, when we compare the total average of high level educated mothers (75.4%) with that of fathers (81.4), we can see the inequality of high-level education between men and women. In the first generation, this inequality between men and women is the largest. Since, in this generation, fathers have the highest percentage of high-level education, while mothers have the lowest percentage of high-level education. Then the percentages of high-level education become equal in the second generation. This should not be understood as equality in favor of the women. Since, the percentage of high- level education among fathers is the lowest in the second generation and there is not any significant change in the percentage of high- level education among mothers. Lastly, this equality is broken in favor of the men again. We should make a comparison according to school types to understand the relation between mother education levels and the school choices.

In table 4.8, two high school types are striking the eye. First school is the Gülen denominational private high schools. Among the graduates of Gülen schools, the percentage of high-level educated mothers is 44.4 and this rate is lower than the total average percentage of high- level educated mothers (75. 4%) and the percentages of other school types. In addition, Gülen schools are one of the schools in which there is

significant difference between father and mother education levels in families. In other words, while the percentage of high level education is 44. 4 among mothers, it is 72. 7 among fathers of Gülen school graduates. Education capital of the mothers of Gülen school graduates is significantly lower than their fathers. Another school is the secular private high schools. In these schools the percentage of high level of education is 88.9 among mothers, while it is 100 among fathers. Though the differences of education levels are not as many as Gülen schools, there is not equality of high-level education in these schools. In other school types, there is equality between percentages of mother and father education levels.

Table 4.8: School Types and Mother Education

		Mother Education		Total
		Low Level Education	High Level Education	
Public Science HS	N	6	21	27
	%	22. 2	77. 8	100. 0
Public Anatolian HS	N	1	9	10
	%	10. 0	90. 0	100. 0
Normal Public HS	N	1	1	2
	%	50. 0	50. 0	100. 0
Secular Private HS	N	1	8	9
	%	11. 1	88. 9	100. 0
Gülen Denominational Private HS	N	5	4	9
	%	55. 6	44. 4	100. 0
Total	N	14	43	57
	%	24. 6	75. 4	100. 0

In sum, more than half of the mothers and fathers have high level education. In this order, the high level education rate of mothers of Gülen school graduates could not reach the half level. Anyway, we would conclude that the interest in science is closely parallel to the education of families or educational capital of the families of scientists. Class position of the family is another socio- economic variable pointing interest in science and school choices of the family.

Table 4.9: Generation and Class

		Class			Total
		Low Class	Middle Class	High Class	
1962- 1969	N	-	9	3	12
	%	-	75. 0	25. 0	100. 0
1970- 1976	N	2	13	5	20
	%	10. 0	65. 0	25. 0	100. 0
1977- 1982	N	-	22	4	26
	%	-	84. 6	15. 4	100. 0
Total	N	2	44	12	58
	%	3. 4	75. 9	20. 7	100. 0

More than half of the former Olympiad participant scientists' families belong to middle class socio- economic group. High class and low class socio- economic groups follow this group respectively. The accession of the former Olympiad participants from high-class socio- economic groups to the scientific career has decreased in the last generation of Olympiads. This would be because of the decreasing interest in science Olympiads or science as an academic career among the children of high-class families. The total average of the scientists belonging to low class is extremely less than other two socio- economic groups. This would be because of the relation between science education and the economic possibilities of the family. Since, science education usually takes long years and students' families should support students of science economically in these years. Low class families do not have economical possibilities to support their children for many years financially. Looking at the distribution of socio- economic classes according to school types would be beneficial to understand the relationship between socio-economic classes and school choices.

In table 4.10, three findings are striking to the eye. First of all, the majority of the scientists graduating from secular private high schools belong to the high-class groups while other schools' graduates are mostly gathered in the middle class groups. The education levels of fathers and mothers of these schools graduates mostly belong to the high level of education. Therefore, it would be possible that they could turn their high levels of educational capital to economic capital. In other words, scientists graduating from secular private high schools mostly have high level educated mothers and fathers and more than half of their families belong to the high class.

Secondly, the percentage of low class families is significantly above the total average among the graduates of Gülen schools. In addition, though Gülen schools are also private schools, there are not any scientists belonging to the high-class families. Therefore, we would say that clever students of these schools do not come from high-class families. They are the students from the low and middle class families. Lastly, public science high school graduates display more heterogeneous profile in socio- economic background. They are the schools of students from low, middle and high-class families.

Table 4.10: School Types and Class

		Class			Total
		Low Class	Middle Class	High Class	
Public Science HS	N	1	22	5	28
	%	3. 6	78. 6	17. 9	100. 0
Public Anatolian HS	N	-	8	2	10
	%	-	80. 0	20. 0	100. 0
Normal Public HS	N	-	2	-	2
	%	-	100. 0	-	100. 0
Secular Private HS	N	-	4	5	9
	%	-	44. 4	55. 6	100. 0
Gülen Denominational Private HS	N	1	8	-	9
	%	11. 1	88. 9	-	100. 0
Total	N	2	44	12	58
	%	3. 4	75. 9	20. 7	100. 0

4. 3. Award Branches and Current Departments

After framing the socio- demographic and socio- economic profile of the former Olympiad participants, it would be necessary to look at the branches of the science Olympiads in relation with three generations of Olympiads and five high school types. Comparing the award types and generations would give clues about the effects of education given in Olympiad organizations in loving science besides displaying the tendency in scientific branches of Olympiads. Since, one of the aims of Olympiad organizations is to love science and canalize the young clever students into scientific activities for their future career. Table 4.11 displays the distribution of scientists participating in Olympiad organizations in five branches according to generations. Biology and informatics are the new branches participated by the second generation. Among the participants of mathematics, physics and biology Olympiad organizations, choice of scientific activities have declined through generations. On

the other hand, among participants of informatics Olympiad organizations there is an increasing tendency to choose scientific activities for future career. This would be because of the increasing scientific studies in informatics for the last years. Besides that, chemistry displays fluctuations. Though declined interest in second generational period, participants of chemistry Olympiad choosing scientific career has started to increase in the third generational period.

Tablo 4.11: Generation and Award Branches

		Award Branches					Total
		Mathematics	Physics	Chemistry	Biology	Informatics	
1962-1969	N	14	17	13	-	-	44
	%	31. 8	38. 6	29. 5	-	-	100. 0
1970-1976	N	16	18	8	10	1	53
	%	30. 2	34. 0	15. 1	18. 9	1. 9	100. 0
1977-1982	N	14	15	13	3	8	53
	%	26. 4	28. 3	24. 5	5. 7	15. 1	100. 0
Total	N	44	50	34	13	9	150
	%	29. 3	33. 3	22. 7	8. 7	6. 0	100. 0

$P<.05$

The relation between the schools types and award branches would be important for analyzing the role of school types in canalizing the students into particular branches of the Olympiad organizations. Table 4.12 displays the distribution of scientists participating in Olympiad organizations in five branches according to school types. The branches of physics, mathematics and chemistry are mostly participated Olympiad organizations among five school type graduates respectively. In mathematics, public high school graduates are above the total average of mathematics participation. In physics, Gülen schools graduates compose the majority of participation in science Olympiads with 40%. The participation of Gülen school students mostly in physics is the expected result of this study. Since, physics is the mostly emphasized branch in Gülen's discourse. Physics is seen as a way of reading the universe as one of the books of God. In chemistry, secular private high schools have priority and public science high schools follow them in participation. In biology, normal public high schools are ahead in participation and secular private high schools and public science high schools follow them respectively. In informatics, public Anatolian high schools have priority in canalizing their students into informatics and Gülen schools follow them.

Tablo 4.12: School Types and Award Branches

		Award Branches					Total
		Mathematics	Physics	Chemistry	Biology	Informatics	
Public Science HS	N	18	17	15	6	3	59
	%	30. 5	28. 8	25. 4	10. 2	5. 1	100. 0
Public Anatolian HS	N	8	9	5	2	2	26
	%	30. 8	34. 6	19. 2	7. 7	7. 7	100. 0
Normal Public HS	N	3	2	1	1	-	7
	%	42. 9	28. 6	14. 3	14. 3	-	100. 0
Secular Private HS	N	4	6	5	2	1	18
	%	22. 2	33. 3	27. 8	11. 1	5. 6	100. 0
Gülen Denominational Private HS	N	11	16	8	2	3	40
	%	27. 5	40. 0	20. 0	5. 0	7. 5	100. 0
Total	N	44	50	34	13	9	150
	%	29. 3	33. 3	22. 7	8. 7	6. 0	100. 0

Besides their fields in the science Olympiads, it would be beneficial to look at the current study areas of the scientists in the scientific sphere. In this analysis, it would be beneficial to look at the effects of the changes in generations and school types as independent variables determining the choice of branches in the scientific sphere.

Table 4.13: Generation and Current Departments

		Current Departments								Total
		Engineering	Medicine	Biology	Economics& Industrial Engn	Civil& Environment Engn	Physics	Chemistry	Math	
1962-1969	N	12	21	1	3	2	4	-	1	44
	%	27. 3	47. 7	2. 3	6. 8	4. 5	9. 1	-	2. 3	100. 0
1970-1976	N	19	1	3	11	-	13	-	8	55
	%	34. 5	1. 8	5. 5	20. 0	-	23. 6	-	14. 5	100. 0
1977-1982	N	23	-	2	7	2	9	5	5	53
	%	43. 4	-	3. 8	13. 2	3. 8	17. 0	9. 4	9. 4	100. 0
Total	N	54	22	6	21	4	26	5	14	152
	%	35. 5	14. 5	3. 9	13. 8	2. 6	17. 1	3. 3	9. 2	100. 0

P< .05

It seems that engineering, medicine and physics compose the highest total averages among the choices of the scientists. One striking outcome of the table 4.13 is the popularity of the medicine among the first group of scientists. Then among the next generations this popularity changes its way towards the engineering. To analyze the effects of school types in choosing scientific field for career, looking at the distribution of scientific fields according to school types would be beneficial. First of

all, the effects of generational job selection periods on two school types including secular private and normal public high school types should be emphasized. Secular private and normal public high school graduates choose to study in the field of medicine mostly. This is the result of the popularity of medicine in the 1980s. The majority of scientists, whose job selection periods come up with 1980s, selected medicine as a branch of study. However, medicine could not maintain its popularity and prestige among the genius students of Turkey. Interests of Olympiad participants in medicine have declined in 1990s. Secular private and normal public high school graduates among the scientists are the students of this period. After that, the participation of secular private and normal public high schools in science Olympiads has declined. Secondly, the majority of public science and Anatolian high school graduates chose to study in the fields of engineering including electric, electronic, computer and mechanical engineering. Lastly, the department choice of the denominational private school graduates is different than the other school types. They have composed higher percentages of participation in physics, chemistry and biology than the graduates of the other high school types. In these fields, they are significantly above the total averages in participation. This would be the result of orientation of their education in their high schools. Gülen's discourse emphasizing the study of natural sciences including these fields and mostly physics led to this expectation. Looking at the journals of Gülen community especially Sızıntı and the Fountain verifies this expectation. The articles of these journals emphasized the compatibility of natural sciences studying on universe and the book of God called Qur'an. The aim, therefore, should be to invent these compatibilities. Natural sciences would be important tools to have the knowledge of these compatibilities.

