THE EFFECTS OF STATE IDEOLOGY, POLITICS, EDUCATIONAL POLICIES AND PHILOSOPHY ON THE SCIENCE CURRICULA OF PRIMARY EDUCATION 1919–1938

ASLI SEZEN

BOĞAZİÇİ UNIVERSITY

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Aslı Sezen

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Thesis Abstract

Aslı Sezen, "The Effects of State Ideology, Politics, Educational Policies and Philosophy on the Science Curricula of Primary Education 1919-1938"

The aim of this study is to analyze the curricular changes in the area of science education at the primary level during the period of Atatürk (1919-1938) with the Yıldıran's "Hierarchical Model of Factors Affecting Curricula (2006)". According to this model, state ideology and politics influence educational policies, and these affect the educational philosophy underlying the curricula of the era.

The thesis uses both historical and qualitative analyses. Historical analysis was used to explain the state ideology and politics, and educational policies of the period. For the analysis of the reports of the Scientific Council Meetings and foreign expert reports, inductive qualitative analyses were utilized. Finally, the science curricula were examined via deductive qualitative analysis.

In conclusion, the state ideology of the period was formed by the six principles of Atatürk: Republicanism, Nationalism, Populism, Étatisme, Laicism, and Reformism (*Revolutionism*). The educational policies were national, rational, pragmatic, egalitarian, and humanistic. The educational philosophy was the Pragmatism of John Dewey in his concept of progressive education. The three science curricula of 1924, 1926 and 1936 were based on experiential learning theory, the teaching methods being observation, investigation, and experimentation. The curricula had detailed content in primary school science aimed at meeting practical local needs as well as preparing for further education. Objectives were not specified but could be inferred as content related (topical), student or teacher activities. There were no evaluation procedures suggested due to lack of theory in the area at the time.

Tez Özeti

Aslı Sezen, "Devlet İdeolojisi, Politikaları, Eğitim Politikaları ve Felsefesinin İlköğretim Fen Eğitimi Müfredat Programı Üzerindeki Etkileri 1919–1938"

Bu çalışmanın amacı, Atatürk dönemindeki (1919–1938) ilköğretim fen müfredat programı değişikliklerini Yıldıran'ın "Müfredat Programını Etkileyen Etkenlerin Sıradüzensel Modeli (2006)" ile incelemektir. Bu modele göre, dönemin devlet ideolojisi ve politikaları eğitim politikalarını, eğitim politikaları dönemin eğitim felsefesini, eğitim felsefesi de müfredat programlarını etkilemektedir.

Tezde tarihsel ve nitel çözümleme yöntemleri birlikte kullanılmıştır. Tarihsel analiz, dönemin devlet ideolojisi ve politikaları ile eğitim politikalarını açıklamak için tercih edilmiştir. Heyet-î İlmiye Toplantı raporları ve yabancı uzman raporlarının çözümlemesi için nitel tümevarım çözümleme yönteminden yararlanılmıştır. Son olarak, fen müfredat programları, nitel tümdengelim çözümleme yöntemiyle incelenmiştir.

Sonuç olarak, dönemin devlet ideolojisi Atatürk'ün Cumhuriyetçilik, Milliyetçilik, Halkçılık, Devletçilik, Laiklik ve İnkılâpçılık olan altı oku ile şekillenmektedir. Eğitim politikaları, milli, bilimsel, uygulamamaya dayalı, eşitlikçi ve insancıldır. Eğitim felsefesi John Dewey'nin İlerici Eğitim kavramında yer alan Pragmatizm'dir. 1924, 1926 ve 1936 fen eğitimi müfredat programları yaşayarak öğrenme kuramına dayalı, gözlem, inceleme ve deney öğretim yöntemlerini kullanmaktadır. Ayrıntılı bir içeriği olan fen müfredat programlarının amaçları, uygulamadaki yerel gereksinimleri karşılamak ve eğitimin ileriki seviyelerine hazırlık yapmaktır. Müfredat programları, öğrenme hedeflerini açık bir şekilde belirtmediğinden, içerik odaklı, öğretmen veya öğrenci etkinliği olarak yazıldığı vardanabilir. Bu dönemde değerlendirme ile ilgili kuramsal bilgi olmadığından, müfredat programlarında bu konuya yer verilmemiştir.

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CONTENTS

page

PREFACE…… xii

CHAPTER I: INTRODUCTION 1
Reasons for Curricular Changes 1
Significance of the Study 20
Research Questions 22

CHAPTER II: REVIEW OF THE LITERATURE 24
Historical Research 24
Qualitative Research 28
Politicy and Politics 37
Curriculum Analysis 39

CHAPTER III: METHOD OF THE STUDY 45
Data Collection Procedures 46
Data Analysis 60

CHAPTER IV: THE STATE IDEOLOGY, POLITICS AND EDUCATIONAL POLICIES OF TURKEY (1919–1938) 68
An Overview of the Educational System during the Ottoman Empire 68
The State Policies, Politics and Educational Policies during the Period of Atatürk (1919-1938) 78

CHAPTER V: ANALYSIS OF THE EDUCATIONAL PHILOSOPHY AND THE SCIENCE CURRICULA OF PRIMARY EDUCATION (1919–1938) 250
The Educational Philosophy Underlying the 1924, 1926, and 1936 Primary School Science Curricula 250
The 1924 Curriculum of Primary Schools - Exploring Nature, Agriculture, Hygiene (*1924 İlk Mekteplerin Müfredat Programı - Tabiat Tetkiki, Ziraat, Hıfzıssıhha*) 260
The 1926 Primary School Curriculum – Courses of Nature and Non-Living Things (*1926 İlk Mekteplerin Müfredat Programı - Tabiat ve Eşya Dersleri*) 271
The 1936 Primary School Curriculum – Natural Science (*1936 İlk Mekteplerin Müfredat Programı - Tabiat Dersleri*) 285

CHAPTER VI: CONCLUSION 301
Summary of the Results 301
Recommendations for Further Studies 308

APPENDIXES 310
A: The Turkısh Form of the 1924 Scıence Curriculum "Explorıng Nature, Agrıculture, Hygıene" 311
B: The Orıgınal Form of The 1924 Scıence Curriculum "Explorıng Nature, Agrıculture, Hygıene" in Arabıc Script 315
C: The Turkısh Form of The 1926 Scıence Currculum "Cources on Nature And Non-Lıvıng Thıngs" 323
D: The Orıgınal Form Of The 1926 Scıence Currculum "Cources of Nature And Non-Lıvıng Thıngs"ın Arabıc Scrıpt 332
E: 1936 Scıence Currculum "Natıral Scıence" 347

REFERENCES 357

TABLES

page

1: Ministers of Education during the Period of Atatürk (1919–1938) 51

2: The Scientific Council Meetings during the period of Atatürk (1919-1938) 51

4: Themes of Analysis for the Scientific Council Meetings 64

5: The Themes in the Reports of the Foreign Experts Invited during the period of Atatürk (1919-1938) 66

6: The Number of Schools, Teachers, and Students at Each Level of Schooling in Turkey, in 1923 107

7: The Number of Schools, Teachers, and Students at each level of schooling in Turkey, in 1935 128

8: Three Sections (Salaries, Expenses, Allocation to Foreign Experts) from the Budget of the *Darülfünûn* between 1923 and 1931 189

9: The Distribution of Academic Personnel in the Faculties 190

10: The Distribution of Civil Servants in the *Darülfünûn* 191

11: Number of Students in the *Darülfünûn* in 1932 191

12: The Numbers of Schools, their Students and Teachers between 1923 and 1932 216

13: The Numbers of Primary Schools, their Students and Teachers between 1923 and 1932 219

14: The Numbers of Village Primary Schools, their Students and Teachers between 1928 and 1932 219

15: The Attendance Rates of Students in the Village Primary Schools from 1929 to 1932. 220

16: The Numbers of Secondary Schools, their Students and Teachers between 1923 and 1932 222

17: The Numbers of Teacher Training Schools, their Students and Teachers between 1923 and 1932 223

18: Numbers of Higher Education Institutes, their Students and Teachers between 1923 and 1932 225

19: The Numbers of Schools of Trade and Commerce, their Students and Teachers between 1923 and 1932 228

20: The Numbers of Nation Schools, their Students and Teachers between 1928 and 1933 230

21: Numbers of Nation School Graduates between 1928 and 1933 231

FIGURES

page

1: Hierarchical Model of Factors Affecting Curricula (Yıldıran, 2006) 20

2: Curriculum Design Model of Güzver Yıldıran (2006) 21

3: Summary of the structural changes from the Original Framework to the Revisions 42

4: Hierarchical Model of Factors Affecting Curricula (Yıldıran, 2006) in relation to the methodology used 46

5: Data Triangulation to Explain the Six Principles of Atatürk 48

6: Data Triangulation Process to Specify the Political Events during the Period of Atatürk 52

7: Data Triangulation to Explain the Educational Policies of Atatürk and the Ministers of Education 54

8: The Data for Educational Philosophies during the period of Atatürk (1919-1938) 56

9: Data Triangulation to Understand the Years of Curricular Changes in Science Curricula at Primary Level 58

10: The Categories Used for the Analysis of the Scientific Council Meetings 63

11: The Categories Used for the Analysis of the Foreign Expert Reports 65

12: The steps for the reform process in the *Darülfünûn* 187

13: Steps for the Appointment of the Professors to the *Darülfünûn* 193

14: The Interactions Leading to the Educational Policies during Atatürk's Period (1919-1938) 304

PREFACE

"What experience and history teaches us is that people and governments have never learned anything from history, or acted on principles deduced from it" (Hegel, 1980, p. 21). This quotation of the German idealist philosopher, Georg Wilhelm Friedrich Hegel (1770-1831) may explain why my thesis advisor and I decided to study on the historical roots of the curricular changes in the Turkish Republic.

In 2004, when I started my graduate studies at Boğaziçi University, Department of Educational Sciences, one of the most debated issues in the area of education was the major curricular changes during that year in Turkey. These debates made me think about the advantages and disadvantages of the curricular changes of 2004. Unfortunately, the logic behind the changes was not clear. Therefore, a model seemed to be necessary in order to shed light to curricular changes influenced by the state ideology, politics, educational policies, and philosophy.

As academicians, we should not only tell the story of the past. Our work had to be objective, reliable and valid. At the beginning, we could never imagine how many hours it would take to reach the objective data most of which were forgotten or lost and how difficult it would be to make credible analyses without being anachronistic.

Throughout the chapters of this thesis, we have tried to present hopefully an objective collection and analysis of the historical documents on state ideology, politics, educational policies and philosophy affecting the science curricula of primary education of Atatürk's period (1919-1938). After reading the thesis, one may think about the quotation of Hegel and question what we learned from our past experiences for the development of curricula.

CHAPTER I

INTRODUCTION

The aim of this thesis is to shed light on the major curricular changes in the history of the Turkish Republic during the period of Atatürk (1919-1938). The study will focus on the state ideology, the political conditions, the educational policies based on the political orientation of the era, the accepted curricular philosophy serving as the basis of instructional theories and the methodologies and practices stemming from these by using Yildiran's model (G. Yıldıran, personal communication, February 24, 2006).

Reasons for Curricular Changes

There are reasons for major educational reforms as observed in Turkey and elsewhere. Educational reforms leading to curricular changes in different countries can be analyzed under four main headings[1];

1. One reason for major curricular changes may be a paradigmatic political shift in the governments and the arising man-power needs, which cannot be reached through existing curricula (Corrales, 1999, p. 17; Kaurova and Ashmera, 2004; Puchi, 1994, p.1).
2. Another reason for change may be major global accomplishments that take place in other cultures, where the curricula of the culture proper seem to fall behind. One such example may be crucial shifts due to major scientific accomplishments in other cultures. Another example

[1] These points are categories developed by the thesis advisor; Prof. Dr. Güzver Yıldıran in February, 2006 from the literature.

may be meeting the demands of major international coalitions and bodies (Elmore, 1997; Rassekh, 2001, p. 9).

3. Furthermore, theoretical changes in the field of social and educational sciences such as changing views related to educational psychology, instructional theories, school systems, democracy, equity, opportunity, human rights, and the environment may also be considered as reasons for curricular changes. (Rassekh, 2001, p.9, Ganguly, 2001, p. 49).
4. There may also be new regional and local needs in educational outcomes. Remediation of undesirable outcomes related to structures of schooling such as demographic misrepresentations in different levels of schooling for various pockets of society, problems related to universal literacy, and shortage of educated human resources may count as reasons for curricular changes (Rassekh, 2001, p. 9).

The above stated points are interrelated. A country which undergoes a curricular reform may experience one or all of the reasons stated above. In the following sections, some examples will be provided to illustrate single or combined reasons for curricular changes in some cultures.

Change of Curricula Due to a Major Political Shift

An example of major political shifts resulting in curricular reform may be the situation in the former Soviet Union after the October Socialist Revolution of 1917. Before 1917, intellectual tradition, respect for learning, academic and scientific excellence were taken to be important in the Russian Empire. The university and higher scientific and technological training were available only for the elite minority of the population. Students who received this kind of education wanted to improve their intellectual careers in Western Europe. At the secondary level, only the elite

received a general education, without consideration for practical purposes. Education was in four tracks in the state-controlled schools; gymnasia, pro-gymnasia[1], real schools, and commercial schools. General education leading to university degrees was offered by the gymnasia. This kind of education was for the elite and compared with the best in Western Europe. Then, there was vocational education preparing students for professional careers or for government service through the other three tracks. Only 7 % of the at-age population was in either general or vocational education. For the rest of the students, on the other hand, even elementary schools were not available. In addition to this, communists claim that the illiteracy rate of the public was between 60 and 70 percent in 1917 (U.S. Department of Health, Education and Welfare, 1957, p.13)

After the October Socialist Revolution of 1917, the manpower needs of the Soviet Regime became different from these of the Russian Empire. The goal of the Soviet Regime became the creation of citizens aligned with the demands of communism (U.S. Department of Health, Education and Welfare, 1957, p.58). Therefore, Soviet educators believed that educational policy and practice should be used to form the "New Soviet Man", who was inline with the interests of the regime. As a way of realizing this, the views of Karl Marx and Vladimir Illich Lenin were favored by the communist party.

The educational philosophy for the October Revolution of 1917 was developed mainly by Lenin, his wife and the educational specialist for the new Soviet Regime Krupskaya, and the Commissar of Education Lunacharskii just before the revolution (Korolyov, 1989, p.119; U.S. Department of Health, Education and

[1] Pro-gymnasia are three years after the four year elementary education enabling students to enter secondary education.

Welfare, 1957, p.51). One of the novelties of the new curriculum was the separation of the church and the schools. The aim was the total secularization of education. Another change in the curriculum was related to providing all children with free, compulsory, general and polytechnical education until the age of sixteen.

According to Marxism-Leninism, the system of education in capitalist societies served the needs of the upper classes, being indifferent to the needs of the masses, thus increasing the gap between them. This, according to the communist view, was responsible for societal inequalities. Marx and Lenin viewed education as a vehicle for social change. In order to create the well-rounded individual, education for the labor market had to be integrated with general education. This would create the cultivated Soviet citizen who was also equipped with the skills for the labor market. The creation of the Soviet citizen was enhanced by socially useful activities available in community centers i.e. art, music, literature, ballet, physical training etc. (Cheng and Manning, 2003, p.364; U.S. Department of Health, Education and Welfare, 1957, p. 38). In light of these views, the communist party determined basic ideas for education at the primary and secondary levels. Some of these ideas as stated in the report of the U.S. Department of Health, Education and Welfare (1957 p.58)[1]are as follows:

1. The fostering of an atheistic attitude toward unexplained natural phenomena;
2. The instilling of Communist morality;
3. General esthetic training through which the rising generation is taught to appreciate past and contemporary achievements in art, music and literature;
4. Physical development and all round development of the body;

[1] Indented, single-spaced texts are direct quotes.

5. Systematic mental training in which children become familiar with the principles of science; develop memory, perception, imagination, and ability to express themselves fluently and easily in speech and in writing; and learn to acquire knowledge independently and to synthesize and apply in practice;
6. Polytechnical education through which pupils acquire the principles of science (basic to understanding the main branches of industry, importance of machinery, operation of large scale industrial and agricultural production, and use and operation of single tools and instruments), and a socialist attitude toward labor and work.

Reflections of these changes in the school system appeared in 1918. Education in this system was comprised of three stages. The first was preschool education, followed by the compulsory 9-year unified labor schools. This 9-year period included elementary (Stage I) and secondary (Stage II) education. Stage I had a duration of five years for children of eight to thirteen years of age. Stage II had a duration of four years for adolescents of thirteen to seventeen years of age. The parts of the curricula in these schools included both general education and different types of manual labor to enable the individual to work at different jobs. (Chang and Manning, 2003, p. 364; U.S. Department of Health, Education and Welfare, 1957, pp. 49-50).

Thus, education included the above stated characteristics to fulfill the hope of creating the new Soviet citizen, furnished with both the culture and the skills required by society. Another aim of the new educational reform was to increase literacy rates. In 1920, to reduce the illiteracy level of the public, literacy schools were founded (Kourova and Ashmer, 2004).

In 1923, Lenin died and Stalin became the leader of the Soviet Union. Towards the end of 1930's, the government stated that the present educational system was too idealistic to think that every Soviet citizen would develop wholly (Cheng and Manning, 2003, p.365). It was not practical to think that each person

would be a cultivated human being as well as having the skills for the labor market. In fact, education had not been successful in creating such a complete citizen. Soviet educators also believed that this was an unachievable egalitarian and romantic project. Education, the new view stated, should serve more practical needs. In 1931, another reform was implemented. Although the previous reform had increased the number of students in the schools, there were problems with what these students gained. According to a decree of the Party Central Committee of September 5, 1931, it was stated that,

> School instruction, is not covering a broad enough field of general educational subjects, and is not coping satisfactorily with the problem of producing for the semiprofessional and higher educational institutions, completely literate pupils with a good mastery of the fundamentals of knowledge, i.e., physics, chemistry, mathematics, the native language geography, etc (Boldyrev in U.S. Department of Health, Education and Welfare, 1957, p.53).