Table 4.14: School Types and Current Departments

		Current Departments								Total
		Engn.	Medic.	Bio.	Economics& Industrial Engn	Civil& Env. Engn.	Physics	Chem.	Math.	
Public Science HS	N	24	6	1	12	-	11	-	5	59
	%	40. 7	10. 2	1. 7	20. 3	-	18. 6	-	8. 5	100. 0
Public Anatolian HS	N	12	6	-	4	1	-	-	2	25
	%	48. 0	24. 0	-	16. 0	4. 0	-	-	8. 0	100. 0
Normal Public HS	N	1	3	1	1	1	-	-	-	7
	%	14. 3	42. 9	14. 3	14. 3	14. 3	-	-	-	100. 0
Secular Private HS	N	6	7	-	1	1	-	-	3	18
	%	33. 3	38. 9	-	5. 6	5. 6	-	-	16. 7	100. 0
Gülen Denominat ional Private HS	N	11	-	4	3	1	15	5	4	43
	%	25. 6	-	9. 3	7. 0	2. 3	34. 9	11. 6	9. 3	100. 0
Total	N	54	22	6	21	4	26	5	14	152
	%	35. 5	14. 5	3. 9	13. 8	2. 6	17. 1	3. 3	9. 2	100. 0

$P < .05$

4. 4. Contributions to the Scientific Sphere

To evaluate the success of genius scientist of Turkey according to school types by considering the generations of them, it would be necessary to see the number of their articles accepted by the ISI scientific database. ISI would give us reliable source to examine the successes of these genius scientists in their scientific career. In addition, citation number of their scientific studies would also be beneficial to support this reliability in evaluating their scientific successes.

Table 4.15: School Types and ISI Article

			ISI Articles					Total
			0	1- 3	4- 10	11- 20	21- 90	
1962-1969	Public Science HS	N	1	1	3	3	7	15
		%	6. 7	6. 7	20. 0	20. 0	46. 7	100. 0
	Public Anatolian HS	N	1	2	4	1	4	12
		%	8. 3	16. 7	33. 3	8. 3	33. 3	100. 0
	Normal Public HS	N	-	-	4	-	1	5
		%	-	-	80. 0	-	20. 0	100. 0
	Secular Private HS	N	1	4	-	2	5	12
		%	8. 3	33. 3	-	16. 7	41. 7	100. 0
	Total	N	3	7	11	6	17	44
		%	6. 8	15. 9	25. 0	13. 6	38. 6	100. 0
1970-1976	Public Science HS	N	4	7	8	1	1	21
		%	19. 0	33. 3	38. 1	4. 8	4. 8	100. 0
	Public Anatolian HS	N	1	4	-	2	-	7
		%	14. 3	57. 1	-	28. 6	-	100. 0
	Normal Public HS	N	-	1	1	-	-	2
		%	-	50. 0	50. 0	-	-	100. 0
	Secular Private HS	N	-	4	2	-	-	6
		%	-	66. 7	33. 3	-	-	100. 0
	Gülen Denominational Private HS	N	5	10	3	2	1	21
		%	23. 8	47. 6	14. 3	9. 5	4. 8	100. 0
	Total	N	10	26	14	5	2	57
		%	17. 5	45. 6	24. 6	8. 8	3. 5	100. 0
1977-1982	Public Science HS	N	20	5	-	-	-	25
		%	80. 0	20. 0	-	-	-	100. 0
	Public Anatolian HS	N	4	2	1	-	-	7
		%	57. 1	28. 6	14. 3	-	-	100. 0
	Gülen Denominational Private HS	N	14	7	2	-	-	23
		%	60. 9	30. 4	8. 7	-	-	100. 0
	Total	N	38	14	3	-	-	55
		%	69. 1	25. 5	5. 5	-	-	100. 0

While ordering the success of school type graduates in scientific field according to the number of articles and citations, the success range could be ordered under the labels of 'extremely successful,' 'successful,' 'fairly successful' and 'no peculiar success' for graduates exceeding the total averages of each column. However, in this ordering, three generations should be taken into consideration differently. Since, the meaning of success changes for each generation depending on the number of articles and citations.

In the first generation, scientists having more than 20 articles are categorized under the label of 'extremely successful.' These 'extremely successful' scientists are the graduates of public science (46.7%) and secular private (41.7%) high schools respectively. In this ordering, scientists who are categorized under the label of

'successful' have more than 3 articles and are the graduates of normal public (80.0%), public Anatolian (41.6%), public science (40. 0%) high schools respectively. Scientists labeled under the name of 'fairly successful' have the articles between 1 and 3 and are the graduates of the secular private (33.3%) and public Anatolian (16. 7%) high schools respectively. Scientists labeled under the name of 'no peculiar success' are the graduates of public Anatolian (8.3%) and secular private (8.3%) schools and they do not have any article in ISI database. In the second generation, scientists who have more than 10 articles are categorized under the label of 'extremely successful' are the graduates of public Anatolian (28.6%) and Gülen private denominational (14.3%) high schools respectively. Scientists who have articles between 4 and 10 are labeled under the name of 'successful' and are the graduates of normal public (50.0%), public science (38.1%), secular private (33.3%) high schools. 'Fairly successful' scientists have articles between 1 and 3 and are the graduates of secular private (66.7%), public Anatolian (57.1%), normal public (50.0%), and Gülen denominational private (47.6%) high schools. Scientists who have 'no peculiar success' in publication of articles are the graduates of Gülen private denominational (23.8%) and public science (19.0%) high schools. In the third generation, the ordering of the success should be changed because of the age of young scientists. Scientists of this generation are usually M.S. or PhD students. Therefore, the number of their articles would be put under two labels called 'extremely successful' and 'successful.' Scientists who have articles between 4 and 10 labeled under the name of 'extremely successful' are the graduates of public Anatolian (14.3%) and Gülen private denominational (8.7%) high schools. Scientists labeled under the name of 'successful' have articles between 1 and 3 and are the graduates of Gülen private denominational (30.4%) and public Anatolian (28.6%) high schools.

Besides the number of the articles, number of the citation for each scientist would give reliable outcome to evaluate the success of the scientists.

Table 4.16: School Types and ISI Citation

			ISI Citation					Total
			0	1- 10	11- 50	51- 200	201- 1805	
1962-1969	Public Science HS	N	1	-	2	5	7	15
		%	6. 7	-	13. 3	33. 3	46. 7	100. 0
	Public Anatolian HS	N	1	5	2	3	1	12
		%	8. 3	41. 7	16. 7	25. 0	8. 3	100. 0
	Normal Public HS	N	-	-	2	1	2	5
		%	-	-	40. 0	20. 0	40. 0	100. 0
	Secular Private HS	N	2	3	1	4	2	12
		%	16. 7	25. 0	8. 3	33. 3	16. 7	100. 0
	Total	N	4	8	7	13	12	44
		%	9. 1	18. 2	15. 9	29. 5	27. 3	100. 0
1970-1976	Public Science HS	N	8	2	9	1	1	21
		%	38. 1	9. 5	42. 9	4. 8	4. 8	100. 0
	Public Anatolian HS	N	2	2	2	1	-	7
		%	28. 6	28. 6	28. 6	14. 3	-	100. 0
	Normal Public HS	N	1	-	-	1	-	2
		%	50. 0	-	-	50. 0	-	100. 0
	Secular Private HS	N	3	2	1	-	-	6
		%	50. 0	33. 3	16. 7	-	-	100. 0
	Gülen Denominational Private HS	N	9	5	2	5	-	21
		%	42. 9	23. 8	9. 5	23. 8	-	100. 0
	Total	N	23	11	14	8	1	57
		%	40. 4	19. 3	24. 6	14. 0	1. 8	100. 0
1977-1982	Public Science HS	N	24	1	-	-	-	25
		%	96. 0	4. 0	-	-	-	100. 0
	Public Anatolian HS	N	6	1	-	-	-	7
		%	85. 7	14. 3	-	-	-	100. 0
	Gülen Denominational Private HS	N	16	5	1	1	-	23
		%	69. 6	21. 7	4. 3	4. 3	-	100. 0
	Total	N	46	7	1	1	-	55
		%	83. 6	12. 7	1. 8	1. 8	-	100. 0

In the first generation, scientists who have more than 200 citations would be categorized under the label of 'extremely successful' and are the graduates of public science (46. 7%) and normal public (40.0%) high schools. Scientists who have citations between 51 and 200 are labeled under the name of 'successful' and are the graduates of secular private (33.3%) and public science (33.3%) high schools. 'Fairly successful' scientists have the citations between 1 and 50 and are the graduates of public Anatolian (58.4%) and normal public (40.0%) high schools. Scientists who could be labeled under the name of 'no peculiar success' are the graduates of secular private (16.7%) high schools mostly. In the second generation, 'extremely successful' scientists have citations more than 50 and are the graduates of normal public (50%) and Gülen private denominational (23.8%) high schools. 'Successful' scientists have citations between 11 and 50 and are the graduates of public science

(42.9%) and public Anatolian (28.6%) high schools. 'Fairly successful' scientists have citations between 1 and 10 and are the graduates of secular private (33.3%), public Anatolian (28.6%) and Gülen private denominational (23.8%) high schools. Scientists who could be categorized under the label of 'no peculiar success' are the graduates of normal public (50.0%), secular private (50.0%), Gülen private denominational (42.9%) high schools. In the third generation, two labels 'extremely successful' and 'successful' should be used because of the age of the scientists. Scientists who have more than 10 citations are labeled under the name of 'extremely successful' and are the graduates of Gülen denominational private (8.6%) high schools. Scientists labeled under the name of 'successful' have citations between 1 and 10 and are the graduates of Gülen private denominational (21.7%) and public Anatolian (14.3%) high schools.

In sum, we would say that public science high school graduates are in distinguished places with their successes in the scientific field in the first generation. Normal public high school graduates taking considerable number of citations and secular private high school graduates having significant number of articles are following them in the scientific field. In the second generation, public science and normal public high school graduates take ahead with their scientific studies. While public science high school graduates have significant number of citations, normal public high school graduates have peculiar number of articles. Likewise public Anatolian high school graduates follow them with their number of citations while secular private high school graduates follow them with their number of articles. In this generation, Gülen school graduates could not show peculiar success with their scientific studies. However, in the third generation, two high school types are striking the eye. While the graduates of the public Anatolian high schools are having the priority in number of articles, the graduates of Gülen schools seems to overwhelm priority in citation numbers. Increase in the success of Gülen school graduates is striking the eye in table 4.15 and 4.16. Young scientists graduating from these schools are increasingly enthusiastic in their studies in the scientific area. It is exemplified by their group efforts in particular scientific fields. These group efforts would empower their success in their fields. For example, I met an Internet web page on chemistry-kimyasanal.net. The graduates of Gülen schools mostly frame

publication team of this web page. It is said that their aims are to create university and high-level Turkish sources in the field of chemistry to guide the people who need help and to solve their problems, to share information within the editorial board and to make the contribution of members and visitors possible. This site has 21 writers and 1231 members. They emphasize the voluntary nature of their site which is mostly composed of the writings on sub fields of chemistry and the announcements about the developments in the field of chemistry. This site is the sign of continuing group efforts among the graduates of Gülen schools after the high school terms in the scientific field besides showing their enthusiasm for working in the scientific field.

4. 5. Behavioral Peculiarities of Scientists

In this part of the study, the behavioral tendencies of the participants will be analyzed to understand the effects of generation and high school education on the personalities of the participants. Their ideas on the causes of high school selection, the effects of school types on the characters, and the beatific aspects of their lives will be analyzed to have behavioral profiles of the participants. All items belonging to each title were organized for the ordering of participants. However, participants chose to sign or confirm items without ordering them. Therefore, these findings are evaluated as 'yes' or 'no' for each item. To decrease the number of tables and to make the comparison of items easy, all items are aggregated in one table for each heading and only the confirmation of the items are taken into consideration. Therefore, there are not total numbers and percentages of lines. There are only total numbers and percentages of each column. Looking at the distributions of causes of high school selections according to generations and school types would give an idea about the tendencies in behavioral profiles of the participants whose socio- demographic and socio-economic peculiarities were analyzed. To understand the causes of high school selection, the items that are 'my family's will', 'for well preparation to university entrance exam', 'for learning a foreign language', 'for societal prestige', 'for scholarship' will be analyzed by taking into consideration the confirmations.

Table 4.17 shows the distribution of causes of high school choices according to generations.

Table 4.17: Generation and Causes of High School Selection

		Causes of High School Selection				
		My family's will	For well preparation to university entrance exam	For learning a foreign language	For societal prestige	For scholarship
		Yes	Yes	Yes	Yes	Yes
1962- 1969	N	4	10	6	7	-
	%	33. 3	83. 3	50. 0	58. 3	-
1970- 1976	N	5	14	6	3	2
	%	26. 3	73. 7	31. 6	15. 8	10. 5
1977- 1982	N	3	21	3	6	-
	%	11. 5	80. 8	11. 5	23. 1	-
Total	N	12	45	15	16	2
	%	21. 1	78. 9	26. 3	28. 1	3. 5

The tendency in the confirmation of causes of high school selection shows fluctuations according to generations of scientists. It seems that the effects of 'family' on decisions and the aims of 'learning a foreign language' gradually decline from generation to generation. For both items, the confirmations could not exceed the total average in the third generation. This would be the sign of the change in Turkish society and the improvement of the education system. Since, family has become a more democratic institution in which the ideas of children are taken into consideration in the decisions about their lives for the last years. Family profile of this study belonging to middle class and having educational capital has been more inclined to this democratic change than the other sections of society. In addition, the improvement of education system in general and the alternative ways in particular has made the language learning easier than the previous days. Now every kind of schools is giving language education which could also be supported by the private language courses. Monopoly of the certain school kinds has ended in language education. On the contrary to language education, 'well- preparation to the university entrance exam' continues to be effective in the causes of high school selection. More than half of the scientists confirm the item of the well preparation to university entrance exam as an effective variable in their high school choice. In Turkey, most of the educational investments are canalized into the university entrance exams for both families and education institutions of the students. Most people evaluate high school education as a step for the university entrance. Therefore, the fame of high schools in preparation to university exam plays an important role on the choice of high schools. However, this university oriented tendency paves the way for memorization rather

than analytical and artistic thinking. Most of the genius scientists of this study complain about this understanding of education in open-ended questions. They support the idea of education that triggers the scientific curiosity and practicing rather than memorization of the data. More than half of the first generation scientists have confirmed the effects of 'societal prestige' in their high school selections. First generation scientists usually come from families that have both educational and economical capital. Therefore, for them and their families high school education, taken from a prestigious high school, would be seen as a way of owning social capital in society besides the economic capital. To be a graduate of these popular schools would give them a prestigious position in society. As we saw in the analyses of socio- demographic and socio- economic parts of this study, second generation of scientists shows heterogeneous profile according to societal roots and characters. Therefore, this generation is also composed of clever students from low class of society. 'For scholarship' item takes confirmations from this generation. Scholarship would be an important factor in the decisions of scientists coming from low class. Distribution of the causes according to school types would give an idea about the societal characters of the participants and their high school choices.

Table 4.18: School Types and Causes of High School Selection

		Causes of High School Selection				
		My family's will	For well preparation to university entrance exam	For learning a foreign language	For societal prestige	For scholarship
		Yes	Yes	Yes	Yes	Yes
Public Science HS	N	3	25	2	8	-
	%	11. 1	92. 6	7. 4	29. 6	-
Public Anatolian HS	N	4	8	8	4	-
	%	40. 0	80. 0	80. 0	40. 0	-
Normal Public HS	N	-	2	-	-	-
	%	-	100. 0	-	-	-
Secular Private HS	N	4	4	5	4	-
	%	44. 4	44. 4	55. 6	44. 4	-
Gülen Denominational Private HS	N	1	6	-	-	2
	%	11. 1	66. 7	-	-	22. 2
Total	N	12	45	15	16	2
	%	21. 1	78. 9	26. 3	28. 1	3. 5

There are 3 important findings from the table 4.18. First of all, the confirmation of the item of 'the well preparation to university entrance exam' is widespread among the graduates of the public schools including science, Anatolian and normal high

schools. We would say that high school education is thought mostly as a step for entering the university among the students of these schools. Secondly, graduates of public Anatolian and secular private high schools display similarities by taking place above the total averages in confirming the items of 'my family's will', 'learning a foreign language' and 'societal prestige.' Similar societal characters of these schools' students in particular fields would be important in these confirmations. As we have seen previously, their averages in birth place and mother and father educational levels are similar except social class. Thirdly, the graduates of Gülen schools affirm the impact of 'scholarship' in their choices. This item about the causes takes confirmation only among the students of Gülen schools. Scholarship advantages of these schools play an important role among the causes of choices. Since, some clever students of these schools usually come from the lower class strata of society. However, confirmation of 'scholarship' item comes from the second generation scientists. Therefore, confirmation comes from the first generation graduates of Gülen schools. In the third generation, there is not any confirmation. So, scholarship plays an important role upon the decisions of the first generation graduates of Gülen schools. In addition, graduates of Gülen schools did not confirm the 'for learning a foreign language.' This would be because of inefficient popularity of these schools in foreign language education. One of the participants of this study pointed this by emphasizing that 'I took English education whose grammer aspect was good, but practice side was weak.' Gülen schools are not popular with their language education success in Turkey. To have an idea about the effects of high school types on the characters of the participants, the distribution of the peculiar types of characters according to school types will be analyzed. The distribution of these peculiar types of character including the items that are 'discipline', 'resolution', 'morality', 'analytical thinking', 'world view', 'imagination', and 'aesthetic thinking' will be given in table 4.19 according to school types.

Table 4.19: Contributions of School Types to Characters

		Contributions of School Types to Characters						
		Discipline	Resolution	Morality	Analytical Thinking	World View	Imagination	Aesthetic Thinking
		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Public Science HS	N	10	16	-	26	14	8	2
	%	37. 0	59. 3	-	96. 3	51. 9	29. 6	7. 4
Public Anatolian HS	N	4	6	2	8	3	3	1
	%	40. 0	60. 0	20. 0	80. 0	30. 0	30. 0	10. 0
Normal Public HS	N	2	2	-	2	-	-	-
	%	100. 0	100. 0	-	100. 0	-	-	-
Secular Private HS	N	3	4	-	7	3	1	3
	%	33. 3	44. 4	-	77. 8	33. 3	11. 1	33. 3
Gülen Denominational Private HS	N	5	4	4	7	3	3	-
	%	55. 6	44. 4	44. 4	77. 8	33. 3	33. 3	-
Total	N	24	32	6	50	23	15	6
	%	42. 1	56. 1	10. 5	87. 7	40. 4	26. 3	10. 5

All graduates of normal public and more than half of the graduates of the Gülen schools confirm the item of 'discipline' as an important character brought by their high schools. If we remember the popularity of normal high schools as successful institutions of old days, this inference would be important for the examination of special position of Gülen schools which is popular nowadays. In education understanding of Gülen schools, the concept of discipline took an important place. According to Gülen, discipline, 'the discipline of barracks' in his terms, should be a character of the golden generation. Therefore, education would be seen as a tool to bring up this disciplined generation. More than half of the scientists' confirmation about discipline would be the sign of the education understanding of these schools that evaluates discipline as a character of the future's generation. In the case of the item of 'resolution', more than half of public schools graduates have confirmed the 'resolution' as an important character brought by their schools to their personality. Other character that is significant for the evolution of contribution of high schools to personality is 'morality'. The graduates of Gülen schools have an esteem to confirm morality suggestion agreeable to the expectation. Morality is an important part of the Gülen discourse on education. Gülen school's teachers evaluate the teaching of morality as the most important duty of themselves. The suggestion of morality is also confirmed by 20 % of Anatolian high school graduates, while other three school's graduates do not esteem it. The item of 'analytical thinking' is confirmed by more than half of the graduates from each school type. However, the percentages of public

science and normal public high schools exceed the total average percentage of the item. Secular private and Gülen private denominational high schools' graduates are in the lowest order in confirmation of this suggestion. In the case of the item of the 'world view', the confirmations of the public science high school graduates are also above the total average. The peculiar respondents of the item of 'imagination' come from the graduates of Gülen schools. In confirmation of the item, public Anatolian and public science high schools follow them with small differences. In the item of 'aesthetic thinking', secular private schools take the first line among others with 33.3%. These schools are popular with their sportive and cultural activities. In their education understanding, cultural and sportive side of the education takes an important place. This education understanding would give graduates of these schools a sense of aesthetic. Public high schools especially normal public high schools and Gülen schools ignore or do not give a special emphasis on this part of the education. In public high schools, this would be because of the economic shortages. State funds would not be sufficient for these kinds of activities. In Gülen schools, these kinds of activities are not seen as a part of the functional education. Gülen discourse is built on the functionality of the knowledge (İnsel 71) to raise a generation that is successful in their jobs especially in science and trade. Sports and arts are not seen as parts of this aim. This educational understanding would prevent the graduates of this study in confirming aesthetic thinking. Confirmation of the items informs about the education understanding of high schools. Among high school types, Gülen schools differentiate themselves with their effects on the character of the students. Especially; the confirmations on the items of discipline, morality and aesthetic thinking differentiate Gülen schools from other schools.

To have behavioral profiles of scientists, beatific aspects of their lives were also asked with the items including 'my occupation', 'relations with my family', 'recreational activities', 'participation in activities of amelioration of the country', 'participation in activities of amelioration of the international relations', 'religious affiliation and activities.' Looking at the distribution of the confirmations of these items according to generations and school types would give an idea about the changing nature of profiles. Table 4.20 displays the distribution according to generations.