Considering the deficiencies stated above, another reform occurred in the 1930's.The new reform brought stricter standards related to time and content as well as new criteria of the evaluation of performance. Thus, education lost its idealistically egalitarian orientation with newly established rewards and education-based social distinctions in order to increase academic excellence.

A major change in the mid 1930's was the rise in the standards of education. After one year, a decree changed the laboratory-brigade method of organizing school work in which students studied in groups to practice what they learned under the guidance of the teacher to the systematic exposition of each subject. Students were required to master the subject given by a specialized teacher. Lessons were arranged and planned by the teacher in accordance with a strictly defined schedule to be implemented. Reaching mastery in each subject area was the aim. This was done by

repetition and expansion of original concepts. In this system, teachers had the responsibility for grading the students' progress at the end of each quarter and their authority in the classroom was to be respected. Teachers, on the other hand, were judged by the achievements of their students on the examinations at the end of the fourth, seventh and tenth grades. Discipline, was another important concern in the Soviet schools (U.S. Department of Health, Education and Welfare, 1957, pp.53-67).

With the second educational revolution, Soviet schools were organized into three categories: The primary schools (*nachal'nye shkoly*) were composed of the first 4 grades, 7-year schools which were the incomplete secondary schools (*ne polnye srednie shkoly*) were composed of grades one to seven, and 10-year schools which were the complete secondary schools (*polnye srednie shkoly*) were composed of grades five to ten. There were no separate junior high schools. If a student started his or her education in a 4-year primary school, s/he would then continue at a ten year complete secondary school. As another choice, a student could start education in a 7-year incomplete secondary school and after completing the seventh grade, could continue at a 10-year complete secondary school (U.S. Department of Health, Education and Welfare, 1957, pp.53-67).

Following this new orientation of instructional system and schooling, more importance was given to science education. 40% of schooling was devoted to science education, 54% to humanities and social sciences, and 6% to physical education. After 1955, even more time was devoted to the teaching of chemistry, physics and biology. Students began to take five years of physics, one year of astronomy, five years of chemistry, four years biology, and ten years of mathematics (U.S. Department of Health, Education and Welfare, 1957, pp.53-67).

As is illustrated by the example, the first reason of systemic changes in education and curricula as a result of major political shifts is confounded with the fourth reason of meeting the challenging situation of the needs of the culture after the change in the regime. This is also followed by theoretical changes in educational philosophies, instructional design, and implementation. It is noteworthy that the effects of political reform may occur in combination with the other categories which produce change in education.

Change of Curricula Resulting from the Global Accomplishments of Other Cultures

The second reason for major curricular changes is the global accomplishments which may occur elsewhere in the world and lead a country a reform its curricula. The conditions in the United States after the orbiting of the Sputnik in 1957 by the Soviet Union can be taken as an example.

After World War II, individuals in the area of education, such as Admiral Hyman Rickover and Arthur Bestor, began to criticize John Dewey's idea of progressive education and the concept of integrating education with life. They supported the idea of returning back to basics, back to drills and memorization. Their debates on American education gained emphasis with the orbiting of the Sputnik by the Soviet Union in 1957. This event led the United States to a curricular reform. In 1958, the "National Defense Education Act" was passed in the Federal Congress. As a consequence, textbooks with instructional materials including films, activities, and readings were changed. Science and mathematics programs emphasizing information, terms and applied aspects of content were replaced with programs in which students would learn the structures and procedures of science and mathematics

as disciplines. Furthermore, the educational innovation of the Sputnik era emphasized academic excellence, and high academic standards especially in the area of science and mathematics. Within twelve years after these changes, the United States sent their astronauts to space and launched satellites. Other achievements of the reforms in the Sputnik era were the production of extensively used commercial textbooks, educational activities (i.e. Batteries and Bulbs, Mystery Powders.), and the birth of educational groups that specialized in the development of instructional materials (i.e. Biological Science Curriculum Study, Lawrence Hall of Science). However, these initiatives had shortcomings as well. Because of the lack of teacher training, teachers faced difficulty with the content and the pedagogy of the system. In the area of mathematics, parents claimed that the content became too abstract and neglected important applications such as computational skills. Another failure of the reform of the Sputnik era was related to equity problems (Bybee, 1997). The results of the innovations led to major scientific accomplishments only by a few elite in the area of science and mathematics wheras students' achievement scores were below the international standards (U.S. Department of Education, 2006).

Low scores in the area of science and mathematics education the United States to a new reform effort. This reform, related to science education, started with "Project 2061", which was founded by the American Association for the Advancement of Science (AAAS). It was initiated in 1985, the year that the Halley Comet was seen from earth, to help all Americans to become literate in science, mathematics, and technology. Project 2061 aimed at changing the quality of life for present day children through knowledge of science and technology so that when the Halley Comet returns in 2061, they will still remember the effects of their science education (AAAS, 2006). As one of the most important products of the Project 2061,

AAAS published the book *Science for all Americans* in 1989, recommending what should be learned until graduation from high school in the area of science, technology and society. The recommended learning areas were as follows, as stated in the overview part of the book *Science for All Americans* (1989, p. V):

- The Nature of Science includes the scientific world view, scientific methods of inquiry, and the nature of the scientific enterprise.
- The Nature of Mathematics describes the creative processes involved in both theoretical and applied mathematics
- The Nature of Technology examines how technology extends our abilities to change the world and the tradeoffs necessarily involved.
- The Physical Setting lays out basic ideas about the content and structure of the universe (on astronomical, terrestrial, and sub-microscopic levels) and the physical principles on which it seems to run.
- The Living Environment delineates basic facts and ideas about how living things function and how they interact with one another and their environment.
- The Human Organism discusses human biology as exemplary of biological systems.
- Human Society considers individual and group behavior, social organizations, and the process of social change.
- The Designed World reviews principles of how people shape and control the world through some key areas of technology.
- The Mathematical World gives basic mathematical ideas, especially those with practical application, that together play a key role in almost all human endeavors.
- Historical Perspectives illustrates the science enterprise with ten examples of exceptional significance in the development of science.
- Common Themes presents general concepts, such as systems and models that cut across science, mathematics, and technology.
- Habits of Mind sketches the attitudes, skills, and ways of thinking that are essential to science literacy.

As a second most important product of Project 2061, *Benchmarks for Scientific Literacy* was published in 1993. Although the *Benchmarks* was not a curriculum, it was planned for the goals of a functional curriculum. It was about what students should learn by grades two, five, eight, and twelve in order to be scientifically, mathematically and technologically literate in adulthood. With these benchmarks, educators could plan their curricula for students to gain basic scientific literacy skills. As stated in the overview part of the *Benchmarks for Scientific Literacy* (1993 p. V), this publication

- describes levels of understanding and ability that all students are expected to reach on the way to becoming science literate;
- concentrates on the common core of learning that contributes to the science literacy of all students while acknowledging that most students have interests and abilities that go beyond that common core, and some have learning difficulties that must be considered;
- avoids language used for its own sake, in part to reduce sheer burden, and in part to prevent vocabulary from being mistaken for understanding;
- is informed by research on how students learn, particularly as it relates to the selection and grade placement of benchmarks; and
- encourages educators to recognize the interconnectedness of knowledge and to build these important connections into their curriculum units and material.

Science for all Americans and *Benchmarks for Scientific Literacy* prepared the background for another important event related to the reforms of Project 2061 in the United States. This was the production of the *National Science Education Standards (NSES)* by the National Research Council in 1995. These Standards were published as a book in 1996. *The National Science Standards* aim at providing both excellence and equity for all students. These standards have brought some major changes to science education such as thinking science education as an active process

(importance of hands-on and minds-on experience). “Science as process” includes such skills as observing, inferring, and experimenting. Moreover, inquiry is an important concept in science education according to *the Standards*. In an overview of the *National Science Education Standards*, the meaning of inquiry is given as follows:

> When engaging in inquiry, students describe objects and events, ask questions, construct explanations, test those explanations against current scientific knowledge, and communicate their ideas to others. They identify their assumptions, use critical and logical thinking, and consider alternative explanations. In this way, students actively develop their understanding of science by combining scientific knowledge with reasoning and thinking skills (NSES, 1996, p.3).

The National Science Education Standards (1996) also emphasizes that these standards do not imply a strict curriculum for schools. Instead, these provide criteria for making all students scientifically literate at local, state or national levels. These standards are organized under six headings (NSES, 1996, p.5):

- Standards for science teaching
- Standards for professional development for teachers of science
- Standards for assessment in science education
- Standards for science content
- Standards for science education programs
- Standards for science education systems

Project 2061 continues its efforts to reform science, technology and mathematics curricula. By this project, it is claimed that teachers, researchers and scientists work together to realize the aim of making all students scientifically literate (AAAS, 2006).

In the example of the USA, we can also see the combination of the effects of the second reason for curriculum change related to global accomplishments and

the effects of the third reason related to theoretical changes in social and educational sciences. Due to the failure of the reform of the Sputnik era (i.e. lack of teacher training, problems related to the equity principle), theoretical and empirical studies were undertaken for the advancement of science, mathematics and technology education for all Americans by using different methods of instruction, developing learning areas for all, and providing benchmarks for scientific literacy and standards for science education.

Change of Curricula Resulting from Progress in Social and Educational Sciences

The third reason for curricular change, related to advancement in the social and educational sciences, can be illustrated by the educational innovations in some Asian countries. The example taken here will be the case of South Korea. South Korea is one of the countries that has shown remarkable economic growth in the last forty years. It is inevitable to note that education was viewed as the most important means for transforming the poor rural economy into a "bustling middle income industry (and service)"[1] . The process is delineated below.

After the Japanese colonization (1910-1945), the division of National territory (1945), and the Korean War (1950-1953), South Korean people believed that a high quality education would lead not only to national development but also to individual prosperity. For this reason, between 1960 and 1970, the government increased the budget for education from 5 % of the Gross National Product (GNP) to 17 % (Lee, 1974, p.1, Lee, 2001, pp. 1-15). During the years that South Korea attempted to improve the economy, education was seen as the system to develop the

[1] As stated in Kim (2001, p.3)

new man-power needs of the country. The aim of these attempts was to transform the country's economy from rural to light, then, respectively to heavy and knowledge-intensive industries. The South Korean Government planned to achieve this by introducing the five year economic development plans in 1962. During the implementation of the five year economic plans, different man-power needs required by each stage were met by the innovations in the educational system or in the curriculum. In order to clarify the role of education in the implementation of the five year economic plans, we can analyze the changes that occurred in the educational system through these years (Lee, 2001, pp. 1-15).

The first two five-year plans (1962-1971) laid out the transformation towards labor intensive industries, such as light manufacturing and consumer good industries. Educated man-power was not the demand of the rural economy. For the transformation to an industrial society, on the other hand, people had to be literate as well as responsive to the demands of the labor market, which in this case were light manufacturing industries. During these years, it was important to have all the eligible school-aged students educated so that they could function in a society with labor intensive industries. For this reason, free basic education was provided for all eligible school-aged students. To be able to achieve this, more schools were built and free textbooks became available for all children at the primary level. Furthermore, moral development was considered important in this period (Kim, 2001, p.3).

In this transition period, the South Korean Educators were sent to the United States to specialize on the subject of effective instructional systems. Two members of the Ministry of Education studied at the University of Chicago with Benjamin Bloom. Upon their return, they developed major educational projects mostly using "Mastery Learning" (Lee, 2001, p. 5). For the project using Mastery Learning,

teachers' manuals, student guides, diagnostic tests, compensatory programs, teachers' guide to instruction, exercises, formative tests, learning programs, enrichment programs, miscellaneous materials, and summative tests were developed. The Korean Institute for Research in the Behavioral Sciences (KIRBS) developed programs for Mastery Learning that were implemented in the Seoul region, encompassing 5,800 seventh graders. Subjects taught by the use of Mastery Learning were Mathematics and English. The results of the summative tests for English showed average differences between Mastery Learning and traditional methods. While the scores of the mastery group ranged between 52 and 92 out of 100, the range of traditional methods was between 8 and 52, with no overlap between them. The results of the summative tests for Mathematics also showed significant average differences between mastery learning and traditional methods. While the scores of the mastery group ranged between 37 and 72 out of 100, the range of traditional method was between 28 and 63. The other projects at the institutional level were Instructional Effectiveness and Education Development Projects (Lee, 1974, p.11).

With the above stated changes during the first two five-year economic plans, more people were educated within ten years. Between 1962 and 1972, the number of schools increased from 7596 to 9850; the number of teachers from 109,396 to 187,662; the number of students from 5,689,351 to 8,546,701 (Lee, 1974, p.2-4).

In 1972, the third five year economic plan was introduced, which was related to the development of heavy industries like the chemical industries. The implementation of this plan required not only educated man-power, but also individuals who had the technical skills to meet the demands of heavy industry. As a result, vocational and technical schools at the secondary level were emphasized. In

this period, a more discipline-oriented curriculum was applied, concentrating on science and technology. Technical education was given separately. As a suitable method for technical education, discovery and inquiry became the major teaching methods in the curriculum (Kim, 2001, p. 3).

Following this, between 1977 and 1986, the last two five-year economic plans (1977-1986) were introduced, related to the importance of education and social policies for national development. This was the time when the country had met the basic needs of an industrial society and had started to take place in the international market by producing electronics, power generation equipment, heavy machinery, and diesel engines (Korean Embassy, 2006). Together with the last two economic plans, the economy acquired a technology and knowledge intensive structure. This structure required college graduates in the job market. As a consequence, higher education gained importance in the 1980's. During the latter half of the 1980's, existing colleges and universities raised the number of admissions by 30%. Moreover, many higher education institutions were established (Kim, 2001, p.3).

Between 1970 and the 1990's, the average years of schooling increased from 5.74 to 10.25 years and the average class size and pupil to teacher ratio for primary education dropped from 65.4 to 28.6. Through these years, the illiteracy rate also decreased from 13 % to 2 %. Besides these quantitative achievements, there were also qualitative achievements (Kim, 2001, p.36). In 1995, an international examination called the "Third International Mathematics and Science Study (TIMSS)", which showed the achievement levels of students in various countries, indicated the success of South Korean education. Among 41 countries South Korea rated first in science and second in mathematics (TIMMS International Study Center & Boston College, 1996, p.2).

During the 1990's, the economy diversified and the consideration of the quantity of manpower in different sectors, which no longer was a problem, changed into a consideration of the quality of manpower in these sectors. Therefore, after 1990, quality and excellence rather than quantity in education became more important. Despite both the quantitative and qualitative achievements in the field of education, the quality of education was still a concern in training individuals with academic excellence and preparing them for a diversified economy. To create diversification, it was necessary to organize the school environment and the curriculum so that individual differences and the creativity of each could be respected. For this reason, the Ministry of Education changed the curriculum in which students were overburdened by many subjects that were learned by rote memorization in the exam-centered classrooms to a learner-oriented curriculum, in which individual differences were considered (Kim, 2001, p.30).

The case of South Korea shows how developments in social and educational sciences were used to meet the man-power needs of a fast developing society, that is, the third and fourth reasons stated above. To improve education and the quality of instruction, different new theories and methods such as Mastery Learning, discovery, inquiry and learner-oriented approaches were utilized. The case clearly demonstrates how man-power needs were met according to the changes in the economy with changes in the educational system through different types of curricula.

Change of Curricula in order to Meet Local Needs

In order to understand the fourth point stated before, about curricular reforms which occur to meet regional and local needs, Saudi Arabia can be given as an example. In

recent years, Saudi Arabia has had problems that negatively affect its international relations. Some examples of these problems are low literacy rates and economical dependency on oil revenue. According to the statistical data of UNESCO (Statistical Yearbook, 1999), the illiteracy level in Saudi Arabia amounts to 29.2% of the total population. Moreover, in terms of oil revenue dependence, petroleum and natural gas provided 27.5% of the total Gross Domestic Product (GDP) in 1998. Most of the jobs requiring special expertise use foreign manpower (Nabti, 1980). In order to overcome these challenges, the Kingdom of Saudi Arabia aims to develop individuals possessing Islamic values, and the capacities for production-oriented skills and attitudes through education. As a result of this profile, the focus of the educational system in Saudi Arabia is stated in the final report of the seminar for the management of curriculum change and adaptation in the Gulf Region as (IBE & UNESCO, 2001, p.73):

- Raising the efficiency of professional and administrative performance in the educational institutions to enhance the standards and content of the educational process;
- Ensuring that the educational system meets the religious, economic and social goals;
- Integrating the activities of the institutions of higher education to fulfill the needs arising from socio-economic planning;
- Broadening the base of higher education by diversifying its programmes to cope with the Kingdom's requirements to achieve overall development;
- Ensuring that qualified citizens enjoy the opportunity to continue their education at the university level

Taking these into consideration, in 1998, the Ministry of Education in Saudi Arabia planned a comprehensive curriculum which would be based not only on educational and scientific achievements but also on traditional beliefs. The years between 1998 and 2004 were determined for the trial of the new comprehensive program. For the

implementation of this curriculum, school textbooks in the areas of Islamic studies, Arabic language, science, social science, technical sciences, and computers and improved printing processes were provided in the schools.

Another change in Saudi Arabia was the foundation of an educational development center for a comprehensive reform. This center is comprised of a general curriculum development team, a technical department, an evaluation department and a number of advisors, researchers, headmasters and trained teachers (IBE & UNESCO, 2001, pp. 72-77).

In Saudi Arabia, as stated before, the educational innovations have been undertaken mainly for the fourth reason related to meeting regional and local needs. In this case, the needs are literate and educated man-power with Islamic values in different sectors of the economy. Furthermore, the effects of the second reason, which is related to educational reforms which are stimulated by the accomplishments of other countries, can be seen in Saudi Arabia, which aims to reach the level of economically developed countries.