Table 4.20: Generation and Beatific Aspects of Life

		Beatific Aspects of Life					
		my occupation	relations with my family	recreational activities	participation in activities of amelioration of the country	participation in activities of amelioration of the international relations	religious affiliation and activities
		Yes	Yes	Yes	Yes	Yes	Yes
1962-1969	N	9	11	7	4	1	1
	%	75. 0	91. 7	58. 3	33. 3	8. 3	8. 3
1970-1976	N	18	17	14	5	3	2
	%	94. 7	89. 5	73. 7	26. 3	15. 8	10. 5
1977-1982	N	22	19	16	12	4	4
	%	84. 6	73. 1	61. 5	46. 2	15. 4	15. 4
Total	N	49	47	37	21	8	7
	%	86. 0	82. 5	64. 9	36. 8	14. 0	12. 3

More than half of scientists pointed the importance of their 'occupation', 'families' and 'recreational activities' in their lives. Among these items, there is a decline in the confirmation of the item of 'relations with family'. This would be because of the relaxation of family ties in Turkish society. Traditional family ties expanding the individuals' every aspect of lives have become looser. In addition, though there is an increase in the item of 'recreational activities' in the second generation, this tendency decreased in the third generation. This would be because of the unpopularity of this item for Gülen school graduates in the third generation. This conclusion would be true for the item of 'occupation' that shows same kind of tendency. The item of 'participation in amelioration activities of country' is showing an increase with the generations. Third generation has exceeded the average in confirmation of this item. This is also because of the confirmations coming from the Gülen school graduates. On the contrary to the amelioration activities of the country, the item on the 'amelioration activities of international relations' could not take so many confirmation from the scientists. Though second and third generations exceeded the average of total confirmations the percentages are low in these confirmations. Like this, confirmation of the item of 'religious affiliation and activities' is low among the participants. Though the low rate of confirmation, there is an increase in confirmations in generations. Third generation is above the average of total confirmation. We would say that the role of religious affiliation and activities is increasing in the lives of the scientists. The distribution of the confirmations of items

on the beatific aspects of life according to school types would be beneficial to understand the changing nature of the scientists' viewpoints on their lives according to school types.

Table 4.21: School Types and Beatific Aspects of Life

		Beatific Aspects of Life					
		my occupation	relations with my family	recreational activities	participation in activities of amelioration of the country	participation in activities of amelioration of the international relations	religious affiliation and activities
		Yes	Yes	Yes	Yes	Yes	Yes
Public Science HS	N	25	22	19	9	4	4
	%	92. 6	81. 5	70. 4	33. 3	14. 8	14. 8
Public Anatolian HS	N	9	9	7	3	3	1
	%	90. 0	90. 0	70. 0	30. 0	30. 0	10. 0
Normal Public HS	N	2	2	1	2	-	-
	%	100. 0	100. 0	50. 0	100. 0	-	-
Secular Private HS	N	7	7	7	2	1	-
	%	77. 8	77. 8	77. 8	22. 2	11. 1	-
Gülen Denominational Private HS	N	6	7	3	5	-	2
	%	66. 7	77. 8	33. 3	55. 6	-	22. 2
Total	N	49	47	37	21	8	7
	%	86. 0	82. 5	64. 9	36. 8	14. 0	12. 3

Most of the scientists graduated from public schools sign their 'occupation' as beautiful facet of their lives. We would say that science is the most important aspect of their lives. Though more than half of the graduates of secular private and Gülen school graduates confirm the item about their occupation, their confirmation percentages are below the total average of confirmation. On the item about the 'recreational activities,' Gülen school graduates compose the lowest tendency in confirmation among all school types while more than half of the other school graduates confirm this item as beatific aspect of their lives. This result is agreeable with the expectation. In Gülen's discourse, there is an enormous emphasis on *'working'* which is presented as a way *'to be takva.'* Therefore, recreational activities are seen as an opposite of this understanding that could be inferred from the confirmation of only 33.3%. On the contrary to this, 'participation in the activities of the amelioration of the country' is supported by more than half of the graduates of the Gülen schools. This is the expected result of this study. Since, Gülen's discourse has nationalist posture in which emphasis is given to powerful state. To this powerful

state, education is the most important tool in which generations of the future are brought up. The highest average of Gülen schools among the averages of other school types would be the sign of this understanding. Besides the confirmation of Gülen schools, all graduates of normal public high schools supported this item. Contrary to expectation, the graduates of the Gülen schools do not support the item of 'participation in amelioration of the international relations.' This absence of Gülen school graduates in confirmation of this item is surprising. Since, Gülen's discourse has enlarged by taking the international political issues in its agenda for the last years with its special emphasis on the danger of Islamic fundamentalism. 'Tolerance' and 'compromise of civilizations' are presented as solutions to international political issues, while Community's schools in abroad are presented as active side of the movement taking global problems into consideration. Gülen schools in abroad are presented as a way of finding solution to the global problems through the education. The confirmation of the item of 'religious affiliations and activities' is lowest among the graduates of all school types. When we try to see a tendency among the lowest rate of confirmations, we see that Gülen private denominational and public science high school graduates are above the total confirmation average. In addition, public Anatolian high school graduates follow these two schools in confirmation of this item though its percentage does not exceed the total average. Therefore, we would say that religious affiliations could be observed among public school graduates rather than only in Gülen schools.

4. 6. Religious and Democratic Attitudes

In this part of the study I will focus on two subjects. First of all, the behavioral tendency of the participant scientists to religion and the degree of this loyalty to religion will try to be analyzed. Secondly, the devotions of scientists to democracy and the degree of this democratic attitude will try to be defined.

To analyze these two attitudinal characters of scientists, the items about religious and democratic attitudes formed in likert style were presented into the confirmation of the scientists. To have integrity in analysis, the relations between confirmations of items should be handled. Therefore, I tried to examine the kind of grouping in the confirmation of items by using factor analysis. I aggregated 21 items in three groups

by making statistical matching through factor analysis. However, most of the items of the questionnaire fell into the obscure place in this grouping. Their places did not give sense about the distribution. In addition, the third group did not take enough items to label it according to the verifications of its items. Therefore, this group was omitted from analysis. It could only have been taken into consideration 11 items of the questionnaire that mostly fell into 2 groups within the conformity of items and their referring. As will be seen in table 4.22, some items fell under more than one group. In these cases, these items were incorporated into the group in which their values were higher than that of other groups. However, in the item that 'the excessive emphasis on religious beliefs prevents scientific exploration,' its referring was taken into consideration while grouping it. This item's meaning is more inclined to second group than the first group.

Table 4.22: Varimax Rotated Factor Matrix

	Factors		
	1	2	3
Inefficient emphasis on ethical and religious matters in education system leads to the blanks in the minds of young.	.751		.212
Man is the head of family in healthy society structure.	.685		
The worst state is better than not having the state.	.652		
Closure of radios and TVs by RTÜK is an intervention of the state to individual rights and liberties.	.600		.-271
The excessive emphasis on religious beliefs prevents scientific exploration.	.515	.356	
If necessary, political parties should be closed.	.463		.-313
Financing of researches of scientists by private institutions prevents the objective research results.	.-432		
The acceptance of Turkey to EU makes the expansion of Turkish- Islamic culture into larger geography possible.	.401		
Individual rights and liberties should be immune against the holiness of the state.	.372	-324	
Religious communities function as a civil society organization.	.366	.759	
Forbidden of headscarf in universities is one of the unfair interventions to the individual rights and liberties.		.-732	
Associations and vakıfs founded by religious communities are not a part of civil society.	.307	.722	
Effectiveness of religion in our societal lives is not an obstacle in consolidation of our democracy.	.467	.608	
Science will solve all secrets of the universe one day.		.592	
I am against the intervention of military to politics.	.396	.-462	.-442
Science has objective character free from personal thoughts and judgments.		.409	.248
A research estimated to be used negatively should be quitted.			
Our cultural structure is the biggest obstacle in front of the consolidation of democracy.		.218	.-813
There should be courses including subjects like mythology and metaphysics besides the basic science courses like physics and chemistry in schools.	.239	.-273	.644
Scientists should be in a more decisive position for the usage of scientific knowledge.		.303	.555
With the acceptance of Turkey into EU, Turkish culture will lose its effects.			.262

After the factor analysis, it is observed that items aggregated in two groups have relations within each other. First group includes the items aiming to analyze 'democratic attitudes' of participant scientists, while the second group consists of items aiming to define 'religious oriented attitudes' of scientists. I will start the analysis with the second group of factor analysis whose items' emphasis are on the 'religious oriented attitudes.'

Five items aim to define 'religious oriented attitudes' of scientists taking place in the second group of factor analysis matching. These items include 'science will solve all secrets of the universe one day', 'the excessive emphasis on religious beliefs prevents scientific exploration', 'associations and vakıfs founded by religious communities are not a part of civil society', 'religious communities function as a civil society organization', and 'effectiveness of religious in our societal lives is not an obstacle in consolidation of our democracy.' These questions were asked in likert type ranging from 'absolutely disagree' to 'absolutely agree.' The high- level alpha value (0.7496) acquired after a reliability analysis indicates explanatory function of these five items in defining 'religious oriented attitudes' of scientists. I will evaluate these items in two ways by turning all items in one variable and analyzing each item. Therefore, first of all, I will frame five items into one variable to examine 'religious oriented attitudes' of participant scientists according to generations and school types. However, this does not mean that the groups analyzed are homogenous. The averages of groups are taken into consideration to analyze general or dominant character of groups. In figure 4.1, the distribution of the average values of 'religious oriented attitudes' according to three generations is displayed.

Figure 4.1: Generations and Religious Attitudes
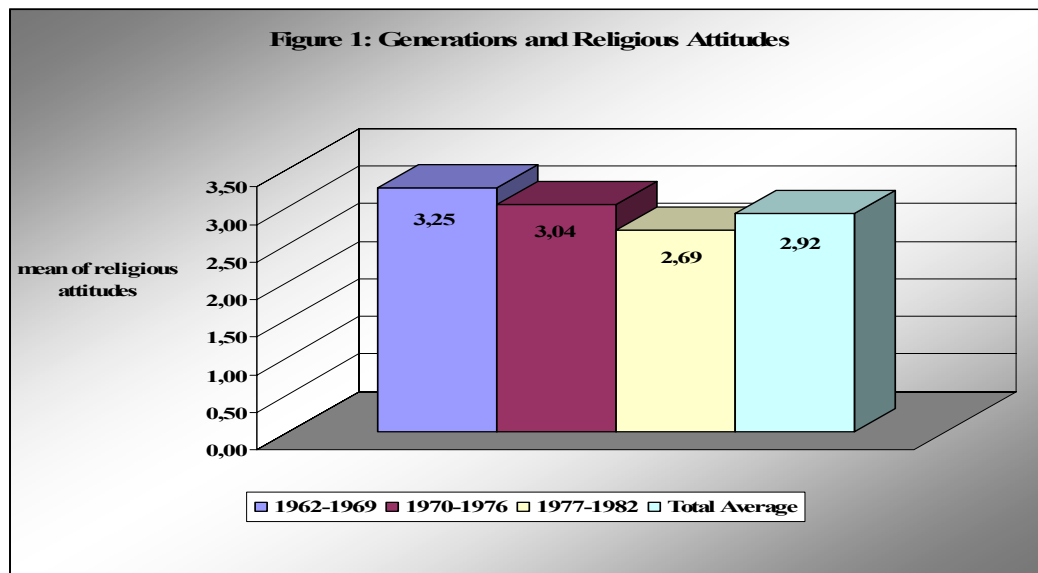
Before analyzing the data it would be beneficial to inform about the data displaying the distribution of 'religious oriented attitudes' of scientists according to generations and school types. The total average of the variable of 'religious oriented attitudes' is

2. 92. The average values approaching 'one' imply 'stronger religious oriented attitudes', while the average values reaching 'five' sign 'looser religious oriented attitudes,' and the average values approaching 'three' present 'undecided religious oriented attitudes.' The total average of variable, 2. 92, signifies the undecided position of religious oriented attitudes among the participants.

The first finding striking the eye in figure 4.1 is the place of the first and the third generation in two opposite edges of the variable of 'religious oriented attitudes' of scientists. In other words, the first generation including the birth dates from 1962 to 1969 shows 'looser religious oriented attitudes (3. 25)', while the third generation including the birth dates from 1977 to 1982 shows 'stronger religious oriented attitudes (2.69)'. The second generation including the birth dates from 1970 to 1976 shows similarities (3.04) with the first generation displayed 'looser religious oriented attitudes.' When we make an analysis according to high school types, we see differences between school types.

In figure 4.2, the first finding that strikes the eye is the ranking of public Anatolian and Gülen denominational schools in two opposite edges with regard to religious oriented attitudes. In other words, there are 'looser religious oriented attitudes' among the graduates of public Anatolian high schools (3,34), while there are 'strong religious oriented attitudes' among the graduates of Gülen denominational private high schools (2,45). Another remarkable point is the similarities of three high school types including public Anatolian (3,34), normal public (3,30) and secular private (3,22) high schools in the distribution of 'religious oriented attitudes.' They present similarities by passing the total average of 'religious oriented attitudes' and displaying 'looser religious oriented attitudes.' On the other hand, the average of the public science high schools (2,80) is below the total average of religious oriented attitudes. However, this does not mean that there are similarities between public science and Gülen schools in religious oriented attitudes. Public science high schools' average is closer to the total average than that of Gülen denominational private high schools. In other words, they are mostly in an undecided position with regard to religious oriented attitudes. This shows that public science high school

84

graduate scientists have less 'strong religious oriented attitudes' than the graduates of Gülen schools.

Figure 4.2: School Types and Religious Attitudes

Figure 2: School Types and Religious Attitudes
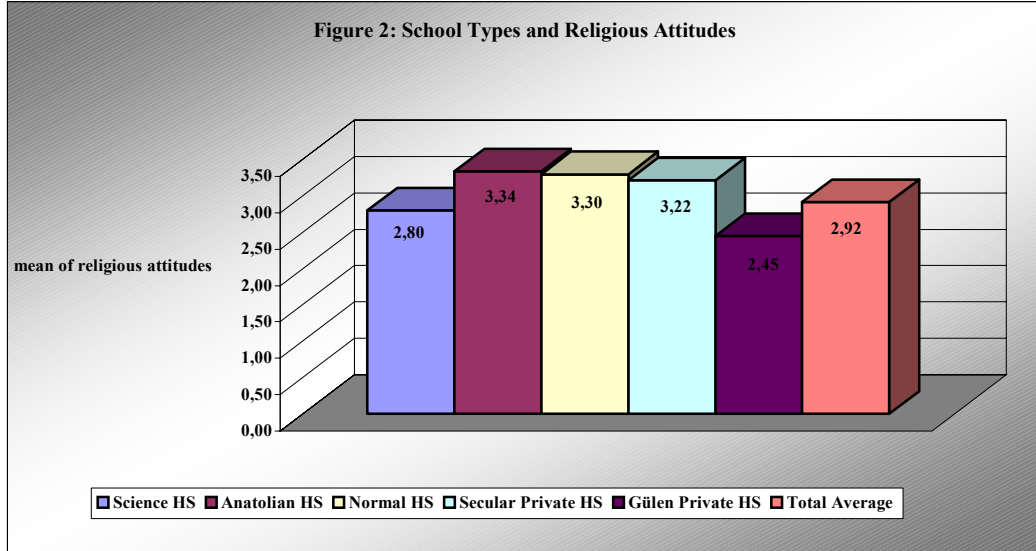
Until that time, I try to make overall evaluation of the tendency of religious oriented attitudes according to generations and school types. Now, I will try to evaluate each item to have an idea on the aspects of religious oriented attitudes and its changing nature according to school types.

Table 4.23: School Types and Religious Attitudes

		science will solve all secrets of the universe one day	the excessive emphasis on religious beliefs prevents scientific exploration	associations and vakıfs founded by religious communities are not a part of civil society	religious communities function as a civil society organization	effectiveness of religious in our societal lives is not an obstacle in consolidation of our democracy
Public Science HS	Mean	2. 63	3. 74	2. 25	2. 70	2. 66
	N	27	27	27	27	27
Public Anatolian HS	Mean	2. 90	4. 10	2. 70	3. 10	3. 90
	N	10	10	10	10	10
Normal Public HS	Mean	4. 00	4. 50	2. 50	3. 50	2. 00
	N	2	2	2	2	2
Secular Private HS	Mean	3. 00	3. 88	2. 33	3. 33	3. 55
	N	9	9	9	9	9
Gülen Denominational Private HS	Mean	2. 26	3. 44	1. 88	2. 55	2. 11
	N	9	9	9	9	9
Total	Mean	2. 72	3. 80	2. 29	2. 87	2. 91
	N	57	57	57	57	57

The total average of the item 'science will solve all secrets of the universe' approaches to 'undecided edge' of the distribution. Thus, we would say that participant scientists display 'undecided religious oriented attitudes' to the secrets of the universe and the power of science against these secrets. The distribution of this item's averages according to school types presents that normal public high schools have 'looser religious oriented attitudes (4.00)' in analyzing the secrets of the universe. They are followed by secular private (3.00) and public Anatolian (2. 90) high schools respectively in this manner. However, averages of these two school types are equal or close to 3.00. This shows that the position of the graduates of these two schools is undecided towards the religious oriented expressions of the universe. On the other hand, Gülen school graduates represent 'strong religious oriented attitudes' with the lowest average (2.26). They are followed by the graduates of public science (2. 63) high schools. The item 'the excessive emphasis on religious beliefs prevents scientific exploration' has the highest total average (3.80) among other items. In other words, many participants affirm the importance of independent exploration without boundaries of other social institutions in scientific sphere. The total average of this item takes place in the 'looser religious oriented attitudes' edge of the distribution. Normal public (4.50), public Anatolian (4.10) and secular private (3.88) high schools show similarities by exceeding the total average and displaying 'looser religious oriented attitudes.' The averages of public science (3.74) and Gülen denominational private (3.44) high schools are less than the total average. However, this does not mean that both school types have the same kind of attitudes towards this item. The average of public science high schools is closer to the total average than the average of Gülen schools. In other words, public science high schools display 'looser religious oriented attitudes' than the Gülen schools. The item of 'associations and vakıfs founded by religious communities are not a part of civil society' has the lowest total average (2.29) among the items. Democratic posture would be effective in confirmation of this item. Like other 2 items, the averages of public Anatolian (2.70), normal public (2.50) and secular private (2.33) high schools exceed the total average. Averages of these 3 school types are less than their prior averages. This would be because of their democratic standing against the religious oriented attitudes. Like other items, averages of public science (2.55) and Gülen denominational (1.88) high schools are less than the total average. In contrast to this

item, the total average of the item of 'religious communities function as a civil society organization' approach to the 'undecided religious oriented attitudes' in the edges of the distribution of averages. Averages of normal public (3.50), secular private (3.33) and public Anatolian (3.10) exceed the total average and display the 'looser religious oriented attitudes' in the distribution of the item. Averages of public science (2.70) and Gülen denominational private (2.55) high schools are less than the total average. The average of public science high schools is close to the 'undecided religious oriented attitudes' edge of the distribution. The total average of the item of 'effectiveness of religious in our societal lives is not an obstacle in consolidation of our democracy' (2.91) is closer to 3.00 that represent the condition of 'undecided religious oriented attitude.' The averages of public Anatolian (3.90) and secular private (3.55) high schools exceed the total average and display 'looser religious oriented attitudes' in evaluating democracy and religion. They incline to see religion as an obstacle to democracy. On the other hand, public science (2.66), Gülen denominational private (2.11) and normal public (2.00) high schools do not incline to evaluate religion as an obstacle to democracy. This result is surprising for the graduates of normal public high schools. They display 'looser religious oriented attitudes' in other items. This would be because of their evaluation of religion in the private sphere rather than in the public sphere contacting with other institutions of society.

The second aim of this study is to evaluate the 'democratic attitudes' of participants. 6 items aiming to analyze democratic posture of scientists take place in the first group of factor analysis matching. These items include 'individual right and liberties should be immune against the holiness of the state', 'closure of radios and TVs by RTÜK is an intervention of the state to individual rights and liberties', 'the worst state is better than not having the state', 'if necessary, political parties should be closed', 'I am against the intervention of military to politics', 'man is the head of family in healthy society structure.'

These questions were asked in likert type ranging from 'absolutely disagree' to 'absolutely agree.' The high- level alpha value (0.6560) acquired after a reliability analysis indicates explanatory function of these 6 items in defining democratic

attitudes of scientists. I will evaluate these items in two ways by turning all items in one variable and analyzing each of the items. Therefore, first of all, I will frame 6 items into one variable to examine democratic attitudes of participant scientists in general. In figure 4.3, the distribution of the average values of 'democratic attitude' variable is displayed according to 3 generations.

Figure 4.3: Generations and Democratic Attitudes
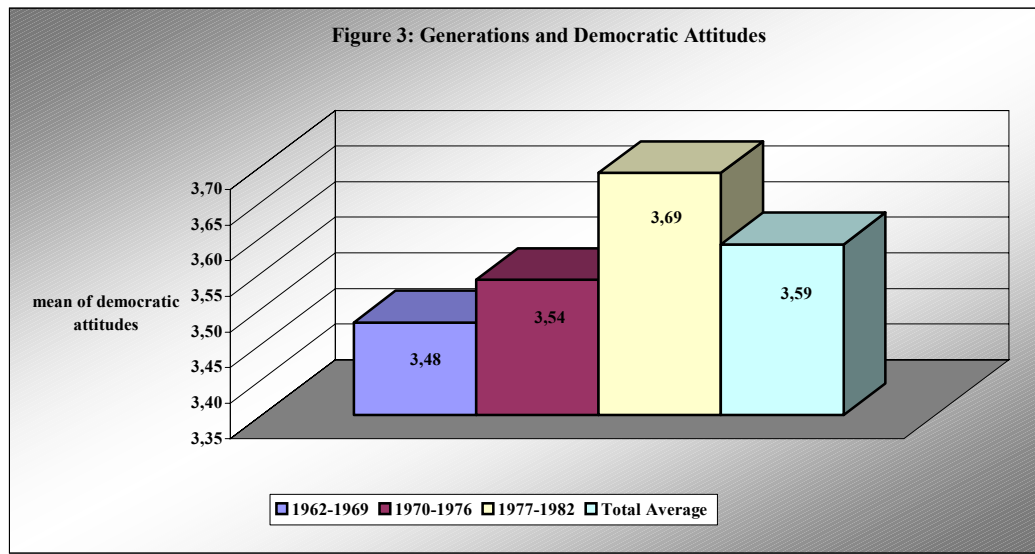
Before analyzing the data, it would be beneficial to inform about the data aiming to display relations between independent variable of 'democratic attitude' and the dependent variables of generations and high school types. The total average of the variable of 'democratic attitude' is 3.59. The averages approaching 'one' imply 'looser democratic attitudes', while the average values reaching to 'five' sign 'stronger democratic attitudes' and the averages approaching 'three' present 'undecided democratic attitudes.' The total average of the variable, 3. 59, signifies the high tendency of the democratic attitudes among the participants.