As emphasized with the examples above, the four reasons of curricular change related to major political shifts, global accomplishments, theoretical changes in the social and educational sciences, and regional and local needs play an important role in educational innovations in world history. This thesis attempts to investigate the case of Turkey in Atatürk's period (1919-1938), during which an educational reform was made as a result of a major change in the political regime from an empire to a republic.

Significance of the Study

This thesis focuses on the analysis of science curricula at the primary level during the period of Atatürk (1919-1938) based on the state ideology, the politics of the period, its educational policies and philosophies. The study offers a model (Yıldıran, 2006) for curriculum analysis. One part of the model, related to the factors affecting the development of curricula (i.e. state ideology, politics, educational policies, and educational philosophy), is as follows:

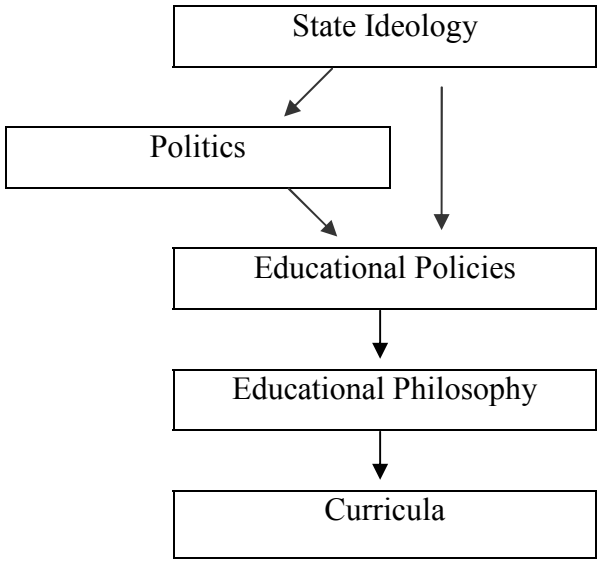

Figure 1: Hierarchical Model of Factors Affecting Curricula (Yıldıran, 2006)

The last part of the model in Figure 1, the curriculum, also undergoes an analysis in this thesis. This study proposes the following model of Yıldıran (2006) for curriculum analysis:

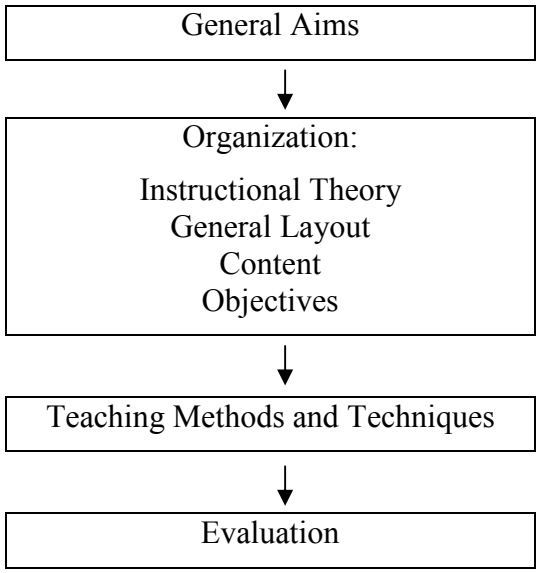

Figure 2: Curriculum Design Model of Güzver Yıldıran (2006)

The second feature of the study is the analysis of unavailable documents. There was no central filing of the six foreign expert reports nor the primary school science curricula during the period of Atatürk. Through secondary sources, we found out how many foreign experts were invited to the Turkish Republic upon the suggestion of Mustafa Kemal or the ministers of education or by the previously invited foreign experts. The search for these documents started from the nearest center, the Boğaziçi University Library, to extend to the central library of Istanbul University, the Hasan Âli Yücel Faculty of Education Library, the Ministry of National Education in Ankara, and the Board of Instruction and Education[1]. Again from the secondary sources, we obtained the number and the dates of curricular changes during the period of Atatürk (1924, 1926, and 1936). We found these documents in the Board of Instruction and Education in Ankara and in the Directorate of Publications (*Yayımlar Dairesi Başkanlığı*).

[1] Turhan Oğuzkan (1981, p. 65) translates "*Talim ve Terbiye Kurulu*" as the "Board of Education" and the Miniştry of National Education (2005) as the "Board of Education" however, Yıldıran (personal communication, October 27, 2006) translates the Board literally from the Turkish as the "Board of Instruction and Education".

The texts of the 1924 and 1926 curricula were in Arabic script, heavily laden with the Ottoman language. These were first transcribed into the Latin script, the translations following the same process as the foreign expert reports (see Chapter III). Thus the second strength of this thesis is making available the primary sources of the three science curricula in the Arabic and Latin scripts. Moreover, the strength of this thesis lies in its being able to reach the primary sources (albeit with difficulty) and thus making the analyses afresh. In making these analyses thorough the primary sources, we have revealed the common and idiosyncratic mistakes made by the authors of the secondary sources. The new generations who no longer use the Ottoman language are usually not aware of the mistaken interpretations of the above stated documents. This thesis offers them another source of information. Thus, this work provides the analysis of the 1924, 1926, and the 1936 primary school science curricula with historical documents, explaining the state ideology, politics, educational policies and philosophies of the specified period in its hopefully rather objective and clear form.

Research Questions

In order to understand what lies behind the curricular changes in Turkey during the period of Atatürk (1919 - 1938), the first group of questions which the thesis will try to answer is as follows:

I. What were the main factors affecting the curricula in Turkey during the period of Atatürk (1919-1938)?
    1. What was the operant state ideology in Turkey during the period of Atatürk (1919-1938)?

2. What was the political background leading to educational policies in Turkey during the period of Atatürk (1919-1938)?
3. How did the educational policies affect the educational philosophies in Turkey during the period of Atatürk (1919-1938)?
4. What were the educational philosophies behind the curricula developed in Turkey during the period of Atatürk (1919-1938)?

Since this thesis specifically deals with the analysis of the science curricula of primary education during the period of Atatürk, the second group of questions is as follows:

II. What were the major curricular changes in Turkey during the period of Atatürk (1919-1938)?
    1. What were the general aims of the science curricula of primary education implemented in Turkey during the period of Atatürk (1919-1938)?
    2. What was the organization (instructional theories, the general layout, content, objectives) of the science curricula of primary education implemented in Turkey during the period of Atatürk (1919-1938)?
    3. What were the teaching methods and techniques used in the science curricula of primary education implemented in Turkey during the period of Atatürk (1919-1938)?
    4. What were the evaluation techniques of the science curricula of primary education implemented in Turkey during the period of Atatürk (1919-1938)?

CHAPTER II

REVIEW OF THE LITERATURE

This section will include a review of the literature about historical research, qualitative research, policy and politics, and curriculum analysis.

Historical Research

This thesis includes an historical study dealing with the politics and educational policies of the Turkish Republic between 1919 and 1938. Therefore, the researcher will give a brief overview on

- The meaning of history and historical research
- The importance of historical research
- The essentials of historical writing

Gottschalk states that there are two contemporary meanings of history: "the past of mankind" or "that which has happened" (Gottschalk, 1958, p. 41). Edward Hallett Carr in his book *What is History?* (1961) defines history as "a continuous process of interaction between the historian and his facts, and an unending dialogue between the present and the past." (p. 35). The way to reach the facts is a process that Carr explains as "a provisional selection of facts and a provisional interpretation in the light of which that selection has been made-by others as well as himself." (p. 35). This process is dynamic in the sense that both "the interpretation and the selection and ordering of facts undergo subtle and perhaps partly unconscious changes through the reciprocal action of one or the other. And this reciprocal action also involves the

reciprocity between present and past, since the historian is part of the present and the facts belong to the past." (p. 35). Thus, Carr goes on, "History, then, in both senses of the word - meaning both the enquiry conducted by the historian and the facts of the past into which he enquires - is a social process, in which individuals are engaged as social beings;" (p. 68-69). This explains how the interpretations of the same period by other researchers may differ due to the selection of different facts.

What about historical research? Before this question, we should examine the status of historical research. We should ask whether historical investigation is scientific. Best and Kahn (1989, p. 60) list the possible arguments of those who have negative as well as positive answers to the above stated question. Historical studies may not be considered scientific because of the following limitations (Best & Kahn, 1989, p. 61):

1. Although the purpose of science is prediction, the historian cannot usually generalize on the basis of past events. Because past events were often unplanned or did not develop as planned, because there were so many uncontrolled factors, and because the influence of one or a few individuals was so crucial, the same pattern of factors is not repeated.
2. The historian must depend upon the reported observation of others, other witnesses of doubtful competence and sometimes of doubtful objectivity.
3. The historian is much like a person trying to complete a complicated jigsaw puzzle with many of the parts missing. On the basis of what is often incomplete evidence, the historian must fill in the gaps by inferring what has happened and why it happened.
4. History does not operate in a closed system such as may be created in the physical science laboratory. The historian cannot control the conditions of observation nor manipulate the significant variables.

On the positive side, historical investigations have the following characteristics of scientific research (Best & Kahn, 1989, p. 61):

1. The historian delimits a problem, formulates hypotheses or raises questions to be answered, gathers and analyzes primary data, tests the hypotheses as consistent or inconsistent with the evidence, and formulates generalizations or conclusions.
2. Although the historian may not have witnessed an event or gathered data directly, he or she may have the testimony of a number of witnesses who have observed the event from different vantage points. It is possible that subsequent events have provided additional information not available to contemporary observers. The historian rigorously subjects the evidence to critical analysis in order to establish its authenticity, truthfulness, and accuracy.
3. In reaching conclusions, the historian employs principles of probability similar to those used by physical scientists.
4. Although it is true that the historian cannot control the variables directly, this limitation also characterizes most behavioral research, particularly nonlaboratory investigations in sociology, social psychology, and economics.
5. The observations of historians may be described in *qualitative* or *quantitative* terms depending on the subject matter and the approach of the historian. In general, the traditional approach is qualitative while the revisionists use quantitative analyses. The traditional, qualitative approach in many historical studies does not preclude the application of scientific methodology. As Brickman (1982) points out, it simply requires "the synthesis and presentation of the facts in a logically organized form" (p. 91)[1].

Best and Kahn define historical research as " delimiting a problem, formulating hypotheses or generalizations to be tested or questions to be answered, gathering and analyzing data, and arriving at probability-type conclusions or at the generalizations based upon deductive-inductive reasoning (1989, p. 63)."

According to Patton (2002, p.284), understanding a program necessitates the study of its history. There are two primary reasons for historical research. We use historical research because it is an important way of comprehending current issues by analyzing the in historical developments which occurred for specific purposes "that

[1] The page from which these points are taken is p. 61; while p. 91 given by the quote they have taken from Brickman.

were often social, economic and political in nature" (Best & Kahn, 1989, p.57; McCulloch & Richardson, 2000, pp. 5-6). Moreover, historical research helps us to avoid past mistakes and "reinventing the wheel" (Best & Kahn, 1989, p. 57; Borg, Gall & Gall, 1993, p.203). In the present study, the aim is to understand the curricular reforms in science at the primary level in Turkey by analyzing the changes in the science curricula of primary education during the period of Atatürk (1919-1938).

In general, in order to guarantee the trustworthiness of historical research, primary or firsthand sources should be used. This, according to Best and Kuhn (1989, p. 65), requires "imagination, hard work and resourcefulness". However, it is also important to put together what has been learned from the data in a logical narrative form. For this reason, Gottschalk states the four bare essentials of how to write the history of any particular place, period, and set of events, institutions or persons (1958, p. 28):

1. The collection of the surviving objects and of the printed, written and oral materials, that may be relevant;
2. The exclusion of those materials (or parts there of) that are unauthentic;
3. The extraction from the authentic material of testimony that is credible;
4. The organization of that reliable testimony into a meaningful narrative or exposition. Understandings of those four steps, and a set of standards of competence for each of them, are required for the intelligent reading of what historians have written.

After briefly discussing the characteristics of historical research, we will now turn to the use of qualitative research techniques for the analysis of data.

The Meaning and General Features of Qualitative Research

According to Gay, Mills and Airasian, qualitative research is "the collection, analysis, and interpretation of the narrative and visual (non-numerical) data in order to gain insights into a particular phenomenon of interest." (2006, p. 9). Straus and Corbin (1990) describe the purposes of qualitative research as,

> …Qualitative methods can be used to uncover and understand what lies behind any phenomenon about which little is yet known. It can be used to gain novel and fresh slants on things about which quite a bit is yet known. Also, qualitative methods can give the intricate details of phenomena that are difficult to convey with quantitative methods (p. 19).

Furthermore, Edson (1988) describes the significant role of qualitative inquiry in education as

> …by assisting us in raising new questions, by leading us to question assumptions, by cultivating an appreciation for complexity, and finally by expanding our frames of reference. In short, qualitative inquiry enhances the critical and intellectual dimensions of human thought and enables researchers to view themselves in relation to the larger world (p. 45).

The term qualitative research is used for different research strategies (such as ethnographic and archival) having common features (Bogdan & Biklen, 2003, p. 2). Bogdan & Biklen (2003) state five characteristics which belong to most forms of qualitative research. First, most qualitative research is naturalistic in the sense that the data is taken from natural settings and the researcher is the key instrument. Second, the data of qualitative research is descriptive (Bogdan & Biklen, 2003, p. 5). Qualitative data involves a detailed description of people, documents, places,

conversations and generally is not analyzed by statistical techniques (Bogdan & Biklen, 2003, pp. 2-3). Patton (2002) describes the three kinds of qualitative data as (p. 4)

- Interviews: Open ended questions and probes yield in-depth responses about people's experiences, opinions, feelings, and knowledge. Data consist of verbatim quotations with sufficient context to be interpretable.
- Observations: Fieldwork descriptions of activities, behaviors, actions, conversations, interpersonal interactions, organizational or community processes, or any aspect of observable human experience. Data consist of field notes: rich, detailed descriptions, including the context within which the observations were made.
- Documents: Written materials and other documents from organizational, or programs records; memoranda and correspondence; official publications and reports; personal diaries, letters, artistic works, photographs, and memorabilia; and written responses to open ended surveys. Data consist of excerpts from documents captured in a way that records and preserves context;

The third characteristic of qualitative research is that it focuses on the process instead of the results and products (Bogdan & Biklen, 2003, p. 5). Research questions are "formulated to investigate in all their complexity in context", and "not framed by operationalizing the variables". Qualitative researchers specify their focus during data collection instead of determining specific research questions or hypotheses at the beginning (Bogdan & Biklen, 2003, pp. 2-3). Fourth, the analysis of qualitative data tends to be done inductively.

Validity and Reliability of Qualitative Research

Validity a word historically linked to quantitative research, is also important in qualitative research. Trustworthiness is one of the popular words which is used for

the validity of qualitative research. Guba, in his article entitled "Criteria for Assessing the Trustworthiness of Naturalistic Inquiries" (1981, pp. 75-91), states four criteria for the trustworthiness of a qualitative research. These are:

> Credibility: the researcher's ability to take into account all of the complexities that present themselves in a study and to deal with patterns that are not easily explained.
> Methods for achieving: prolonged participation, peer debriefing, and triangulation of methods to verify sources and data.
>
> Transferability: because the objects of study are held to be context-bound, the goal of research is not to produce truth statements that can be generalized to others, rather to develop descriptive, context-relevant statements.
> Methods for achieving: collecting detailed descriptions of the data itself as well as the context so that the reader can make comparisons to other contexts.
>
> Dependability: the stability of the data
> Methods for achieving: overlap methods and ensure you have properly provided and explained them.
>
> Confirmability: the objectivity or neutrality of the data.
> Methods for achieving: triangulation of sources and methods, and be reflexive, i.e., reveal assumptions or biases that may have affected initial questions or interpretations

To check confirmability, the triangulation method is used. "Triangulation is the process of using multiple methods, data collection strategies, and data sources to obtain a more complete picture of what is being studied and to cross check information". This also shows the strength of qualitative research (Gay, Mills, & Airasian, 2002, p. 405).

Mexwell in his article entitled "Understanding and Validity in Qualitative Research" (1992, pp. 279-300), develops five criteria for assessing the trustworthiness of qualitative research. These are,

> Descriptive Validity: the factual accuracy of the data. Methods for achieving: checking transcripts, recordings or other original sources of the data.

> Interpretive Validity: the match between the meaning attributed to participants' behaviors and the actual participants' perspective. Methods for achieving: try to use the words and concepts of the people studied and judge the study's accuracy based on their perspective.
>
> Theoretical Validity: the ability of the report to explain the phenomena studied, including its main concepts and the relationships between them.
>
> Methods for achieving: ensure that an applicable theory is provided that explains the data.
>
> Generalizability: would the same findings exist with different data.
>
> Internal generalizability is whether generalizability exists within the community that has been studied. External generalizability is whether these findings generalize to settings that were not studied. Methods for achieving: internal generalizability can be enhanced by having participants respond to their own collected data. Evaluative Validity: whether the researcher was able to describe and understand the data without being evaluative or judgmental.

Reliability is also discussed in qualitative research in terms of data collection techniques. Reliability of data collection involves whether or not the same data would end up being collected using the same techniques over time (Gay, Mills, & Airasian, 2002, p. 407).

After explaining the meaning, purposes, features, reliability, and validity of qualitative research, we will focus on the analysis of qualitative data.

Data Analysis in Qualitative Research

Qualitative designs can be in the pure form, requiring only qualitative data and content analysis, or in the mixed form, including experimental designs, quantitative data, or statistical analyses (Patton, 2002, p. 252). In this study, the pure qualitative strategy will be used. Therefore, the data of this study will be analyzed through content analysis. Patton describes content analysis as "…any qualitative data reduction and sense-making effort that takes a volume of qualitative material and

attempts to identify core consistencies and meanings." (2002, p. 453). According to Patton (2002, p. 453), the core consistencies and meanings stated in the definition are the patterns, themes or categories. Qualitative content analysis can be inductive or deductive. Under the following headings, each of these analyses are explained.

Inductive Qualitative Content Analysis

During inductive analysis, new patterns, categories, or themes are discovered (Patton, 2002, p.453). Inductive analysis can be done in two different ways. One is analytic induction. Analytic induction starts with a proposition or theory deduced by the researcher, or derived by hypotheses. Then, it proceeds with the verification of the proposition, theory, or hypothesis (Patton, 2002, p. 454). Analytic induction was first introduced by Florian Znaniecki (1934) as a method of data analysis. Znaniecki (1934, pp. 261-262) lists several steps in the analytic induction process. First, Znaniecki proposes the following steps:

1. develop a hypothetical statement drawn from an individual instance
2. compare that hypothesis with alternative possibilities taken from other instances

A decade and a half later Cressey (cited in Robinson, 1951) summarized Znaniecki's rather complex and detailed description of analytic induction in the form of six steps. These are (p. 813):

1. A rough definition of the phenomenon to be explained is formulated.
2. An hypothetical explanation of that phenomenon is formulated.

3. One case is studies in the light of the hypothesis with the object of determining whether the hypothesis fits the facts in that case.
4. If the hypothesis does not fit the facts, either the hypothesis is reformulated or the phenomenon to be explained is re-defined, so that the case is excluded.
5. Practical certainty may be attained after a small number of cases have been examined, but the discovery by the investigator of a single negative case disproves the explanation and requires a re-formulation.
6. This procedure of examining cases, re-defining the phenomenon and re-formulating the hypothesis is continued until a universal relationship is established, each negative case calling for a re-definition or a re-formulation.

In contrast to analytic induction, Glaser and Straus (1967) emphasize ground theory in which meanings and relationships can emerge from the data. In their book *Basics of Qualitative Research: Grounded Theory Procedures and Techniques* (1990), Straus and Corbin identify the steps for determining codes by induction as:

1. Open coding meaning the process of breaking down, examining, comparing, conceptualizing, and categorizing data (p. 61)
2. Axial coding meaning a set of procedures whereby data are put back together in new ways after open coding, by making connections in new categories. This is done by utilizing a coding paradigm involving conditions, context, action/ interactional strategies and consequences (p. 96)
3. Selective coding meaning the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development (p. 116).
4. Conditional Matrix meaning an analytic aid, a diagram, useful for considering the wide range of conditions and consequences related to the phenomenon under study. The matrix enables the analyst to both distinguish and link levels of conditions and consequences.

   Conditional Path meaning the tracking of an event, incident, or happening from action/interaction through the various conditional and consequential levels, and vice versa, in order to directly link them to a phenomenon.

Deductive Qualitative Content Analysis

In order to understand deductive analysis, it can be beneficial to define deductive reasoning first. According to Hyde (2000), "deductive reasoning is a theory testing process which commences with an established theory or generalization, and seeks to see if the theory applies to specific instances" (p. 83). As the definition implies, deductive reasoning starts with a theory, which will be proved or disproved rather than deriving or rearranging theories. Therefore, different from inductive analysis, deductive analysis requires an existing framework (Patton, 2002, p. 453).

Even though deductive analysis is generally a matter of concern for quantitative researchers, it is also used by qualitative researchers (*Ibid*, p. 85). Deductive analysis is used in qualitative research in the cases where researchers are employed by others "to explore particular problems or aspects of a particular setting or a subject". In such cases, instead of assigning codes, existing schemes or codes developed by the agreement among the researchers are employed (Bogdan and Biklen, 2003, p. 168). Bogdan and Biklen (2003) in their book *Qualitative Research for Education: An Introduction to Theories and Methods* list the codes on which researchers agree. As an example, for typical children, the categories are physical description, academic description, dress, background, and how they get along with each other and the teacher. Another example is for curriculum, for which the categories are content, process, amount of time spent with disabled vs. typical, and IEP (Individualized Education Program).

For the emergence of these categories, the theories of the researchers have impact (Bogdan and Biklen, 2003, p. 168). Therefore, one way of starting deductive

analysis is the identification of themes emerging from the literature review and the data collection (Gay, Mills & Airasian, 2006, p. 471).

Quality of Content Analysis

According to Bauer (2000), the quality of content analysis methodology can be provided by the coherence and transparency of the codes driven from the data as well as by their reliability and validity (p. 141).

Coherence is related to the "aesthetic value of the coding frame". Transparency can be achieved through the documentation of the coding process (i.e. "summary list of all codes, the frequency distribution for each code, and an account of the coder reliability"). The reliability of the categories can be ensured by interpreting the data after a time interval or by the interpretation of the data by two or more people. The validity of the categories can be checked in a number of ways. One is ensuring that the codes are related to the words in the text (semantic validity), the second is related to whether the samples represent the text well (sampling validity). The third is predicting "the public opinion polls from press coverage and testing "this prediction under specified circumstances" (predictive validity). Fourth, a coding frame should come from the theory which is the basis of the analysis (construct validity), (Bauer, 2000, pp. 141-143).

Techniques of Analyzing the Content

There are different techniques of analyzing the content. These are (Tavşancıl & Aslan, 2001, pp. 87–105):

- Frequency analysis is related to how frequent the units are observed in the text quantitatively in terms of percentage or ratios.
- Relational analysis after determining the concepts explores the relationships between the concepts identified.
- Categorical analysis is done by first dividing the text into units and then grouping these units into categories according to pre-determined criteria.
- Evaluative analysis is used for measuring the positive and negative attitudes in the text.
- Summative analysis is first done by the omission of the least relative passages and the ones having the same meaning (first reduction). Second, relative passages are brought together (second reduction).
- Explanatory analysis is done by reducing the scattered and conflicting passages (Narrow content analysis), or adding new sentences to explain the passages in the text (Wide content analysis).
- Syntactical analysis searches for the structures in the text. This structure is in the level of rules, symbols, scaling, or related to the content.
- Semantic (Thematic) analysis is the process of forming categories in order to reveal the themes, dimensions and specific sub-themes which fits to the themes and dimension.

Among theses techniques, semantic (thematic) analysis is mostly used. It is a method for identifying, analyzing and reporting patterns (themes) within data (Braun & Clarke, 2006, 79). “A theme is minimally organizes and describes your data set in (rich) detail” (Boyatzis, 1998, 6). The steps for making thematic analyses are (Boyatzis, 1998, 45):

1. reducing the raw data
2. identifying themes within subsamples
3. comparing themes across subsamples
4. creating a code
5. determining the reliability of the code

After having discussed the nature of qualitative research, briefly, the next section will involve the descriptions of policy and politics, the analyses of which is the case in Chapter IV of this thesis for the Atatürk's period (1919-1938).

Policy and Politics

Under this heading, the thesis aims to scrutinize the meanings of the words; policy and politics so that further expressions of these words can be clearly understood.

Policy

Guba in his article, "The effects of definitions of policy on the nature and outcome of policy analysis", proposes eight different definitions of policy. According to Guba, policy is (1984, pp. 63-70),

1. an assertion of intents or goals
2. the accumulated standing decisions of a governing body by which it regulates, controls, promotes services, and otherwise influences matters within its sphere of authority
3. guide to discretionary actions
4. a strategy undertaken to solve or ameliorate a problem
5. sanctioned behavior formally through authoritative decisions or informally through expectations and acceptance established over time
6. a norm of conduct characterized by consistency and regularity in some substantive action area

7. the output of the policy making system: the cumulative effect of all of the action, decisions and behaviors of the millions who work in bureaucracies. It occurs, takes place, and is made at every point in policy cycle from agenda setting to policy impact
8. the effect of the policy making and policy implementing system as it is experienced by the client

From these definitions, it can be inferred that policies can be in the form of expectation, aims, plans, guidelines, rules, set of tactics, results, and ends. According to Bonn (1994, p. 20-21), policies are the substance based dimension "which refers to the political objectives, tasks and issues". All of these meanings in terms of the final implementation of political decisions are taken into consideration in this thesis.

Politics

Since the term politics is "multi-dimensional", it is difficult to give a definition. In order to define the term politics, Bonn (1994, p. 20-21), focuses on the three dimensions: "the institutional dimension (polity), the normative substance based dimension (policy) and the procedural dimension (politics)". While analyzing the factors affecting the curricula during the Atatürk's period (1919-1938), the thesis focuses on policies as the substance based and politics as the procedural dimension. Politics in this thesis involves historical events and occurrences, functioning institutions, laws, by-laws, regulations, and decisions of various governing bodies related to education.

Under the next heading, the literature review on curriculum analysis will be given.

Curriculum Analysis

Analyzing a curriculum requires not only the examination of the components of the curriculum, but also the study of the dynamics leading to the preparation of the curriculum. Curriculum analysis is defined by Posner as,

> A curriculum analysis is an attempt to tease a curriculum apart into its component parts, to examine those parts and the way they fit together to make a whole, to identify the beliefs and ideas to which the developers were committed and which either explicitly or implicitly shaped the curriculum, and to examine the implications of these commitments and beliefs for the quality of educational experience, (1992, p. 12).

This statement is totally aligned with Yıldıran's model (2006) where curricula are affected by the educational philosophy stemming from educational policies influenced by the state ideology and politics and the state ideology of a particular era. Therefore, curriculum analysis requires knowledge about the components of the curriculum as well as about the beliefs and ideas on which the curriculum is based.

The question of how to design curricula was firstly emphasized in the early 1920s. The process of scientifically designing curricula was greatly influenced by the ideas of Franklin Bobbitt. In his book *The Curriculum* (1918), Bobbitt (in Newman, 1981 p. 29) states that curriculum design (in Newman, 1981, p. 29)

1. requires knowledge of the educational system
2. specifies the broad range of human experience into major fields
3. includes objectives as statements of the abilities required to perform activities
4. involves the use of a logical description for future prediction and control

From his efforts evolved a century of contributions of various levels in curriculum design. Some focal contributors will be discussed in a cursory fashion, as a background to Yıldıran's model of curriculum analysis, used in this thesis.

In 1949, Ralph Tyler, who started the educational objectives movement, explained the rationale for designing curricula, based on his experiences of being a teacher, curriculum designer and evaluator in his book *Basic Principles of Curriculum and Instruction*. Tyler's rationale was viewed as "the culmination of an epoch of curriculum making (McNeil, 2006, p.316)". According to Tyler, a curriculum developer should ask the following questions:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?

To determine the attainment of the objectives by the students, Tyler for the first time developed a formal evaluation system, which has since then become part of curriculum design. In his book *Constructing Achievement Tests* (1934), Tyler (in Madaus (Ed.), 1989) states the steps of evaluation as:

1. Formulation of course objectives;
2. Definition of each objective in terms of student behavior;
3. Collection of situations in which students will reveal presence or absence of each objective;
4. Presentation of situations to students;
5. Evaluation of student reactions in light of each objective;
6. Determination of objectivity of evaluation;
7. Improvement of objectivity when necessary;
8. Determination of reliability;

9. Improvement of reliability, when necessary;
10. Development of more practicable methods of measurement, when necessary.

Tyler's greatest contribution is his translation of skills into learnable-teachable and measurable behavioral objectives, capable of being evaluated as indices of achievement as well giving an idea about the effectiveness of instruction. Tyler's system later helped Bloom to develop the taxonomy of educational objectives, at various levels of complexity. In the first volume of the book *Taxonomy of Educational Objectives: The Classification of Educational Goals*, Benjamin S. Bloom (Ed.) states the levels of objectives in the cognitive domain as follows (1956, pp. 201-207):

1. Knowledge: the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern structure, or setting.
2. Comprehension: a type of understanding or apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other material or seeing its fullest implications.
3. Application: the use of abstractions in particular and concrete situations.
4. Analysis: the breakdown of a communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit.
5. Synthesis: the putting together of elements and parts so as to form a whole.
6. Evaluation: judgments about the value of material and methods for given purposes.

In 2001, Bloom's taxonomy of educational objectives was revisited by Lorin W. Anderson and David R. Krathwohl (Eds.) in their books entitled, *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational*

Objectives. The figure shows the revised versions of the levels of educational objectives.

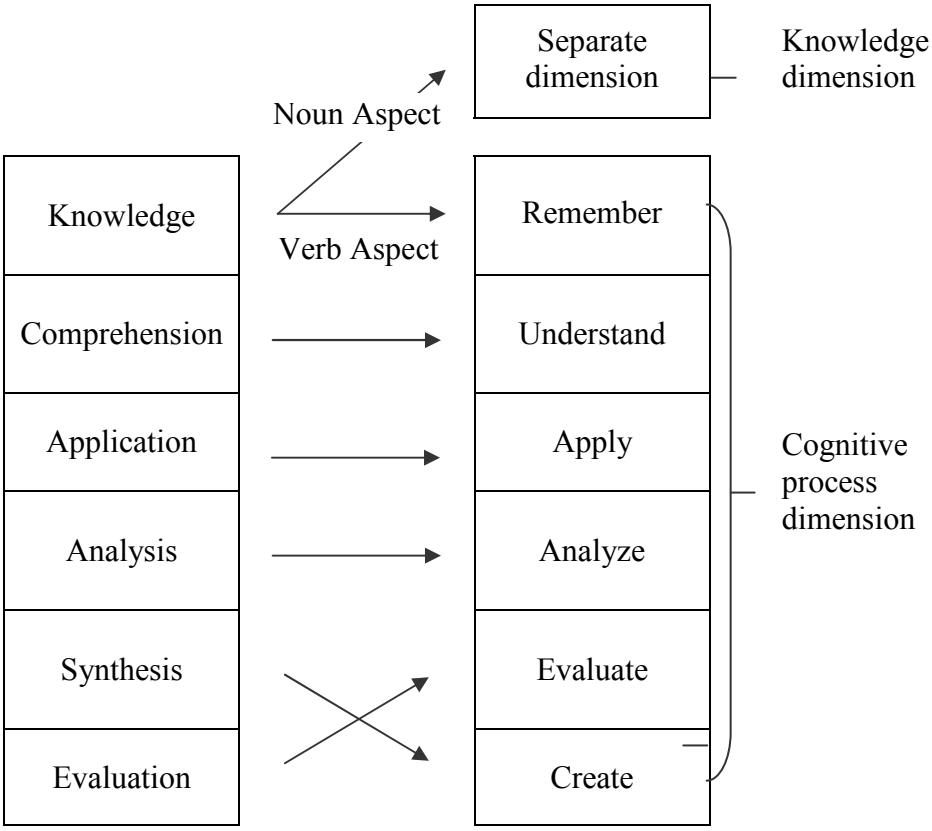

Figure 3[1]: Summary of the structural changes from the Original Framework to the Revisions

Lorin W. Anderson and David R. Krathwohl (2001) define the terms in the revised versions as follows:

1. Remember: retention of the presented material in much the same form as it was taught (p. 66).
2. Understand: building connections between the "new" knowledge to be gained and their prior knowledge (p. 70).
3. Apply: using procedures to perform exercises or solve problems (p. 77).
4. Analyze: breaking materials into its constituent parts and determining how the parts are related to one another and to an overall structure (p. 79).

[1] This figure was taken from Anderson and Kratwohls' *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (2001). p. 310.

5. Evaluate: making judgments based on the criteria and the standards. The criteria most often used are quality, effectiveness, efficiency, and consistency (p. 83).
6. Create: putting elements together to form a coherent or functional whole (p. 84).

Hilda Taba was influenced by Dewey's view of education as a means for transforming culture (Taba, 1962, p.23). In her book entitled *Curriculum Development: Theory and Practice* (1962), Taba defines curriculum as "a way of preparing young people to participate as productive members of our culture" (p. 10). For her, any curriculum includes the following elements:

1. Statement of aims and specific objectives
2. Selection and organization of content
3. Implication or manifestation of certain patterns of learning and teaching
4. Program evaluation of outcomes

The order of developing the curriculum is as follows:

Step 1: Diagnosis of needs
Step 2: Formulation of objectives
Step 3: Selection of content
Step 4: Organization of content
Step 5: Selection of learning experiences
Step 6: Organization of learning experiences
Step 7: Determination of what to evaluate and of the ways and means of doing it

Another person who contributed to the field of curriculum development was George A. Beauchamp. He viewed curriculum as the main working tool of teachers. According to Beauchamp (1956), the important considerations in curriculum development are(p. 3):

1. The reasons why children are enrolled in schools;

2. The varied expectancies of individuals, or groups, for the school;
3. The interests of people because of the social position they occupy in relation to the school.

In 1975, in his book entitled *Curriculum Theory*, Beauchamp states the procedures for curriculum development as:

1. Preparing a set of directions for teachers about the use of a curriculum
2. Formulate a list of educational goals or objectives to include cognitive, syntactical affective, and applicative skills
3. Include a body of culture content to achieve goals
4. Organize culture content in terms of realms, components and levels of organization.

As is seen, after Tyler all curriculum designers include objectives and evaluation as part of their curriculum design.

CHAPTER III

METHOD OF THE STUDY

This section aims to explain the methodology of the thesis based on the "Hierarchical Model of Factors Affecting Curricula" (Yıldıran, 2006). Different parts of the model require different methodologies of analysis. Therefore, both historical accounts of events as well as qualitative analyses of documents were utilized

For the historical part of the model, the ideology of Atatürk's era, its politics and the educational policies thus formed were derived by studying the ideologies of Mustafa Kemal, the Ministers of Education and the educational implementations and practices between 1919 and 1938. On the other hand, the documents of the Scientific Council Meetings (*Heyet-i İlmiye Toplantıları*) and the foreign expert reports which also played a role in the shaping of educational policies during the period of Atatürk were analyzed qualitatively. The historical and qualitative analyses of the documents in Chapter IV brought forth the educational philosophies reflected in the science curricula examined in Chapter V. Lastly, the science curricula of primary education, stemming from the educational philosophy of the specified period, was analyzed qualitatively. The figure below shows the "Hierarchical Model of Factors Affecting Curricula" (Yıldıran, 2006) in relation to the methodology used.