First finding striking the eye in figure 4.3 is the place of the first and third generation in opposite edges of the distribution of democratic attitudes. In other words, the first generation including the birth dates from 1962 to 1969 shows looser democratic attitudes (3.48), when compared with the third generation including the birth dates from 1977 to 1982, (3.69). The second generation including the birth dates from 1970 to 1976 shows similarities (3.54) with the first generation displayed looser

democratic attitudes than the third generation. Analysis of the distribution according to school types would give us information about the differences.

Figure 4.4: School Types and Democratic Attitudes

Figure 4: School Types and Democratic Attitudes
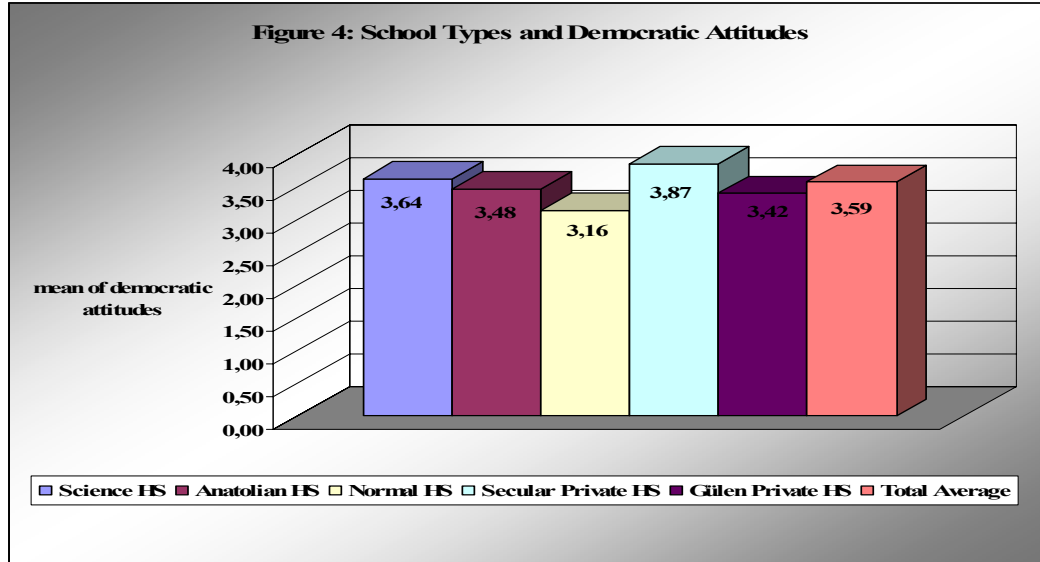
In figure 4.4, the first finding that strikes the eye is the ranking of secular private and normal public high schools in two opposite edges with regard to democratic attitudes. In other words, there are looser democratic attitudes among the graduates of normal public high schools (3.16), when we compared with the graduates of secular private high schools (3.87). Secular private high schools are followed by public science high schools (3.64) while displaying stronger democratic attitudes. The averages of public Anatolian (3.48) and denominational private (3.42) high schools do not exceed the total average of democratic attitudes. This is very surprising for Gülen denominational private high schools. Since, Gülen Community presents itself as a civil society organization working in a democratic country. Therefore, these schools are expected to bring up a generation more devoted to democracy than other school types. In distribution of data, Gülen schools share the lowest levels with normal public high schools.

Up to now, I try to make overall evaluation of the tendency of democratic attitudes according to generations and school types. Now, I will try to evaluate each item to have an idea on the aspects of democratic attitudes and its changing nature according to school types.

Table 4.24: School Types and Democratic Attitudes

		individual right and liberties should be immune against the holiness of the state	closure of radios and TVs by RTÜK is an intervention of the state to individual rights and liberties	the worst state is better than not having the state	if necessary, political parties should be closed	I am against the intervention of military to politics	man is the head of family in healthy society structure
Public Science HS	Mean	3. 85	3. 22	3. 22	3. 59	3. 88	4. 07
	N	27	27	27	27	27	27
Public Anatolian HS	Mean	3. 88	3. 20	2. 79	3. 00	3. 90	4. 10
	N	10	10	10	10	10	10
Normal Public HS	Mean	4. 50	3. 00	1. 50	2. 00	4. 00	4. 00
	N	2	2	2	2	2	2
Secular Private HS	Mean	3. 66	4. 00	3. 44	3. 66	3. 77	4. 66
	N	9	9	9	9	9	9
Gülen Denominational Private HS	Mean	4. 11	3. 22	2. 33	3. 22	4. 00	3. 66
	N	9	9	9	9	9	9
Total	Mean	3. 89	3. 33	2. 98	3. 38	3. 89	4. 10
	N	57	57	57	57	57	57

The total average of the item 'individual rights and liberties should be immune against the holiness of the state' approaches to the 'stronger democratic attitudes.' Therefore, there is support for the protection of individual rights and liberties against the intervention of the state among the graduates of all school types. Normal public (4.50) and Gülen denominational high schools (4.11) show 'stronger democratic attitude' by achieving to exceed total average of the distribution. While public science (3.85) and Anatolian (3.88) high schools approach the total average, secular private high schools (3.66) obtain the least average among the school types. The total average of the item 'closure of radios and TVs by RTÜK is an intervention of the state to individual rights and liberties' is 3.33. Secular private high schools (4.00) attain the highest average rate among the school types and display the 'stronger democratic attitude.' Though the averages of public science (3.22), Gülen denominational private (3.22) and public Anatolian (3.20) high schools could not exceed the total average, their averages are the sign of their 'stronger democratic attitudes' displayed by exceeding 3.00. Normal public high schools (3.00) place in

'undecided democratic attitudes.' The item that 'the worst state is better than not having the state' attains the lowest total average (2.98) among all items. This average is close to the 'undecided democratic attitudes.' Secular private high schools have the highest average (3.44) by questioning the role of the state. They are followed by the public science high schools (3.22). Public Anatolian high schools (2.79) held an undecided manner while Gülen denominational (2.33) and normal public (1.50) high schools obtain 'looser democratic attitudes' without questioning the role of the state. Normal public high schools have the lowest average displaying the most statist position among all other school types. The total average of the item 'if necessary, political parties should be closed' is 3.38 and this is the sign of the 'stronger democratic attitudes' among the participants. Secular private (3.66) and public science (3.59) high schools display 'stronger democratic attitudes' by exceeding the total average of the item. Though Gülen schools (3.22) could not exceed the average, they have 'strong democratic attitudes' by exceeding 3.00. Public Anatolian high schools (3.00) have an undecided position towards the closure of the parties. Normal public high schools (2.00) display 'looser democratic attitude' by attaining the lowest average among the school types. The total average of the item 'I am against the intervention of military to politics' is 3.89 and sign of the 'strong democratic attitudes' in evaluating the role of the military. Gülen denominational private high schools (4.00), normal public high schools (4.00) and public Anatolian high schools (3.90) have the highest average among the school types and exceed the total average. This is the sign of their democratic attitudes towards darkness of military interventions lived in Turkish modernization history. Though public science (3.88) and secular private (3.77) high schools do not exceed the total average, they also display 'strong democratic attitude' against the military interventions. This is the sign of consensus among the participants on undemocratic nature of the intervention of the military. The item of 'man is the head of family in healthy society structure' attains the highest general average (4.10) among the items. Secular private (4.66) and public Anatolian (4.10) high schools exceed the total average and display 'strong democratic attitude' towards the family. Though public science (4.07) and normal public (4.00) high schools do not exceed total average, they have 'stronger democratic attitude.' Denominational private high schools (3.66) have the least average among other school types though they exceed the undecided level of 3.00.

CHAPTER 5

CONCLUSION

In this study, I wish to address the effects of high school types on the scientific careers and ideological profiles of former Olympiad participant scientists from Fethullah Gülen and other secondary schools. Therefore, this study has a particular concern out the reproductive role of education making possible transmission of ideology to the next generation and in accordance with this becoming of the field of education into an area of struggle. In Turkish context, education field whose parameters are defined by the nationalist secularist ideology of the State has witnessed the appearance of new actors aiming to affect the reproductive function of education paralleling to their worldviews. The educational activities of Gülen Community constituting the main concern of this study are part of struggle in the field of education in Turkey.

Since the subject of this study is appearance of a significant religious group in the field of education to affect the reproductive function of education, the first task has been to examine the reproductive function of education and in accordance with this becoming of education field into an area of struggle to understand the nature of the issue. In the second chapter, a brief history of Turkish education system is given to point the becoming of the education field into an area of struggle. This is a history of transformation of instrumentality of education at the end of which the State presented the opportunities for appearance of new actors in the field of education. Third chapter focuses on the education understanding of Gülen Community, which entered the field of education in 1960s and expanded its activities in 1980s. This chapter presents the ideas of Gülen on education and educational activities of the Gülen Community in this way. This is a profile of the Community, which became a part of

struggle in the education field to affect the reproductive function of the education. Findings of the study are presented in the fourth chapter. These findings are related with the scientific successes, religious and democratic postures of former Olympiad participant scientists from different high school types.

First of all, science Olympiads has become an important source of advertisement for the Gülen Community schools. This could be observed from the names of the Olympiad participants who participated in Olympiads each year during their education period. Though the names of students are usually different in each year from other school types, they have shown some similarities. In other words, there is a tendency of participation with same special students in Olympiad organizations. This was because of the selected small number of clever students trained for the success in Olympiads. Therefore, the cause of scientific successes could not be attributed to majority of students' success in science education. In this context, differences of participants from other school types would be result of the prevalence of scientific success in these school types.

Anyhow the successes of these participants in scientific field in successive years do not show subordinate character when compared with the former Olympiad participants graduating from other school types. The article and citation numbers of these scientists in ISI Citation Index display their successes that their levels do not take part behind other school types' graduates. Especially, last generation of graduates from these schools has displayed enthusiasm for success in scientific sphere. In their enthusiasm for success, group efforts have important role. Graduates of these schools have continued their group efforts after high school education; that means, they do not break ties with each other after they graduated from their high schools. They continue their group efforts after participating in science Olympiads. Hence, we would conclude that strong religious oriented attitudes of scientists graduating from Gülen schools do not affect their success in science. They have increased their scientific successes in their peculiar scientific study areas. In their successes, group efforts would be influential.

In contrast to graduates of Gülen schools, the number of former Olympiad participant scientists from normal and secular private high schools has sharply declined in the last years. This would be because of the decline in quality of science education in these schools during the last years. Since, the participation in science Olympiad organizations from these schools has declined in contrast to the first years of Olympiad organizations. Besides this, the participation from public science and Anatolian high schools has displayed continuity in Olympiad organizations. These schools have participated in Olympiad organizations without interruption. In addition, the successes of scientists graduating from these schools have also displayed continuity. Their article and citation numbers in ISI Citation Index remark their continuing success in scientific field.

Secondly, the continuing tendency to religious attitudes after high school education, during scientific career, is one of the results of this study. In this sense, graduates of Gülen community schools have displayed strong religious attitudes, when compared with the other school types. This would be result of the education understanding of Gülen schools in which knowledge of Islam is emphasized. Training efforts of Gülen schools has combined two methods including formal obligatory curriculum and *temsil* that is good representation. Formal obligatory curriculum makes the following of modern methods including the science education possible and *temsil* aims to teach religio- ethical values embodied in the behaviors of teachers. Therefore, there is not any embodied religious education that differs from other school types in these schools; rather teachers represent religio- ethical values through their life styles. *Temsil* or representation formed in behaviors of teachers like being kind to elders, balance in behaviors, complying to Islamic rules would be effective in formation of their habitus, that their internalizations of external world. One of the participant scientists of this study emphasized that: '…(my high school) provided the skill of balancing and controlling my senses and desires in my young age…' This effect of school on young scientists would be because of the effects of teachers rather than formal curricula. As Apple said for teaching vocation in school, teachers are political on purpose or not; teachers of Gülen schools are also political because of their life styles by knowing or unknowing.