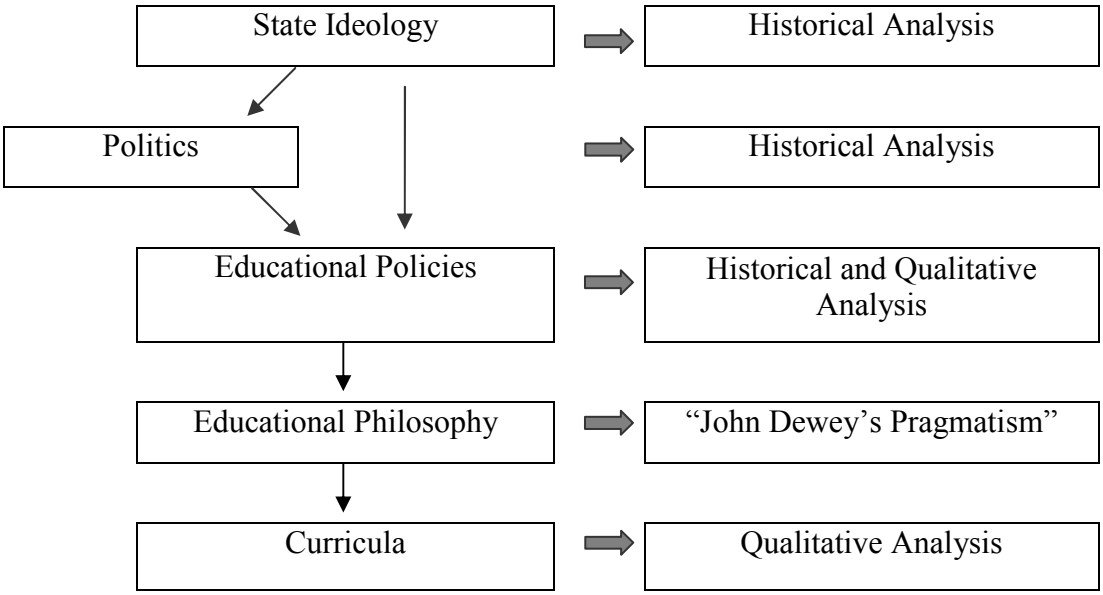

Figure 4: Hierarchical Model of Factors Affecting Curricula (Yıldıran, 2006) in relation to the methodology used

The following sections will include the procedures for collecting the historical and qualitative data along with their analyses.

Data Collection Procedures

As is discussed in the second chapter, the stability and objectivity of data are important for the trustworthiness of both historical and qualitative analysis. In order to ensure the stability and objectivity of data, primarily first hand sources were used for this study. Secondary sources were only used in relation to the major viewpoints of the era studied. Other important functions of secondary sources in this study were the following:

1. Secondary sources were the means for reaching the primary sources. We determined the events and facts of the specified period by reviewing the books and articles of social thinkers and educational specialists.

2. Secondary sources were used to check the trustworthiness of primary and first hand sources by using the data triangulation method.

In this section, we will focus on the procedures of collecting secondary and primary data in order to understand the state ideology, politics and educational policies with the resulting educational philosophies and science curricula.

Data Collection Procedures for State Ideology and Politics during the Period of Atatürk (1919-1938)

Yıldıran's model (2006) begins with the claim that the state ideology affected the political events of the era as well as its educational policies during the period of Atatürk (1919-1938). Therefore, this thesis starts with thestate ideology and political events in relation to the educational issues of the period. In light of the definitions of the term politics in Chapter 2, we tried to determine the operant ideologies as well as historical events and their environment at the governmental level during the period of Atatürk (1919-1938).

First, to define the state ideology of the specified period, we tried to explain Mustafa Kemal's six principles. These principles were mainly quoted from original and primary sources; the speeches and handwritings of Mustafa Kemal, handwritings of his aide-de-camp (Kılıç Ali), and the articles of the 1924 constitution. As we discussed in the historical research part, historians can vary in their interpretations of the past. Therefore, we not only used our own interpretations, but also benefited from other historians (Suna Kili, Andrew Davison, Taha Parla) in interpreting the six principles of Atatürk. Figure 4 illustrates the triangulation of the data:

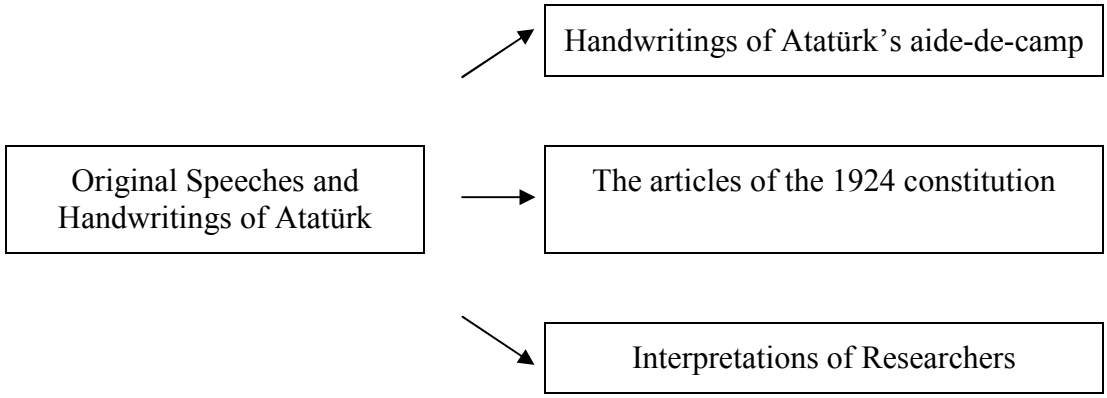

Figure 5: Data Triangulation to Explain the Six Principles of Atatürk

Another investigation was the role of education in the politics of Turkey. By means of the secondary sources; Andreas M. Kazamias' E*ducation and the Quest for Modernity in Turkey,* 1966 and Yahya Akyüz's *Türk Eğitim Tarihi* (History of Turkish Education, 2001), we explained the role of education for Atatürk, the leader and the founder of the Turkish Republic. In Atatürk's politics, education is a vehicle for the creation of the contemporary Turkish citizen. We compared the interpretations of these scholars with Atatürk's original speeches and further with the events (such as the organization of the first teacher congress before the conclusion of the War of Independence in 1922) of the specified period. In other words, to understand the role of education for Atatürk, we used secondary sources as means of specifying the primary sources. When it was possible, the views stated in primary and secondary sources were confirmed by the events which occurred.

The next step was to determine the political events which occurred during the period of Atatürk (1919-1938). In order to detect the political events related to educational issues during the specified period, Ayşe Âfetinan's *İzmir iktisat kongresi*, 17 Şubat-4 Mart 1923 (Izmir economic congress, 1989), Yahya Akyüz's *Başlangıçtan 2001'e Türk Eğitim Tarihi* (History of Turkish Education from the

beginning to 2001), Mustafa Ergün's *Atatürk Devri Türk Eğitimi* (Education in Turkey During the Period of Atatürk, 1997), Necdet Sakaoğlu's *Cumhuriyet Dönemi Eğitim Tarihi* (History of Education during the Period of Republic, 1993), and Howard E. Wilson and İlhan Başgöz's *Türkiye Cumhuriyetinde Milli Eğitim ve Atatürk* (National Education in the Turkish Republic and Atatürk, 1968) were as utilized secondary sources. Furthermore, for the implementations of the Minister, Mustafa Necati Uğural, we used a chapter of Cavit Binaşıoğlu's *Eski Milli Eğitim bakanlarından Mustafa Necati'nin Türk eğitim tarihindeki yeri* (The place of Mustafa Necati, an old Minister of Education, in the history of education, 1999). With the help of these secondary sources, we specified the political events of Atatürk's period (1919-1938). For this thesis, the political events which could have had an impact on educational issues were selected. In their chronological order, these events are,

- War of Independence (1919–1921)
- Opening of the Turkish Grand National Assembly (*Türkiye Büyük Millet Meclisi, TBMM*) – April 23, 1920
- Establishment of the Ministry of Education as one of the First Ministries in 1920
- Appointment of the Ministers of Education (1920-1938)
- Preparation of the Budget of the Educational Expenditures during the ministry of Hamdullah Suphi Tanrıöver (December 14, 1920-November 20, 1921)
- First Teachers Congress before the conclusion of the War of Independence (July 16, 1921) and Teachers Meetings at different provinces of Turkey
- Draft Bill about primary and secondary education in mid 1921 during the ministry of Hamdullah Suphi Tanrıöver
- Izmir Economic Congress, February 17, 1923 --- Educational Issues in Agriculture
- The organization of the Ministry of Education with scientific and administrative parts in 1923

- Scientific Council Meetings (see Table 3 for the dates of the meetings)
- Government program presented to the Grand National Assembly (*Türkiye Büyük Millet Meclisi--TBMM*) on August 14, 1923
- The proclamation of the Republic - October 29, 1923
- Pact of Education (*Maarif Misak-ı*) published during the period of İsmail Safa Özler in 1923
- Atatürk's Reforms: the Abolition of the Caliphate and the establishment of the General Directorate of Religious Affairs - March 3, 1924
- The law of the Unification of Education (*Tevhid-i Tedrisat Kanunu*) on March 3, 1924
- Articles of the 1924 Constitution --- 87 and 88
- Invited Foreign Experts
  John Dewey (1924)
  Alfred Kühne (1925)
  Ömer Buyse (1927)
  Albert Malche (1932)
  American Board (1933)
  Beryl Parker (1934)
- Declaration of Vasıf Çınar on September 8, 1924
- Opening of Teacher Training Schools and Village Teacher Training Schools during the Ministry of Mustafa Necati (1925 - 1927)
- The Law of General Education (*Maarif-i Umumiye Kanunu*) on March 20, 1926
- Establishment of Vocational Schools after the Report of Ömer Buyse in 1927
- The Number of Established Schools, Appointed Teachers via the Statistics Calculated after the 1927 and 1935 Population Census
- Alphabet Change (November 1,1928)
- Establishment of National Schools (*Millet Mektepleri*) on November 11, 1928
- Establishment of People's Houses (*Halk Evleri*) in 1931

Table 1 shows the ministers of education during the period of Atatürk, Table 2 the dates of the Scientific Council Meetings (*Heyet-î İlmiye Toplantıları*), and Table 3 the names and dates of the foreign expert reports during the same period.

Table 1: Ministers of Education during the Period of Atatürk (1919–1938)

Ministers of Education	Time Interval
Dr. Rıza Nur	May 4, 1920 - December 13, 1920
Hamdullah Suphi Tanrıöver	December 14, 1920 - November 20, 1921
Mehmet Vehbi Bulak	November 20, 1921 - November 5, 1922
İsmail Safa Özler	November 6, 1922 - March 7, 1924
Vasıf Çınar	March 8, 1924 - November 21, 1924
Şükrü Saraçoğlu	November 22, 1924 - March 3, 1925
Hamdullah Suphi Tanrıöver	March 4, 1925 - December 19, 1925
Mustafa Necati Uğural	December 20, 1925 - January 1, 1929
Başvekil İsmet İnönü (Acting)	January 1, 1929 - February 27, 1929
Vasıf Çınar (Second time)	February 28, 1929 - April 7, 1929
Recep Peker (Acting)	April 9, 1929 - April 10, 1929
Cemal Hüsnü Taray	April 10, 1929 - September 15, 1930
Dr. Refik Saydam (Acting)	September 17, 1930 - September 27, 1930
Esat Sagay	September 27, 1930 - September 18, 1932
Dr. Reşit Galip	September 19, 1932 - Augst 13, 1933
Dr. Refik Saydam (Acting)	Augst 14, 1933 - October 26,1933
Hikmet Bayur	October 27,1933 - July 8, 1934
Abidin Özmen	July 9, 1934 - June 9, 1935
Saffet Arıkan	June 10, 1935 - December 28, 1938

* The information in the tables is taken from the www.meb.gov.tr on May 27, 2006.

Table 2: The Scientific Council Meetings during the period of Atatürk (1919-1938)

The Scientific Council Meeting	Date
The First Scientific Council Meeting	July 15, 1923
The Second Scientific Council Meeting	April 13, 1924
The Third Scientific Council Meeting	December 27, 1925

Table 3: Reports of the Foreign Educational Specialists during the Period of Atatürk (1919–1938)

Name Surname	Country	Year
Prof. John Dewey	USA	1924
Alfred Kühne	Germany	1925
Omer Buyse	Belgium	1927
Prof. Albert Malche	Switzerland	1932
Kemmerer Report (The American Board Report: Walker D. Hines, Brehon Somervell, O. F. Gardener, Edwin Walter Kemmerer, W. L. Wright Jr, Bongt Wadsted, Goldthwaite H. Dorr, H. Alexsandre Smith, Vaso Trivanovith	USA	1933, 1934
Ms Beryl Parker	USA	1934

In order to ensure the trustworthiness of the information, we also compared our data with the original speeches of Atatürk and the ministers of education. Unlike the data for the role of education, the events of the period were checked with the reports of the Scientific Council Meetings and the foreign expert reports. The articles of the 1924 constitution were also used to check the correctness of the information gained through the secondary sources. The following figure shows the data triangulation processed to specify the political events and role of education during the period of Atatürk (1919-1938).

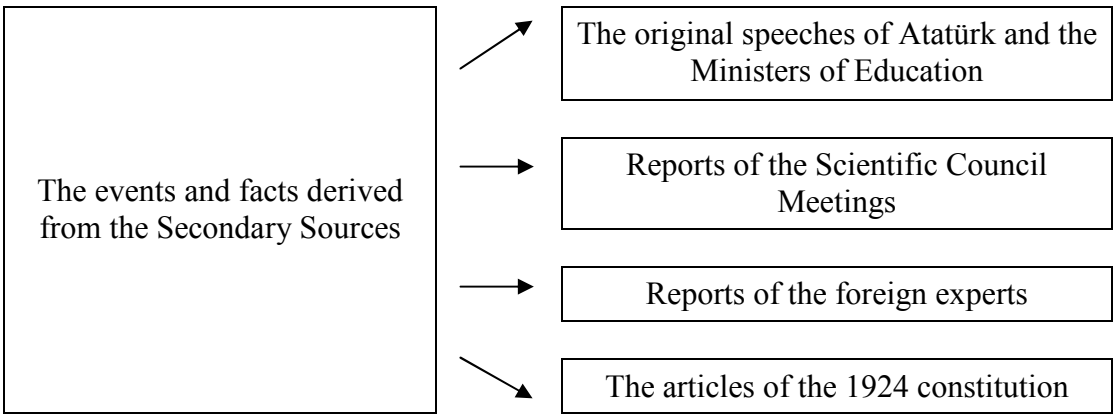

Figure 6: Data Triangulation Process to Specify the Political Events during the period of Atatürk

We found the original speeches of the ministers of education mostly in Ottoman Turkish in the National Library. The articles of the 1924 constitution are available on the official website of the Turkish Grand National Assembly (*Türkiye Büyük Millet Meclisi, TBMM*). The method used to reach the reports of the Scientific Council Meetings (*Heyet-î İlmiye Toplantıları*) and the foreign experts will be explained under the next heading.

Data Collection Procedures for Educational Policies during the Period of Atatürk (1919-1938)

The second part of the model is the educational policies of the period between 1919 and 1938. In order to understand the educational policies of the era, the second definition of Guba (see Chapter II, Politics and Policy) was taken as the base. Accordingly, policy is "the accumulated standing decisions of a governing body by which it regulates controls, promotes services, and otherwise influences matters within its sphere of authority.", (1984, pp. 63 -70). Guba also concludes his definitions of policy by stating that policies can be in the form of expectations, aims, plans, guidelines, rules, set of tactics, results, and ends. All of these forms, in terms of the final implementation of political decisions, are taken into consideration in this thesis.

For the explanation the educational policies of Atatürk's period, the ideology of the governing body is very important. Therefore, initially, we started with the educational policies of Mustafa Kemal Atatürk, mostly influenced by his six principles, which further led to different educational policies. While explaining the educational policies, we also utilized the ideologies of the Ministers of Education

which had also resulted in outstanding implementations during the period of Atatürk (1919-1938). We investigated the educational policies of Atatürk and the Ministers of Education through the secondary sources: Yahya Akyüz's *Başlangıçtan 2001'e Türk Eğitim Tarihi* [History of Turkish Education from the beginning to 2001], Süleyman Çelenk's *Cumhuriyet döneminde ilköğretim* (Primary education during the republican era, 2000), Mustafa Ergün's (*Atatürk Devri Türk Eğitimi* (Education in Turkey During the Period of Atatürk, 1997), and Necdet Sakaoğlu's *Cumhuriyet Dönemi Eğitim Tarihi* (History of Education during the Period of Republic, 1993). By means of these secondary sources, we reached the speeches of Atatürk and the Ministers of Education about their educational policies. Figure 6 shows the data triangulation process utilized to understand the educational policies of Atatürk and the Ministers of Education.

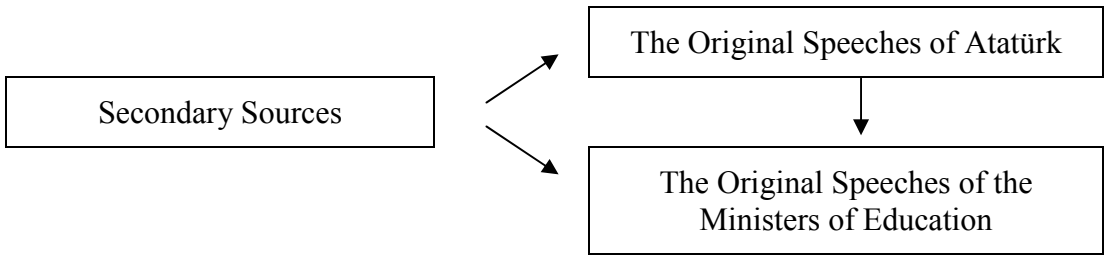

Figure 7: Data Triangulation to Explain the Educational Policies of Atatürk and the Ministers of Education

Other important data are the reports of the Scientific Council Meetings and the Foreign Experts (see Table 2 and 3 for the dates). There was no central filing of the six foreign expert reports written during the period of Atatürk. Through secondary sources, we found out how many foreign experts were invited to the Turkish Republic upon either the suggestion of Mustafa Kemal or the ministers of education or by the previously invited foreign experts. Search for these documents started from the nearest center, the Boğaziçi University Library. One foreign expert report, the

American Board Report, was reached through this center. For the rest, the central library of Istanbul University was searched. No report was found there; thus the Hasan Âli Yücel Faculty of Education Library of Istanbul University was searched next. Four foreign expert reports were located there (Kühne, Buyse, Malche, Parker). In order to get the first foreign expert report (John Dewey's), the Ministry of National Education in Ankara was contacted. The report, in Latin script but in Ottoman Turkish was acquired from the Board of Instruction and Education. The English form of this report was obtained from a colleague from Yeditepe University in Istanbul[1], through serendipity. All of the other reports obtained were in Latin script, but heavily laden with the Ottoman language.

In summary, to analyze the educational policies of Atatürk, we utilized the ideologies of Atatürk and his ministers of Education as well as the reports of the Scientific Council Meetings and the Foreign Expert Reports.

Data Collection Procedures for Educational Philosophies during the Period of Atatürk (1919-1938)

To understand the educational philosophies which influenced the curricula of primary education during the period of Atatürk (1919-1938), data was derived from three categories of sources. First, analyzing the educational policies of the period (Chapter IV), we reached the conclusion that the educational philosophy of the period was heavily influenced by pragmatism and the progressive education movement of John Dewey. Therefore, the second category of our sources was the works of John Dewey as well as those of William James, whose views influenced the

[1] The colleague mentioned is Assist. Prof. Yasemin Alptekin.

formation of John Dewey's philosophy. As a last category, science curricula of 1924, 1926, and 1936 were used to understand whether this philosophy appeared in the texts of the science curricula. The reason for stating that John Dewey's philosophy was influential on science curricula was due to the fact that John Dewey was the first foreign expert to be invited in 1924 and the pragmatic orientation of the science curricula of the period. In fact, his suggestions in his report, entitled *Report and Recommendation upon Turkish Education* and the orientation of the three science curricula are congruent. Figure 8 summarizes the process for determining the data in order to investigate the educational philosophies during the period of Atatürk.

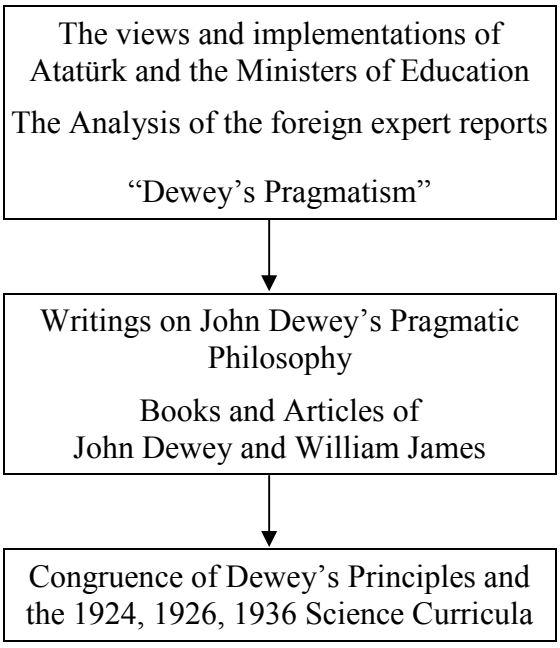

Figure 8: The Data for Educational Philosophies during the period of Atatürk (1919-1938)

Data Collection Procedures for the Science Curricula of Primary Education during the Period of Atatürk (1919-1938)

The other data of the study is the science curricula of primary education in Turkey during the time of Atatürk (1919-1938). There were three curricular revisions undertaken during this period for all curricula in 1924, 1926, and 1936. However, only the science curriculum is chosen as the focus of the study due to the educational background of the researcher. This choice provides better understanding of the subject areas as well as the teaching methods and techniques used in science education.

In order to determine the number of curricular changes in science education at the primary level through the history of the Turkish Republic, the following secondary sources about curricular changes in Turkey were reviewed: Süleyman Çelenk, Neşe Tertemiz, and Nurdan Kalaycı's *İlköğretim Programları ve Gelişmeler: Program Geliştirme İlke ve Teknikleri Açısından Değerlendirilmesi* (Primary School Curricula and Developments: Evaluation in terms of Program Development Principles and Techniques, 2000), Fatma Varış's *Eğitimde Program Geliştirme: Teoriler ve Teknikler* (Program Development in Education: Theories and Techniques, 1997), Selahattin Ertürk's *Eğitimde Program Geliştirme* (Program Development in Education, 1986), Fitnat Kaptan's *Fen Bilgisi Öğretimi* (Teaching Science, 1999), Mustafa Ergün's *Atatürk Dönemi Türk Eğitimi* (Turkish Education during the Period of Atatürk, 1977). In addition, two articles were reviewed for the same purpose. The articles were Sedat Yüksel's "Türkiye'de Program Geliştirme Çalışmaları ve Sorunları" (Studies and Problems of Program Development in

Turkey, 2003) and Dilek Gözütok's "Türkiye'de Program Geliştirme Çalışmaları" (Program Development Studies in Turkey, 2003).

The curricular changes that appeared in these scholarly books and articles were checked in the decisions of the Scientific Council Meetings. Finally, we specified the following curricular changes during the period of Atatürk (1919-1938), period witnessing the most important political shift in the history of the Turkish Republic. The three science curricula of primary education during the period of Atatürk were, 1924 science curricula entitled "Exploring Nature, Agriculture, Hygiene (*Tabiat Tetkiki, Ziraat, Hıfzıssıhha*)", 1926 science curriculum entitled "Courses of Nature and Non-living Things (*Tabiat Dersleri, Eşya Dersleri*)", and 1936 science curriculum entitled Natural Science (*Tabiat Bilgisi*). Figure 9 shows the data triangulation to understand the number of curricular changes.

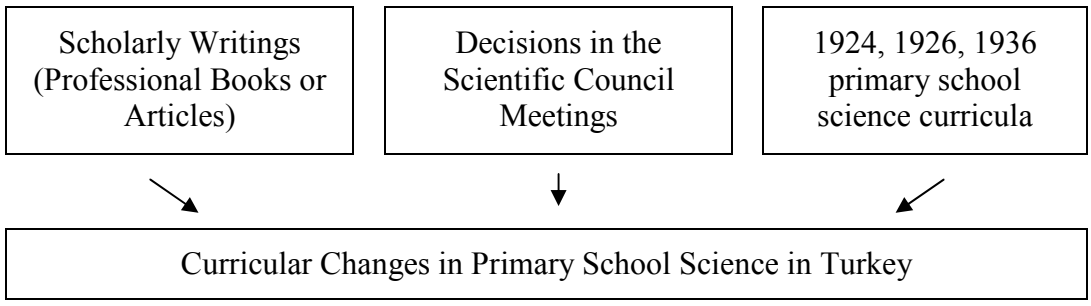

Figure 9: Data Triangulation to Understand the Years of Curricular Changes in Science Curricula at Primary Level

It was not possible to find all of these curricula in one place. The 1924 and 1926 curricula were in Ottoman Turkish, written in Arabic script. Moreover, another difficulty was that there were libraries in which publications were not organized. For this reason, it took five months to collect all of these original curricula and to make the transcriptions from Arabic script to Latin script for the 1924 and 1926 curricula.

The process for collecting the original curricula is as follows. With the help of one member of the Science and Technology Curriculum Development

Commission (*Fen ve Teknoloji Program Geliştirme Komisyonu*) in the Board of National Education[1] (*Talim ve Terbiye Kurulu*), the 1924 and 1926 curricula were obtained from *Milli Eğitim Bakanlığı Yayımlar Dairesi* (The Department of the Publications Office of the Ministry of National Education) located in the Ministry of Education in Ankara. These curricula were written in Arabic Script. Since many people can no longer read the Arabic script, first the two curricula were transcribed into the Latin script by a retired primary school teacher[2]. This translation was checked by a specialist in Ottoman history. Therefore, one of the important contributions of this thesis is transcribing the unavailable documents into the Latin Script (see appendices 1, 2, 3, 4, 5, and 6 for the Arabic and Latin samples of these documents). The 1936 curriculum was in the National Library of Turkey (*Milli Kütüphane*) in Ankara and it was written in the Latin Script.

[1] Dr. Fatma Tezcan, a member of the Science and Technology Program Committee of the Board of Instruction and Education was the contact person whose help was of immeasurable value for this thesis.

[2] Ahmet Bayındır is a retired primary school teacher who is 58 years of age and had primarily learned to read and write in the Arabic Script. He also made transcriptions for local newspapers and *Cumhuriyet* (the Republic).

Data Analysis

Under this heading, we will try to explain how the historical and qualitative analyses were used for different parts of Yıldıran's model (2006).

Historical Data Analysis

For the description of the state ideology, politics and the educational policies of the period of Atatürk (1919-1938), a historical analysis was needed. In using historical analysis as a method in our study, we went through different stages that Gottschalk (1958, p. 28) defined for historical writing (see Chapter II, Historical Research). In the paragraphs below, we will try to clarify how these stages were used in this thesis.

After collecting the data, the second step that Gottschalk states for historical writing is "the exclusion of the materials that are unauthentic". For this purpose, we eliminated information (i.e. events, dates, meetings, statistics, laws, by-laws, regulations) when it did not match the information on the same issue in other sources during the data triangulation process. Authenticity was further guaranteed by the use of original documents in Ottoman language rather than their translations to avoid translation errors. The Quotations from the sources in the Ottoman language were literally translated into English by the thesis advisor. Literal translations were preferred even if the texts ended up not completely conforming to English patterns of usage. The idea behind this preference was that readers would be free to make their own interpretations rather than having to comply with those of the researcher and the

thesis advisor. As the present generation up to age forty[1] is not familiar with Ottoman Turkish, errors may confound realities in the translation of original documents which were heavily laden in Ottoman Turkish. In this thesis, the originals of all the translations are given as footnotes so that other investigators can check the accuracy of the translations.

In our readings we came across some inauthentic material due to translation errors, and interpretations based on these errors. Furthermore, there was a mix-up on some of the dates of events which were corrected by the data triangulation method. When there were varying accounts, several other sources were used to find an overlap. These sources were further checked by original documents. Errors were thus excluded.

The next step, according to Gottschalk, is deriving a "credible testimony" from the authentic material. Interpretation of ideologies and policies just by the researcher and the thesis advisor could possibly have lead to a biased orientation. Although some original interpretations are included in the thesis, in cases where our interpretations diverged from others, attention was given to different views by citing their voices. When sources diverged in terms of interpretations, the primary sources were revisited in order to find the logic of perspectives. The search for the truth of events or ideologies came from the original documents themselves and the

[1] Two main reasons can be influential on the decrease of the usage of words of Arabic and Persian Origin which were prevalent in the Ottoman Language in Turkey. First, the Turkish Language reform involving the elimination of Arabic and Persian words and the replacement of these by words of Turkic origin gained speed in the late 1960s and early 1970s. Consequently, those who are younger than 40 now had less of an opportunity to learn words of Arabic and Persian origin which were prevalent in the Ottoman Language. (See the book of Geoffrey L. Lewis entitled, *The Turkish Language Reform: A Catastrophic Success,* pp. 140-152) In addition, there was a major curricular change in 1968 whereby the content of Turkish Language and Literature courses offered in secondary education did not include as much of the Ottoman Language and Literature as the curricula before.

interpretations of these documents by us, by others, their overlap, and differences; all clearly stated as references.

The last step of historical writing, according to Gottschalk, is to arrange the credible testimony into a meaningful narrative form. To be able to put the analyses of this study into a meaningful narrative form, we set criteria under which we could organize them. While explaining the state ideology, politics and educational policies of Atatürk, the order of the evolution of his six arrows was the criterion. This was because the six arrows of Atatürk were central to his politics and educational policies between 1919 and 1938. The criterion of chronology of appointment was used in writing the views and implementations of the Ministers of Education. Furthermore, for the period of each ministry, the implementations were organized thematically.

Qualitative Data Analysis

Since this thesis attempts to explain the state ideology, politics, educational policies and philosophies behind the changes in the science curricula of primary education in Turkey during the period of Atatürk (1919-1938) in a detailed manner, a qualitative design seemed most appropriate. In this thesis pure qualitative strategy with content analysis was used. The analysis was made inductively for the Scientific Council Meetings (*Heyet-i İlmiye Toplantıları*) and the foreign expert reports, and deductively for the science curricula of primary education during the period of Atatürk.

The Reports of the Scientific Councils and the Foreign Expert Reports: Inductive Qualitative Analysis

Inductive qualitative analyses were used for the Scientific Council Meetings (*Heyet-i İlmiye Toplantıları*) and the foreign expert reports. The method of Analytic Induction of Znaniecki and Cressey was utilized during the analysis process.

According to Cressey, first, rough common categories that fit all of the documents need to be delineated. Thus, for the Scientific Council Meetings (*Heyet-i İlmiye Toplantilari*), we decided to state the date, the participants, the aim, the topics discussed and the decisions of the meetings as categories, which showed an overlap for all of the meetings. Secondary sources were used to check the implementation level of the decisions taken in each of the Scientific Council Meetings. Thus we added the category of implementation to our system of analysis. It must be remembered that this category did not evolve out of a text analysis but emerged out of concerns related to policy implementations in the model (Yıldıran, 2006). The following model gives the outline of the categorical analysis utilized in the analysis of all the Scientific Council Meeting Reports.

Categories
The date and the participants
The aim of the meeting
The topics discussed
The decisions
The implementations of the decisions

Figure 10: The Categories Used for the Analysis of the Scientific Council Meetings

Next, the items of each of the meetings were analyzed for common themes. Items having similar or common themes were grouped together. The name that best described the commonality emerged as the theme. The common themes changed from meeting to meeting. The following table gives the themes which emerged from the topics of all three Scientific Council Meeting Reports.

Table 4: Themes of Analysis for the Scientific Council Meetings

I. Scientific Council Meeting	II. Scientific Council Meeting	III. Scientific Council Meeting
1. Organization (the educational system, the departments of ministry, schools, and the primary school curricula)	1. Organization (schools, and the primary school curricula)	1. Organization (the departments of the ministry, the schools)
2. Nationalism	2. Levels of Education	2. Budget
3. Formal and Non-formal Education	3. Equality of Opportunity	3. The Betterment of School Facilities
4. Latent and Hidden Curricula		4. Training of teachers
		5. Coeducational Instruction

For the foreign expert reports, the categories set at the beginning were the name, the date, the author, the aim, the method utilized to collect data, and the suggestions of the author of the report and the implementations following the report. After reading all the reports, the category of the topics under discussion was also added to our analysis. Figure 11 gives the outline of the categorical analysis utilized in the analysis of all the foreign expert reports.

Categories
The name, year, author
The aim of the report
The method followed for the investigations
The topics under discussion
The suggestions of the foreign experts
Implementations related to suggestions

Figure 11: The Categories Used for the Analysis of the Foreign Expert Reports

The second step was analyzing the reports case by case. The case analyses of the reports were carried out by the method of thematic analysis. First, the main themes of each paragraph were derived and checked for the accuracy of translation by the thesis advisor. The themes were compared across the whole text of the report. Themes with the same content were brought together in every single report. Table 5 will give the themes of each report.

The Primary School Science Curricula of 1924, 1926, 1936: Deductive Qualitative Analysis

In this thesis, deductive qualitative content analysis was used for the analysis of the science curricula of 1924, 1926 and 1936. Deductive content analysis has been preferred due to the long history of curricular concepts and theoretical background (see Chapter II, Curriculum Analysis). Curriculum designers have already defined the components of the curriculum.

Tablo 5: The Themes in the Reports of the Foreign Experts Invited during the period of Atatürk (1919-1938)

John Dewey (1924)	Alfred Künhe (1925)	Ömer Buyse (1927)	Albert Malche (1932)	The American Board (1933)	Beryl Parker (1934)
Teacher Training	General Education	The Ankara Atatürk Labor University	The Organization of the *Darülfünûn*	Primary Education	Education and National Development
The Structure and Architecture of School Buildings	Training of Primary School Teachers	Vocational Education in Different Provinces	Autonomy and Responsibility, Rectorate, Statistics, Appointment of Academic Staff, Professor Allocations, Student Life, Libraries, Buildings,	Secondary Education	Establishment of the National Education Laboratories
Turkish Educational System	Training of Technicians	Middle Agricultural Schools	Preparation of Students, Faculties	Teachers and Teacher Training Schools	Location, Buildings, and Equipments
Aim and purposes of Schools	Education for Commercial Vocations	Vocational Education in the Navy	The Instruction Given in the *Darülfünûn*	Higher Education and the University	Students
An Educational plan	Life Schools (*Hayat Mektepleri*)		Teaching Methods, Foreign Language Education, Turkish Publications	Students Sent Abroad	The Curriculum
Organization of the Min. of Public Inst.	Home Economics Education		The Influences and Services of the *Darülfünûn*	Technical and Commercial Schools	Teachers, Supervisors, and Administrators
Training and Treatment of Teachers	Administration of Vocational School Affairs		Courses for Sec. School Teachers, Courses for the Public, Vocational Courses, Arch. Excursions, and Conferences, Turkish Journal of *Darülfünûn*, Academy of National Sci., Literature and Arts	Public Education	Village Schools
The School System					Agents Working with Schools
Health and Hygiene					

In order to determine the categories which fit all of the science curricula during the period of Atatürk (1919-1938), first a literature review on curriculum development was carried out. This step is also emphasized by Gay, Mills & Airasian (2006, p. 471). At the end, the curricula in this research were analyzed using categories established by the curricula literature and Yıldıran's model. These categories are the general aims, the organization (instructional methodology, general layout, content, and objectives), teaching methods and techniques, and the evaluation of curricula (see figure 2). Because the concept of curriculum was new during the 1920s, the 1924, 1926 and 1936 science curricula of the Turkish Republic were not organized according to the components stated by recent curriculum designers. We, however, tried to respond to the above stated categories, even though they were scattered over the whole document. We have used deductive data analysis for the science curricula because there is an established theoretical background for the concept.