In addition to graduates of Gülen schools, there are also scientists from other school types who display religious oriented attitudes. The cause of this would be searched in their early socialization period when habitus started to be shaped. Since, the education program of other school types includes secular formal curriculum in entrenched character. Therefore, causes of these attitudes would be searched in early socialization period. Family or other closer intimate relationships would be helpful in this manner.

Lastly, another important result is related with democracy in this study. Related to these religious oriented attitudes, the questions about the democratic postures of scientists have won priority. The participants of this study have displayed democratic postures on political issues of Turkey. However, contrary to expectation the graduates of Gülen schools do not take a leading place on approving democratic solutions, though their approvals could not be considered insufficient. Following the discourse of Gülen in last decade, it is assumed that graduates of these schools could have more democratic attitudes than the graduates of other school types. However, the graduates of Gülen schools have shared the lowest two ranks with the graduates of normal public high schools, while secular private and public science high schools have partaken in highest two ranks. All the same, all participant scientists have displayed democratic attitudes. Therefore, secular or religious attitudes of these scientists do not enforce anti- democratic stances on issues of political and societal life in Turkish context. All participants from different school types have displayed a democratic posture on many issues. Therefore, we would say as in J. Linz terminology, 'democracy became only game in town' in Turkish context. Scientists of Turkey from different ideological backgrounds do not see an alternative to democracy.

In sum, Gülen religious Community has evaluated education as an instrument of reproduction of Subjects having knowledge of Islam and modern sciences, and Turkish- Islamic tradition parallel to the ideas of Fethullah Gülen. The Community tries to affect the reproduction function of education paralleling to its worldviews in its struggle in the field of education. It aims to integrate its education method and

worldview into the education system and designate the meaning of legitimacy and desirable society within the field of education.

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APPENDIX A

A BRIEF HISTORY OF INTERNATIONAL SCIENCE OLYMPIADS

International Science Olympiads are organized in the fields of mathematics, physics, chemistry, biology, informatics and astronomy. Prior to the international organizations of these events, there were science competitions in individual countries of Eastern Europe. The oldest well - known competition organized in the field of science and inspired the growth of science Olympiads is Eötvös mathematics competitions begun in 1894 under the auspices of the Mathematical and Physical Society of Hungary (French 44). In introducing a competition for graduating classes of secondary schools, the aim of the Society was to raise the level of teaching and learning mathematics and physics and to discover exceptionally talented students. The Society named the competition the Eötvös Competition to honor Baron Lorand Eötvös, who was a distinguished professor and physicist and one of the founder of the Society and Minister of Education (Wieschenberg 287). According to Wieschenberg (287), the problems of the Competition could be solved with basic algebra, geometry and trigonometry, combined with imagination and creativeness. Additional studying for the Competition was not necessary. In addition, the Society began publication of *the Mathematics Journal for Secondary Schools (Közepiskolai Matematikai Lapok)* in 1894. The publication aim of this journal was to create interest in mathematics among students and help them to prepare for the competition by offering a rich variety of challenging problems (Wieschenberg 292). Since 1894, both the Eötvös Competition and the Mathematics Journal for Secondary Schools have survived with minor alterations. The Competition is known as the Kürschak Competition, renamed to the honor of Professor Kürschak who devoted his energy to the mathematics including competition. In other countries, mathematical contests and Olympiads have become popular later than Hungary (Wieschenberg 292).

In the Soviet Union, the first mathematical contest was held in Leningrad in 1934. For Wieschenberg, though the character of the contest problems was similar to Eötvös contest problems, the learned techniques had a priority over creativity in this mathematical competition. Yet, the contest activities spread to the other major cities of the Soviet Union after 1945 (Wieschenberg 292).

In United States, the first mathematical examination modeled on the Eötvös Competition was initiated by Professor Szegö, who was one of the winners of Eötvös Competition and the chairman of the mathematics department at Stanford University, in 1946 for California students. The purpose of this mathematics examination was to stimulate interest in mathematics among high school students and teachers and to identify the talented students. However, the examination did not continue as a tradition. In 1965, this examination program was stopped. In addition, the Mathematical Association of America organized the first Annual High School Contest in New York in 1950 and the Contest was expanded other regions of the U.S. in 1957. Today the Mathematical Association of America is responsible for organizing the American Junior High School Mathematics Examination, the American High School Mathematics Examination, and the American Invitational Mathematics Examination. The best competitors are invited to the U.S.A. Mathematical Olympiad (Wieschenberg 293).

Mathematical competition was firstly organized on an international scale in communist world. The Rumanian Society of Mathematical and Physical Sciences (SSMF) supported by the Ministry of Education of the Rumanian People's Republic organized the first International Mathematical Olympiad (IMO) for students of the Communist countries in Rumania in 1959 (Wirszup 150). For several years, IMO was strictly a Soviet-bloc affair. In the late 1960s, Western European countries started to join in the IMO. In the détente year of 1974, the United States sent its first mathematics team to the IMO organized in East Germany (Mackenzie).

The International Physics Olympiad grew out of a long established tradition of mathematics competitions in Eastern Europe. It was modeled after the IMO. The chief architect of the physics Olympiads was Czeslaw Scislowski of Warsaw

University who made the first organization of the International Physics Olympiad (IPO) in Poland in 1967 under the aegis of the Polish Physical Society possible (French 44). Like IMO, IPO originated as an Eastern European event. Teams from Western European countries gradually participated in IPOs ('AIP to Send' 80). In 1986, the U.S. participated for the first time in the IPO organized in London (Eisenkraft 56).

The first International Chemistry Olympiad was organized in 1968 in Czechoslovakia. The delegations that attended the first events were mostly the countries of the former Eastern block, and it was not led to the others until 1980, the 12th IchO, when the event was held in a capitalist country, Austria.

The first International Biology Olympiad also took place in Eastern Europe. The organization of the first biological competition between Czechoslovakia and Poland in 1985 led to the invitation of the United Nations Educational, Scientific and Cultural Organization (UNESCO) to Czechoslovakia to start an International Biology Olympiad. In 1989, six countries founded the International Biology Olympiad ('British Students' 199).

The first International Olympiad in Informatics was organized in 1989 in Bulgaria. The idea of initiating international Olympiads in informatics was proposed to the 24th General Conference of the UNESCO in Paris in 1987 by Bulgaria. In 1989, UNESCO initiated and sponsored the first International Olympiad in Informatics in Bulgaria.

The first International Olympiads in Astronomy was carried out in 1996. The Euro-Asian Astronomical Society (EAAS) and the Euro- Asian Association of Astronomy Teachers (EAATA) of the EAAS with the assistance of the P.K. Sternberg State Astronomical Institute, Special Astrophysical Observatory of Russian Academy of Sciences and the Moscow- Regional Branch of the M.V. Lomonosov Moscow State University found an International Olympiad of the EAAS to popularize natural science among the students. EAAS carried it out in 1996. The International

Astronomy Olympiad is sponsored and held by the EAAS, EAATA, astronomical organizations of the participating states and other organizations.

APPENDIX B

A BRIEF HISTORY OF SCIENCE OLYMPIADS IN TURKEY

The Scientific and Technological Research Council of Turkey (TÜBİTAK) has played the leading role in organizations of scientific competitions in Turkey. TÜBİTAK organized the scientific competitions in 1974 for the first time. These competitions were held in two categories. The first category of competition was held among the students of secondary schools and teacher schools in the branch of mathematics and grading of it was made in individual level. The second category of competitions was held among the students of the high schools and teacher schools in the branches of mathematics, physics and chemistry, and grading of it was made in individual and group levels. In 1975, the competition form was changed by dividing the competition place in seven geographic regions. The first category of competition was held among the students of the secondary schools in the branch of mathematics, while the second category of the competition was held among the students of the high schools in the branches of mathematics, physics and chemistry. In each region scores were determined in individual and group levels. In the next year, 1976, North Cyprus Turkish Republic was added to the competition regions. However, the form of the competition was not changed. In 1989, biology was added to the competition branches in seven regions and North Cyprus. In 1993, the form of the competitions was changed again. Informatics was added to the branches of the competition. Moreover, the competition was renamed as the National Science Olympiad and was held in two stages. The first stage of the competition was held in seven regions and North Cyprus. The scores were determined in individual level. In the second stage of the competition, the scores were determined among the winners of the first stage of the Olympiad. There was not any regional and group division in this stage of the Olympiad. In addition, the student profile of the competitions was also changed. The

1st and 2nd classes of high schools and secondary school students except mathematics branch could participate into these national Olympiads. The finalists of the Olympiad were awarded with gold, silver and bronze medals.

National Science Olympiads are organized among the high school students and 8th classes of secondary schools. The 8th classes do not participate into the mathematics Olympiads. In this branch, they could participate into the National Secondary School Mathematics Olympiad. National Science Olympiads are organized in the fields of mathematics, physics, chemistry, biology and informatics. Examinations were made in 28 cities of Turkey and North Cyprus in 2004. The students who are successful in the first stage of the Olympiads are trained in summer courses. In addition, 40 or 50 students from each branch are called for the second stage of the Olympiad. The students who take degrees from the second stage take money awards and medals. Then, these finalists with other successful students who have not degree but evaluated as highly successful by the committee are called to winter courses for the preparation to International Science Olympiads. The students who have degrees in National Science Olympiads could acquire extra scores in university entrance exam according to their scores. In addition, the students who enter these exams and get degrees could benefit from the University Award Scholarship Programs if they choose a department of the basic sciences (BAYG).

TÜBİTAK participated into the International Science Olympiads in the branches of the mathematics and chemistry in 1978 for the first time in testing character. After 1985, Turkey participated into the Olympiads in the branches of mathematics and physics regularly in every year. In 1993, the responsibilities and authorities related to Olympiads are transferred to TÜBİTAK by Turkish Ministry of Education. Turkey participated into International Science Olympiads in the branches of mathematics, physics, biology, informatics in 1993. Since 1994, Turkey has participated into the International Science Olympiads regularly in five branches including mathematics, physics, chemistry, biology, and informatics.

APPENDIX C

QUESTIONNAIRE

Türkiye'deki toplumsal değişme ve modernleşme ile bilim insanlarının bu süreçteki pratikleri ve görüşleri arasındaki ilişkiyi inceleyen bir tez araştırması yapılmaktadır. Tarihsel, kuramsal analizlerle birlikte bu anket sonuçları, tez çalışmasının bel kemiğini oluşturacaktır.

Bu çalışmanın örneklemi, TÜBİTAK'ın ulusal ve uluslararası bilim yarışması organizasyonlarına katılmış ve akademik alanda çalışmalarını sürdüren kişilerden oluşmaktadır. Bu kişilerin isimlerine TÜBİTAK kayıtlarından ulaşılmış, posta/e-posta adresleri de internet arama motorlarından elde edilmeye çalışılmıştır.