After the explanation of the methodology used in this thesis, the next two chapters will continue with the analyses of the state ideology, politics, educational policies, educational philosophy and the science curricula of 1919-1938.

CHAPTER IV

THE STATE IDEOLOGY, POLITICS AND EDUCATIONAL POLICIES OF TURKEY (1919–1938)

In the history of Turkey, one major curricular change occurred in 1924 as a result of the political shift from empire to republic, which is indicated as one of the main reasons for curricular reform in the first chapter. In order to understand the effects of this major revolution on Turkish culture, the educational system in the Ottoman Empire will be reviewed in a cursory fashion. This will be followed by the educational reforms leading to curricular changes throughout the history of the Turkish Republic in relation to the political orientation of the era.

An Overview of the Educational System during the Ottoman Empire

The conquest of Istanbul in 1453 by Mehmet the Conqueror (Mehmet II; 1451–1481) started the period of the growth of the Empire (1453–1579). After the conquests of Yavuz Sultan Selim (1512–1520) and Süleyman the Magnificent (1520-1566), the empire reached the height of the glory (Emecan, 1997, p.315). Having territories on three continents (Europe, Asia and Africa), the Ottoman Empire was at a critical location for the politics and the economy of many regions. In this period, the empire had a very powerful military. The military leaders, together with the highest ruling administrators, played a significant role in the decisions taken in the Empire. These high-ranking officials were trained and educated within the system of the *Kapı*

Kulları (Subjects of the 'Porte')[1], and were responsible for the supervision of the military, the judicial system, and education (Kazamias, 1966, p. 25). The system of *Kapı Kulları* was established during the period of Murat I (Murad Hüdavendigar; 1362-1389) through the training of the eligible males from the conquered territories in order to provide for the shortage in the military.

After the conquest of Istanbul, the *Enderun Mektebi* (Palace School) was established during the period of Mehmet the Conqueror in 1455, with the aim of training the *Kapı Kulları* (Okçabol, 2005 p. 24). The school aimed to select youngsters on the basis of excellence of body and mind, and to educate them to be the new Moslem elite, the military and administrative leaders of the Empire (Kazamias, 1966, pp. 27-28). Even though at the beginning the *Enderun* was only for non-Moslem youngsters from the conquered territories, Moslem students began to be admitted at the end of the seventeenth century when the Ottoman Empire started to decline in terms of conquests, with the consequence that enrolling youngsters from newly conquered territories was no longer possible (Koçer, 1970, p. 16). The *Enderun* was organized into seven grades, with ascending levels of difficulty (Kazamias, 1966, p. 29).

Until the second half of the eighteenth century, besides the education of the elite in the *Enderun*, the other major types of schools were the *mektep* at the primary level and the *medrese* at the secondary and higher education levels (Kazamias, 1966, pp. 31-32). The *medreses* were opened in 1330, the first in Iznik during the period of Orhan Gazi (Okçabol, 2005, p. 24). These schools provided free education for all segments of society. The teaching of religion was dominant in these schools.

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[1] Kazamias (1966, p.25) translates "*Kapı Kulları*" as "Slaves of the 'Porte' ". However, the word slaves does not connatate the administrative power of individuals trained through the system. Therefore, we choose the word 'subjects' instead.

Especially in the *mekteps*, the instruction was restricted to the teaching of the Qur'an, and the Ottoman language (*Elif-ba*). In the *medreses*, on the other hand, the courses were more diverse. During the early periods of the Ottoman Empire, the courses taken in the *medreses* were grammar, syntax, logic, metaphysics, rhetoric, geometry, arithmetic, tropics, stylistics and medicine (Kazamias, 1966, p. 32).

The *medrese* was vital for the empire because even teachers and intellectuals for the Enderun were educated and trained in these institutions (Kazamias, 1966, p. 33). Until the end of the growth period, the *medreses* were institutions of scientific learning with a high level of tolerance. On the other hand, during the decline of the Ottoman Empire, the quality of non-religious education became questionable in these institutions (Okçabol, 2005, p. 24).

The glorious history of the Ottoman Empire until the end of the sixteenth century began to decline after the seventeenth. During the time of Mehmed IV (1648-1687), the Second Vienna Attack (1683) resulted in the advancement of the Austrians and their allies into the Ottoman territories. As a consequence, during the time of Muıstafa II (1695-1703), the peace treaty of Carlowitz (January 26, 1699) was signed with the allied powers. This treaty indicated the end of the growth period, heralding the beginning of the stagnation epoch of the Ottoman Empire (1699-1792). Another cession of territory occurred with the treaty of Passarowitz (1718) during the period of Ahmed III (1703-1730). During the last days of Mustafa III (1757-1774) in 1774, the treaty of Küçük Kaynarca was signed with Russia, as a result of which Russia entered the Mediterranean and threatened the coasts of Anatolia. The above stated defeats necessitated the implementation of major changes in certain institutions to save the declining empire from its inevitable collapse. Because of the wars during the decline period, the empire had to strengthen its military. Thus, the

training given in military schools gained importance. As a result, reforms in the area of education also became necessary. After the sea defeat of Ceşme (Çeşme Deniz Bozgunu; 1770; Okçabol, 2005, p. 25), in order to train engineers for the military, The Imperial Naval Engineering College (*Mühendishane-i Bahr-i Humayun*) was established in Kasımpaşa on November 18, 1773, during the time of Mustafa III (1757-1774), (Koçer, 1970, pp. 22-15).

Sultan Selim III (1789-1807) saw the possible solution to the decline through reforms aiming at modernizing the armed forces, modeled after France. Thus he invited French experts to facilitate the modernization of the armed forces (Lewis, 1968, p. 36-39). During the period of Mahmut II (1808-1839), elementary education was declared to be compulsory by the Sultan first for the people of Istanbul in 1824, and then for all in 1826 (Okçabol, 2005, p. 26).

During the nineteenth century, the Ottoman Empire struggled with internal as well as external problems. Political reforms were seen to be inevitable in order to overcome these difficulties. For the modernization of society along western lines, the *Gülhane* Rescript of 1839 (*Tanzimat Fermanı*) and the Rescript of 1856 (*Islahat Fermanı*) were proclaimed during the period of Abdülmecit (1839-1861), (Kazamias, 1966, pp. 56-62; Yücel, 1994, pp. 7-9).

Major reforms in education took place during the reigns of Abdülmecit (1839-1861) and of Abdülaziz (1861-1876). In 1840, reforms in education continued with the establishment of a middle school of two years above the four-year *sıbyan mektebi* (primary education) (Gelişli, 2005, p.138). This school was located inside the Sultan Ahmet Mosque and was named *Mektep-i Maarif-i Adli* (Yücel, 1994, p.7). These types of schools took the name *Rüşdiye* in 1847, initially giving only two years

of education above the *sıbyan mektebi* (Gelisli, 2005, p.138). By 1848, there were five *rüşdiyes* in Istanbul (Yücel, 1994, p. 7).

In 1845, secondary schools called the *idadi* were established first in Bosnia, again during the period of Abdülmecit (1839-1861), in order to prepare students for the prerequisites required by the Military Medical School (*Askeri Tıbbiye* established in 1827) and the Military Academy (*Mekteb-i Fünun-ı Harbiye* established in 1834), both established during the period of Mahmut II (1808-1839), the Sultan before Abdülmecit. Initially, education in *idadis* was not different from that given in the *rüşdiyes*. The *idadis* accepted students between the ages of 11-14. The first *idadi* established in Istanbul, in 1845 during the time of Abdülmecit, was the *Mekteb-i Fünûn-ı İdadiye*, which became the *Kuleli Askeri İdadisi* in 1872, during the era of Abdülaziz (1861-1876) (Akyüz, 2001, pp.152-153).

In 1846, during the period of Abdülmecit, a commission headed by the *Şeyhülislam* was formed to discuss the issues related to educational reforms. The commission proposed and established the *Mekâtibi Umumiye Nezareti* (the Ministry of Public Schools). In addition, a proposal was made for the establishment of the *Darülfünûn* at the university level. The commission also discussed the reformation of the textbooks and instruction in the primary school, within the limits set by religion. Furthermore, the commission declared that primary education had to be obligatory. In 1857, the *Mekâtibi Umumiye Nezareti* (the Ministry of Public Schools) was changed to the *Maarifi Umumiye Nezareti* (the Ministry of Public Education). Aligned with this change, the Ministry gained control over the curricula of *sıbyan mektepleri, rüşdiyes, idadis, medreses* and other types of civil schools.

During these years, the Ottoman leaders were influenced by the reforms in France (Kazamias, 1966, pp. 58-62). According to Kazamias (1966, p.62), The

French wanted to strengthen their political and cultural influence in the Near East. As a result, they supervised for the Ottoman educational system. In 1867, during the period of Abdülaziz (1861-1876), the French government stressed the need for the reorganization of the educational system in the Ottoman Empire. In this reorganization, secondary schools were restructured. One reason was the increasing necessity of educating the Christians and the Moslems at the same level so that they could take equal responsibility in the administration of the Empire. Another reason was the inadequacy of the *rüşdiyes* in the preparation of students for higher education (Akyüz, 2001, pp. 148-154). The visits of Sultan Abdülaziz to Europe and his interviews with the French ambassadors (1867) resulted in the establishment of *sultanis* in 1868, which would train intellectuals educated along western models (Gelişli, 2005, p. 134). The first sultani was the *Mekteb-i Sultani*, established in Galatasaray on September, 1, 1868. In *Mekteb-i Sultani*, the language of instruction was French and the school was co-administered by a Turk and a French director. During its first years, the *sultani* offered ten years of education, five of which were the *iptidai* (basic) classes, followed by five years of secondary education (Akyüz, 2001, pp. 153-154).

In light of the French influence, during the reign of Abdülaziz, in 1869, the *Maarifi Umumiye Nizamnamesi* (Regulations for General Education, RGE) provided new organizations for the educational system. According to these regulations, the main types of schools were the *iptidai* schools, *rüşdiyes, idadis, and sultanis*. The four-year *sıbyan mektepleri* were transformed into three-year *iptidai* schools for children who were above the age of five. The curriculum of these schools was based on the Islamic religion. Students were mainly taught the Qur'an, religious knowledge, the alphabet (*Elif-Ba*), Turkish, calligraphy, arithmetic, and Ottoman

history and geography (Güvenç, 1998, p. 34-35). In the towns of 500 domiciles or more, students would go to *rüşdiyes*, where secondary education had increased from two to four years. Instruction in the *rüşdiyes* included introductory knowledge of religion, Ottoman grammar, punctuation and structure, Arabic and Persian grammar, drawing, geometry, Ottoman and general history, geography, physical education, regional languages, and in the fourth year the French language (Düstur as cited in Gelişli, 2005, p. 134). After the 1869 regulations, the *idadis* were established in the center of the provinces in order to provide a common culture for both Moslems and Christians (Akyüz, 2001, p. 152). According to Yücel, (1994, p. 13-14), some *idadis* were for five years, including the three years of *rüşdiye* education followed by the two years of *idadi*. Some other *idadis* were comprised of seven years, three of which were *rüşdiye* education, followed by four years of *idadi*.

After the 1869 regulations, the *Mekatib-i Sultani* in Galatasaray was reorganized to offer six years of education, instead of the initial ten years. However, in this arrangement students had to acquire a *rüşdiye* education before they were admitted to the *sultani*. Students took the courses of the *idadi* during the first three years in the the Kısm-ı âdî (lower level). During the second three years of the *Kısm-ı âlî* (higher level), they were separated into two groups, studying either the humanities or the sciences (Akyüz, 2001, pp. 153-154). The courses in the humanities section were the art of writing Turkish and composition, books related to Arabic and Persian literature, semantics, French, the wealth of nations, law of nations, and history; while in the science section the courses included technical geometry, perspective, algebra and the application of algebra to geometry, trigonometry and spherical geometry, stylistics, natural sciences and the limited

application of chemistry to industry and agriculture, life sciences, and topography[1], (Akyüz, 2001, p.154).

In 1873, again during the period of Abdülaziz, another *sultani*, *Darüşafaka*, was established in Istanbul for the poor and orphans. As opposed to the *Mekteb-i Sultani*, the language of instruction was Turkish in the *Darüşafaka* (Ergin, 1977, pp.487-494). The aim of the *sultanis* was to prepare the elite minority of the population for higher education and elevated careers in society. These schools gave a general humanistic education, the curriculum containing science and mathematics. Even though the *sultanis* were intended to be established in all of the provinces, this could only be achieved in Istanbul (Başaran, 1999, pp. 94-95; Kazamias, 1966, pp. 61-64).

On December 19, 1873, again during the period Abdülaziz, the *Mülki idadis*, quasi vocational or practical institutions of seven years (the *rüşdiye* and *idadi* education combined), were established in Istanbul with Turkish as the language of instruction. They spread to other cities between 1882 and 1890, during the period of Abdülhamid II (1876-1909). Both Moslem and non-Moslem students had to take an entrance exam in order to be accepted to these schools. The courses included accurate Turkish literary composition and structure, French, Ottoman law, logic, economics, geography, general history, natural sciences, algebra, accounting, geometry, surveying, physics, chemistry, and drawing. These schools prepared

[1] The original names of the couses for the Humanities section were *Türkçe Fenn-i Kitabet ve İnşa, Arabî ve Farisî'den müteallik müellefât, Maanî, Fransızca, İlm-î Servet-i Milel, Hukuk-ı Milel, Tarih; while the courses for the Science section were Hendese-i Resmiye, Menazır, Cebir ve Cebir'in Hendeseye tatbiki, Müsellesat-ı müsteviye ve küreviye, Heyet, Hikmet-i Tabiiyye ve Kimya'nın muhtasar suretle sanayive ziraata tatbiki, İlm-i Mevalid, Fenn-i Tahtit-i Arazi* (Akyüz, 2001, p. 154).

students for the *Darülfünûn*, the university first established in 1863 during the reign of Abdülaziz (Unat, 1964, pp. 45-46).

According to Article 80 of the 1869 RGE, the departments of the *Darülfünûn* included philosophy, literature, law, natural sciences, and mathematics. The duration of education in these departments was for three years, except for those who were to be university lecturers, in which case it was four years (Unat, 1964, p.106).

When Sultan Abdülhamid II became the emperor in 1876, the first *meshrutiyet* (constitutional government) was proclaimed upon the insistence of the reformers, the Young Turks and Mithat Pasha, who after the proclamation became the Grand Vezir. However, between 1877 and 1878, a war broke out with Russia. At the same time, the conflicts between the reformers and the Sultan led to internal rebellions. These events resulted in Abdülhamid's tighter control and censuring, which were viewed by the Young Turks as despotism (Kazamias, 1966, p.56). To prevent the collapse of the Ottoman Empire, different groups relied on their ideologies of of Ottomonism (the Young Turks and the Ottoman intellectuals), Islamism (Sultan Abdülhamid II), Westernizm (writers and poets of the group *Fecr-i ati*, the Dawn of the Future; Abdullah Cevdet, Celal Nuri and Süleyman Nazif), and Turkism (writers and poets of the group *Edebiyat-ı Cedide*, New Literature; Ziya Gökalp, Mehmet Emin Yurdakul, Ömer Seyfettin, and Ali Canip Yöntem). The supporters of each of these views thought that different groups (minorities who lived in the Ottoman Empire) or nations had to be responsible for the protection of the Empire from the attack of the European allied powers. The supporters of these diverse views were disappointed in not receiving the idealized help from the

contingencies to which their views were aligned (Güvenç, 1998; Emecan, 1997, pp.496, 497).

In 1908, the Young Turks demanded the proclamation of the Second *Meşrutiyet* for the reimbursement of the constitutional government. Like the First *Meşrutiyet*, the second also failed (Kazamias, 1966, p.56). In 1909 Abdülhamid was replaced by Mehmet V (*Reşad*). As Ottomanism, Turkism, Islamism, and Westernizm had not been able to save the 'the Sick Man' of Europe after the first *meşrutiyet*, during the second *meşrutiyet*, 'the Turkish-Islamic Synthesis' of Ziya Gökalp gained importance (Güvenç, 1998). According to Yıldıran (Personal Communication, May, 2006), the reason behind this synthesis was the indispensable role of Islam and its function in the theocratic Ottoman Empire, and the concept of the 'nation state' which was spreading in the world after the French Revolution (1789), which took the form of Turkism in the Empire. Three years after the proclamation of the Second *Meşrutiyet*, in 1911, the Ottoman Empire came face to face with the Trablusgarp and the Balkan Wars (Kazamias, 1966, p.56).

Changes in the area of education continued during the epoch of the first and second *meşrutiyets*. In 1908, the *sultanis* were turned into nine-year institutions, with three years of *iptidai* (basic), three years of *idadi*, and three years of higher level secondary education (Celep, 2006). In 1913 during the period of Mehmet V (Reshad), the organization of *sultanis* was changed again, comprised of five years of *iptidai* (basic), followed by seven years of *tâli* (secondary) classes (Yücel, 1994, p. 17). The same year, the 'Tedrisati İptidai Kanunu' (the Provisory Primary Education Law) was passed, another important attempt of the reform movement of the Young Turks. This law included the items about compulsory, free six-year education, and the limitation of class size by fifty pupils. It also determined instruction at the

primary level, which would continue until the 1924 curriculum change after the proclamation of the Republic (Kazamias, 1966, p.83).