Bu anketi oluşturan sorular, temelde üç gruba ayrılmaktadır. Birinci bölüm, kişisel-demografik veriler ve eğitim- öğretim bilgilerini kapsamaktadır. İkinci bölümü oluşturan sorular, kişinin mesleki memnuniyeti ile ilgili fikir edinmek amacını taşımaktadır. Üçüncü bölümü oluşturan tutum soruları, cevap verenin görüş ve fikirleri ile ilgili bilgileri elde etmeye yöneliktir. Kişisel- demografik veriler ve eğitim- öğretim bilgilerini elde etmek amacıyla hazırlanan soruların dışında hiçbir sorunun kesin doğru ya da yanlış cevabı yoktur. Tek kötü sayılan cevap, başkalarına danışılarak verilen veya samimi olmayan cevaptır.

Lütfen cevap vermeden önce her soruyu dikkatle okuyunuz. Hiçbir soru üzerinde çok fazla zaman kaybetmeden, hızlı fakat dikkatli olarak soruları cevaplayınız. Durumunuzu yansıtan ya da fikrinize en yakın olan parantezin içine bir (x) işareti koyunuz.

Ya elektronik olarak ya da çıktı alarak doldurduğunuz anketleri aşağıdaki, e-posta ve posta adreslerinden birisine göndermenizi rica ederiz.

Bu ankete cevap vermekle, araştırmanın tamamlanmasına büyük yardımınız olacaktır. Şimdiden çok teşekkür ederiz.

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ANKET SORULARI:

BÖLÜM 1: SOSYO- DEMOGRAFİK ÖZELLİKLER

1.Cinsiyetiniz:
- a) ( ) Kadın
- b) ( ) Erkek

2. Doğum Yılınız: 19...

3. Şu anda bulunduğunuz akademik aşama:
- a) ( ) Tam zamanlı öğretim üyesi
- b) ( ) Post- Doktora
- c) ( ) Doktora
- d) ( ) Yüksek Lisans
- e) ( ) Lisans
- f) ( ) Diğer (belirtiniz)..

4. Çalıştığınız ya da eğitiminize devam ettiğiniz kurumun adı ve adresi:
....
....

5. Mezun olduğunuz lisenin adı ve adresi:
....
....

6. Doğum Yeriniz:
- a) İli:...
- b) Doğduğunuz yer köy, kasaba ya da şehir mi?
  - 1) ( ) Köy

2) ( ) Kasaba

3) ( ) Şehir

7.Ailenizin şu an yaşadığı yer:

    a) İli:..

    b) Bu yer köy, kasaba ya da şehir mi?

           1) ( ) Köy

           2) ( ) Kasaba

           3) ( ) Şehir

8. Size göre, aileniz maddi gelir bakımından aşağıdaki genel gruplardan hangisine dahildir?

        a) ( ) Çok zengin

        b) ( ) Zengin

        c) ( ) Orta halli

        d) ( ) Fakir

        e) ( ) Çok fakir

9. Kardeşiniz var ise cinsiyet, yaş ve eğitimini belirtiniz.

	Cinsiyeti	Yaşı	Eğitimi
1. Kardeş			
2. Kardeş			
3. Kardeş			
4. Kardeş			
5. Kardeş			
6. Kardeş			
7. Kardeş			

10. Anne ve babanızın öğrenim durumunu belirtiniz.

	Anne	Baba
Üniversite, yüksek okul mezunu		
Lise mezunu		
Meslek okulu mezunu		
Ortaokul mezunu		
İlkokul mezunu		
Okuma yazma biliyor ama ilkokulu bitirmemiş		
Okuma yazma bilmiyor		

11 . Medeni haliniz: ('Bekar' şıkkını işaretlemeniz durumunda 13. soruya geçiniz).

    a) ( ) Bekar

    b) ( ) Evli

c) ( ) Dul

d) ( ) Boşanmış

e) ( ) Evli, fakat ayrı yaşıyorum

12. Eşinizin eğitim durumu:

a) ( ) Yüksek Lisans/ Doktora/ Post-Doktora

b) ( ) Üniversite

c) ( ) Lise

d) ( ) Ortaokul

e) ( ) İlkokul

f) ( ) Okuma-yazma biliyor ama ilkokulu bitirmemiş

g) ( ) Okuma-yazma bilmiyor

13. Çocuğunuz var mı? ('Hayır' şıkkını işaretlemeniz durumunda 15. soruya geçiniz)

a) ( ) Evet

b) ( ) Hayır

14. Çocuklarınızın cinsiyet, yaş ve eğitim durumunu belirtiniz.

	Cinsiyeti	Yaşı	Eğitimi
1. Çocuk			
2. Çocuk			
3. Çocuk			
4. Çocuk			
5. Çocuk			
6. Çocuk			

BÖLÜM 2: MESLEKİ MEMNUNİYET

15. Okuduğunuz liseyi seçme nedenleriniz nelerdi? (derecelendirerek birden fazla işaret koyabilirsiniz- '1'en önemli faktör, ' 8' en az önemli faktör)

a) ( ) ailemin isteğini yerine getirmek

b) ( ) üniversite için iyi bir hazırlık yapmak

c) ( ) bir meslek edinmek

d) ( ) yeni bir yabancı dil öğrenmek

e) ( ) dini bilgiler edinmek

113

f) ( ) sanatsal ve kültürel faaliyetlerde bulunmak

g) ( ) toplumda saygınlık kazanmak

h) ( ) diğer (belirtiniz)..

16. Okuduğunuz lisenin sizce kişiliğinize ve yaşam biçiminize katkısı ne oldu? ……(3 tanesini önem sırasına göre belirtiniz)

a) ( ) disiplin

b) ( ) azim

c) ( ) ahlak

d) ( ) analitik düşünce gücü

e) ( ) yeni bir dünya görüşü

f) ( ) estetik düşünme yetisi

g) ( ) hayal gücü

h) ( ) diğer (belirtiniz)..

17. Lise döneminizde okul zamanınızda en uzun süre nerede yaşadınız?

a) ( ) ailenizin yanında

b) ( ) akraba yanında

c) ( ) yurtta

d) ( ) pansiyonda

e) ( ) arkadaşlarınızla birlikte kiraladığınız evde

f) ( ) yatılı okulda

g) ( ) diğer (belirtiniz)...

18. Genel olarak düşündüğünüzde lisede aldığınız eğitimden ve okulunuzdan memnun musunuz? Nedenlerini açıklar mısınız?

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....
....

19. Aşağıdakilerden hayatınızda sizi en çok mutlu edecek üç alanı önem sırasına göre belirtiniz.

a) ( ) Mesleğim ve meşguliyetim

b) ( ) Ailemin fertleriyle ilişkilerim

c) ( ) Serbest zaman ve eğlence faaliyetleri

d) ( ) Bulunduğum çevrede mahalli faaliyetlere katılma

e) ( ) Ülkenin durumunu düzeltmek için gayretlere katılma

f) ( ) Milletlerarası durumu düzeltmek için gayretlere katılma

g) ( ) Dini inanç ve faaliyetler

h) ( ) diğer (belirtiniz)..

20. Bilimsel alanda çalışmanızı mümkün kılan mesleğinizi seçmenizin en önemli üç nedenini belirtiniz.

a)...

b)...

c)...

21. Herhangi bir mesleki kuruluşa/derneğe üye misiniz?

a) ( ) Evet

b) ( ) Hayır

Evet ise adlarını belirtiniz;

....

....

....

22. Meslek dışı herhangi bir kuruluşa/derneğe üye misiniz?

a) ( ) Evet

b) ( ) Hayır

Evet ise adlarını belirtiniz;

....

....

....

23. Mesleğinizle ilgili herhangi bir yerli/yabancı yayına üye misiniz?

a) ( ) Evet

b) ( ) Hayır

Evet ise adlarını belirtiniz;

....

....

....

24. Gazete dışında, meslek dışı bir yayına abone misiniz ya da devamlı alır mısınız?

    a) ( ) Evet

    b) ( ) Hayır

Evet ise adlarını belirtiniz;

....

....

....

25. Bilim insanı kimliğinizle toplumda statülü bir konumda olduğunuzu düşünüyor musunuz?

    a) ( ) Evet

    b) ( ) Hayır

Nedenlerini açıklar mısınız?

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BÖLÜM 3: TUTUM SORULARI

26. Aşağıdaki ifadelerden sizin fikrinize uygun olan ve olmayanları derecesine göre (x) işareti koyarak belirtiniz.

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
Bilim insanları bilimsel bilginin kullanımı açısından daha karar verici bir konumda olmalıdırlar.					
Bilimin kişisel düşünce ve yargılardan bağımsız objektif bir niteliği vardır.					
Olumsuz veya yanlış kullanılabileceği sezilen bir araştırma bırakılmalıdır.					
Bilim, günün birinde evrenin bütün sırlarını çözecektir.					
Okullarda fizik, kimya gibi temel bilim derslerinin yanında mitoloji ve metafizik gibi konular içeren dersler de olmalıdır.					
Bilim insanlarının çalışmalarının özel kuruluşlarca finanse edilmesi araştırma sonuçlarının objektif olmasını engeller.					
Dini inançlara aşırı vurgu bilimsel keşfediciliği engeller.					
Kültürel yapımız, demokrasinin gelişmesinin önündeki en büyük engeldir.					
Kişi hak ve özgürlükleri devletin kutsallığına karşı dokunulmaz olmalıdır.					
Radyo ve televizyonların RTÜK tarafından kapatılması, devletin, kişi hak ve özgürlüklerine karşı bir müdahalesidir.					
En kötü devlet, devletsizlikten iyidir.					
Üniversitelerde başörtüsünün yasaklanması, kişi hak ve özgürlüklerine karşı yapılan haksız müdahalelerden birisidir.					
Dini cemaatlerin kurduğu dernek ve vakıflar sivil toplumun bir parçası değildir.					
Türkiye'nin Avrupa Birliği'ne girmesi ile Türk kültürü etkisini kaybedecektir.					
Gerekli olduğunda siyasi partiler kapatılmalıdır.					
Ordunun politikaya müdahalesine karşıyım.					

Dini cemaatler sivil toplum örgütü gibi işlev görürler.					
Toplumsal hayatımızda dinin etkinliği demokrasimizin sağlamlaşması yolunda bir engel değildir.					
Türkiye'nin Avrupa Birliği'ne girmesi, Türk-Islam kültürünün daha geniş bir coğrafyaya yayılmasını sağlayacaktır.					
Sağlıklı bir toplum yapısında erkek ailenin reisidir.					
Eğitim sisteminde ahlaki ve dini konulara yeterince vurgu yapılmaması gençlerin ruhsal dünyasında boşluklara yol açmaktadır.					

27. Sizce bilimsel bilgiyi diğer tür bilgilerden (sanatsal, felsefi, dinsel v.b) ayıran temel özellikler nelerdir? Kısaca belirtiniz.

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28. Bir bilim insanında olması gereken özellikler sizce nelerdir? Kısaca belirtiniz.

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29. Türkiye'de ki eğitim sistemi hakkında düşüncelerinizi belirtiniz.

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Anketin içeriği ve soru düzeni ile ilgili gördüğünüz eksikleri ve/ veya eklemek istediğiniz notları lütfen yazınız.

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