At the end of the First World War (1914-1918), the Ottoman Empire was defeated in spite of all the efforts at political, military and educational reform. In 1919, Istanbul was under the occupation of the European allied powers, while the Greeks had landed in Izmir. That same year, Mustafa Kemal started the War of Independence by landing in Samsun on May 19, 1919. This was followed by the events which prepared the collapse of the theocratic Ottoman Empire governed by Islamic rules, and the birth of the new Turkish Republic (Kazamias, 1966, p. 56), the details of which are beyond the scope of this thesis.

The next section will include the social and educational processes of the founding years of the Turkish Republic, during the era of Mustafa Kemal Atatürk's presidency.

The State Ideology, Politics and Educational Policies during the Period of Atatürk (1919-1938)

The Ottoman Empire, governed by Islamic law, ended with the signing of the Mondros (October 30, 1918) and *Sevres* (August 10, 1920) Treaties. What remained from the Ottoman Empire was the Turkish nation, under foreign occupation, with the extreme poverty and illiteracy of Anatolia. After the three and a half years long War of Independence (1919-1923) against the imperialist foreign powers, the nation experienced a major political shift on October 29, 1923, with the proclamation of the Republic (Sakaoğlu, 1993, p.12).

The proclamation of the Turkish Republic was not only a major political revolution, but also a social, cultural and economic one on the way to modernization. The aim of modernization was the transformation of Ottoman Islamic Institutions, concepts, and the way of life into a *laic*, constitutional republic, with the delegation of authority to an elected national assembly (Kazamias, 1966, p.17). In the modernization of the Turkish society, Mustafa Kemal Atatürk, the leader and founder of the Turkish Republic, had the pioneering role.

Atatürk's Ideology and Its Reflections on Education

Sinan Meydan in his book *Bir Ömrün Öteki Hikayesi: Atatürk, Modernizm, Din ve Allah* (The Other Side of a Life Story: Atatürk, Modernity, Religion and God, 2002) asks a noteworthy question, "How did Atatürk create a modern society, whereas many reformers in the Empire could not?", (Meydan, op. cit., p. 17). In his book *Education and the Quest for Modernity in Turkey* (1966), it is as if Kazamias responds to this question:

> In embarking upon the task of building a new nation, Atatürk and his associates conceived of education as the most important foundation. In the emerging ideology of Atatürkism, education was inextricably bound up with political, economic, and cultural independence and with breaking the shackles of traditional beliefs and outlooks; it was the means of nourishing national, aspirations, creating the consensus necessary to sustain a free, national state, training new Turkish leaders, and paving the way towards a dynamic and modern society. Knowledge and science were regarded as power and as the leverage in transforming and uplifting the entire society (Kazamias, op. cit., p. 115).

According to Kazamias, Mustafa Kemal attributed three responsibilities to education. The first was forming the citizen of the Republic with the necessary knowledge, skills, and values required by the new regime. The educated individual would then

ensure the continuity of the new regime. The second was the education of the leaders of the newly declared Republic, who not only had the skills to lead but also the capabilities of representing the hopeful future of the nation. Finally, education would be responsible for national unity through shared levels of competencies, modes of life, future expectations, and values. Akyüz in his book *Türk Eğitim Tarihi* (The History of Turkish Education, 2001) supports Kazamias's view. Akyüz states that Mustafa Kemal formulated a new philosophy and polity of education for the new regime (Akyüz, op. cit., p. 312). Thus, we can infer that this conceptual frame was responsible for the success of the new regime of Turkey while other political shifts, which did not resort to the creation of citizens for the regime through education, did not last.

We see the importance of education for the continuation of the Turkish Republic in Atatürk's own words. On March 1, 1922, at the yearly opening of the National Assembly, before the final victory against the imperialist powers (*Başkomutanlık Meydan Muharebesi*; August 26 - September 9, 1922), Mustafa Kemal stated that, "the most productive and important duty of the government is its educational function[1]". This is a statement which clearly shows the priority of education among the responsibilities of the state. After the final victory was won by the nation (September 9, 1922), Mustafa Kemal met with the teachers in Kütahya (March 24, 1923) before the proclamation of the Republic. In this meeting, he said, "No matter how sparkling may be the victories won by a nation at the battle field,

[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; I*. (1997, p. 244) by the author of the thesis on May 13, 2006. The original Turkish form is, "*Hükümetin en feyizli ve en mühim vazifesi maarif umurudur*".

those victories may only yield lasting results through an army of knowledge[1]". With these words, Mustafa Kemal indeed envisioned that the Republic would only prevail through the process of education by an "army of knowledge". This passage has been translated by others (Karal, *Atatürk Society for America*, Washington) as "through the efforts of an army of educators". Our interpretation is derived from Atatürk's own words where the word 'effort' is not present, nor is the word 'educators'. Rather, the 'army' is an army of knowledge, '*irfan ordusu*', which is comprised of all who take part in knowledge, teachers and others. The word 'army' is significant because education not only actively creates the citizen with the characteristics required by the new regime but also by doing so, forms its defense. Again in September 22, 1924, when Atatürk met with the teachers in Samsun he said, "It is education that enables a nation to live as a free, independent, glorified and elevated society or abandons it to the domination of others and to poverty[2]".

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[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II.* (1997, p. 168) on July 3, 2006. The original Turkish form is, "*Bir millet irfan ordusuna malik olmadıkça savaş meydanlarında ne kadar parlak zaferler elde ederse etsin, o zaferlerin payidar neticeler vermesi ancak irfan ordusuyla kaimdir*".

All the translations in the text, inclusive of the direct quotes from Atatürk and others as well as the foreign expert reports and the curricula are translated in terms of only their direct denotative meanings by the thesis advisor Professor Güzver Yıldıran. The conatative meanings are left to the reader.

[2] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II.* (1997, p. 206 on July 3, 2006. The original Turkish form is; "*Terbiyedir ki, bir milleti ya hür, müstakil, şanlı, âli bir heyeti içtimai halinde yaşatır ya da bir milleti esaret ve sefalete terk eder*".

The Six Principles of Atatürk

The educational philosophy and polity of Atatürk was greatly influenced by his state politics (Topses, 1999, p. 9). It is possible to understand Atatürk's state politics through his six principles (the six arrows): Republicanism, Nationalism, Populism, Étatisme, Laicism, and Reformism (*Revolutionism*)[1]. These principles will be explained briefly with reference to Atatürk's own speeches and handwritings (in his Great Speech, 1931 and collected by A. Âfetinan, 2000), Andrew Davison's *Turkey, a Secular State? The Challenge of Description* (2003), Kılıç Ali's *The Characteristics of Atatürk* (1955), Suna Kili's *Kemalism* (1969), the articles of the 1924 constitution, and the records of the Republican People's Party (RPP)[2] program (in Parla & Davison; *Corporatist Ideology in Kemalist Turkey: Progress or Order?*, 2004).

The first principle of Atatürk was related to defining the new regime of the nation. He thought that a republic was the most suitable regime for national sovereignty. In his speech to the Neue Freie Presse reporters on October 27, 1923, two days before the proclamation of the Republic, Atatürk stated,

> Sovereignty without any condition belongs to the nation. The executive power and legislative authority is manifested by and centered in the national assembly which is the only and true representative of the nation.

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[1] In 1935, these principles were determined as the six arrows in the program of Republican People's Party (*Cumhuriyet Halk Partisi; CHP*). Later on February 5, 1937, the principles were included in the second article of the 1924 constitution as, "the Turkish State is Republican, National, Populist, Statist, Secularist, and Reformist (*Revolutionist*)". The English form was translated by the author of the thesis on July 22, 2006. The original Turkish form is, "*Türkiye Devleti, Cumhuriyetçi, Milliyetçi, Halkçı, Devletçi, Laik ve İnkilapçıdır*", (İsmet İnönü: Yaşamı, Dönemi, Kişiliği, 2000, p. 166). The word Reformism (Revolutionism) is used as Suna Kili used in her book *Kemalism* (1969).

[2] Republican People's Party (RPP) was established on September 9, 1923 as the People's Party and it became Republican People's Party in 1924. Mustafa Kemal Atatürk was the founder and as the first chair of the party until his death on November 10, 1938, (CHP, 2006). The word Reformism (Revolutionism) is used as Suna Kili used in her book *Kemalism* (1969).

> It is possible to summarize these two words by a single word: "Republic".[1]

Atatürk delegates the responsibility of the protection of the Republic from all dangers to two addresses. The first of these is the Turkish youth as expressed in his speech on October 20, 1927, "Oh Turkish Youth! Your first duty is to guard and to protect Turkish independence and the Turkish Republic. The only foundation of your existence and your future is this[2]". The second is the Republican People's Party, as expressed in the 1931 program of the RPP (Parla and Davison, 2004, p. 90).

The second principle of Atatürk is nationalism. The definition of a nation, on which this principle is based, was stated in the handwritings of Atatürk, collected by Âfetinan (2000, p. 28), as, "A nation is a political and social unity formed by citizens who are tied to each other by a common language, culture, and ideals[3]". This definition seems to stem from the concept of the 'Nation State' brought to the historical stage by the French Revolution. Atatürk rejected the idea of racism in the concept of nationalism. This was very clear in the 88th article of the 1924 constitution. The article stated that "The Turkish People in terms of citizenship are

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[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; III.* (1997, p. 178) on August 9, 2006. The original Turkish form is,

"*Hâkimiyet bilâ-kayd ü şart milletindir. İcra kudreti teşriî salahiyeti milletin yegâne hakiki mümessili olan mecliste tecelli ve temerküz etmiştir.*

Bu iki kelimeyi bir kelimede hulâsa etmek kaabildir: "Cumhuriyet"."

[2] The English form was translated directly from *Nutuk* [Great Speech]*; II.* (1997, pp. 897-898) on August 16, 2006. The original Turkish form is,

"Ey Türk gençliği! Birinci vazifen, Türk istiklâlini, Türk Cumhuriyet'ini, ilelebed muhafaza ve müdâfaa etmektir.

Mevcüdiyetinin ve istikbâlinin yegâne temeli budur."

[3] The English form was translated directly from the text of Âfetinan by the author of the thesis on August 4, 2006. The original Turkish form is, "*Millet, dil, kültür ve ülkü birliği ile birbirine bağlı vatandaşların oluşturduğu siyasal ve sosyal bir birliktir*".

called Turks without any differentiation of religion and race[1]". Kili states that according to Kemalist nationalism, one's "Turkishness was not necessarily determined by one's race or religion but by the degree a person associated himself with the ideas, ideals, and goals of the Turkish nation and by determination to protect all that had been won as a result of great hardships; …", (1969, p. 82). Atatürk explained the concept of nationalism in his speech to the youth of Konya in the Turkish Hearth Organization (*Türk Ocakları*) on March 20, 1923 as "If we want the world to show us respect, first let us show respect toward our own character and nationality through our feelings, ideas, and actions and with our own activities and deeds; let's be aware that a nation which has not found her national identity is a prey to other nations[2]". It is clear that Atatürk saw nationalism as the only means of having an identity of existence within a world composed of other national identities.

The third principle of Atatürk is populism. This principle was stated in Atatürk's speech to the National Assembly, on the occasion of discussions on the duties and rights of the Cabinet, on December 1, 1921. Mustafa Kemal stated,

> … Our government is a… 'people's government' … When we think in terms of our social life one fact definitely emerges which is, that we are a working people, we are a poor people, who work and who have to work in order to live and in order to achieve our independence! Let us know ourselves. Therefore, all of us have rights. All of us have authority. But we acquire a right only through working. In our society a person does not have a place, or a right if

[1] The English form was translated directly from the text of Feyzioğlu (1986, p. 45) on August 9, 2006. The original Turkish form is, "*Türkiye ahalisine, din ve ırk farkı olmaksızın, vatandaşlık itibariyle, Türk denir*".

[2] The English from was taken from Kili, 1969, p. 82. The original Turkish form is, "*Dünyanın bize hürmet göstermesini istiyorsak evvelâ bizim kendi benliğimize ve benliğimize bu hürmeti hissen, fikren, fiilen bütün ef'al ve harekâtımızla gösterelim; bilelim ki milli benliği bulmayan milletler başka milletlerin şikârıdır*" (Atatürk'ün Söylev ve Demeçleri; II. 1997, p. 147).

> he wants to lie back and does not want to work … Populism is social system which aims to base the social order on work.[1]

The above paragraph may imply that Mustafa Kemal's populism requires equal rights for all and hard work for the public to protect its independence.

The fourth principle of Atatürk is *étatisme*. In his opening speech of the Izmir Economic Congress on February 17, 1923, Atatürk stated that the state of a nation is related to its political, military, and social conditions. Of all of these, it was the economic conditions which were responsible for the well-being of a nation (Kili, 1969, p. 95). On January 16, 1923, talking to some journalists Atatürk said, "The new Turkish state will not be a military state. But the new Turkish state will be an economic state[2]". According to Kili, Atatürk and the founders of the Republic abolished the institutions that would impede economic development and began to focus on the problem of industrialization. The Kemalist elite thought, according to Kili, that Turkey "could not be a truly modern state and could not also safeguard her independence if she were not industrialized" (1969, p. 97). In his speech in a branch of RPP in Izmir on January 27, 1931, Atatürk stated that

> The program which the RPP follows is in one respect democratic and populist, but its economic policy is *étatist*… Our people by nature are *etatist*, and therefore they think it is their right to demand everything from the State. For this reason, our Party Program is in

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[1] The English from was taken from Kili, 1969, p. 86. The original Turkish form is, "*İlmi, içtimai noktasından bizim hükümetimizi ifade etmek lâzım gelirse "halk hükümeti" deriz. Fakat mesleki içtimai itibariyle dahi düşündüğümüz zaman, biz hayatını, istiklâlini kurtarmak için çalışan erbab-ı sâyiz, zavallı bir halkız! Binaenaleyh her birimizin hakkı vardır. Salâhiyeti vardır. Fakat çalışmak sayesinde bir hakkı iktisap ederiz. Yoksa arka üstü yatmak ve hayatını sâyden muarra geçirmek isteyen insanların bizim heyet-i içtimaiyemiz içerisinde yeri yoktur! ...Halkçılık, nizam-ı içtimaisini sâyine, hukukuna istinadettirmek isteyen bir mesleki içtimaidir*" (Atatürk'ün Söylev ve Demeçleri; I., 1997, p. 211).

[2] The English from was taken from Kili, 1969, p. 95. The original Turkish form is, "*Yeni Türkiye Devleti cihangir bir devlet olmayacaktır. Fakat yeni Türkiye devleti bir devleti iktisadiye olacaktır*." (Atatürk'ün Söylev ve Demeçleri; II., 1997, pp. 60-61).

> conformity with our national character. We shall proceed in this direction. And there is no doubt that we shall be successful.[1]

According to Kili, the principle of *étatisme* did not suggest public ownership of all the means of production. The right to have private enterprise and the right to private property were recognized. The mixed nature of the Turkish economy was emphasized. Through *étatisme* the state acquired the right to interfere with and to control Turkish economy (Kili, 1969, p. 101). Atatürk's opening speech to the Grand National Assembly on November 1, 1937 dealt with the importance of agriculture and industrialization for the Turkish nation. Atatürk stated that "the basis of national economy is agriculture. For this reason we should pay special attention to agricultural development[2]". Again in the same speech, Atatürk said "Industrialization is among our most important national causes[3]". The speech continues as:

> Economic development is the backbone of the ideal of a free and independent, always stronger, and always more prosperous Turkey. In her development Turkey depends on two pillars of strength:
>
> The climate of the land, its wealth and its valuable geographical setting; and also the strong hand of the Turkish nation which is escapable of holding a machine as well as a gun, and her high sense of national identity,…[4]

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[1] The English form was taken from Kili, 1969, p. 98. The original Turkish form is, "*Fırkamızın takip ettiği program, bir istikametten tamamiyle demokratik, halkçı bir program olmakla beraber iktisadi noktai nazardan devletçidir. Halkımız tab'an devletçidir ki, her türlü ihtiyacı devletten talebetmek için kendisinde bir hak görüyor. Bu itibarla milletimiz tabayii ile fırkamızın programında tamamiyle bir mutabakat vardır*" (Atatürk'ün Söylev ve Demeçleri; II., 1997, p. 295).

[2] The English form was taken from Kili (1969, p. 100). The original Turkish form is, "*Milli ekonominin temeli ziraattır. Bunun içindir ki ziraatte kalkınmaya büyük önem vermekteyiz"* (Atatürk'ün Söylev ve Demeçleri; I., 1997, p. 412).

[3] The English form was taken from Kili (1969, p. 100). The original Turkish form is, "*Endüstrileşmek, en büyük milli davamızdır"* (Ibid, p. 414).

[4] The English form was taken from Kili (1969, p. 101). The original Turkish form is,
"*Ekonomik kalkınma; Türkiye'nin, hür müstakil, daima daha kuvvetli, daima daha refahlı Türkiye idealinin, bel kemiğidir. Türkiye bu kalkınmada iki büyük kuvvet serisine dayanmaktadır:*
Toprağının iklimleri, zenginlikleri, ve başlıbaşına bir servet olan coğrafi vaziyeti; ve bir de, Türk milletinin silah kadar, makina da tutmaya yaraşan kudretli eli ve milli olduğuna inandığı işlerde ve zamanlarda,..." (Ibid, p. 416).

According to Atatürk, it is clear that the economic status of a nation determines its independence or its subjugation to other economically powerful nations.

The fifth principle of Atatürk is laicism. Suna Kili uses the term "secularism" rather than laicism. Although sometimes used synonymously, the two terms are derived from different etymologies. Davison (2003) states,

> ....*Secularism* derives from the Latin *saeculum*, meaning generation or age, and originally meant "of the world" as opposed to "of the church". *Laicism,* by contrast, derives from the French word *lai* (*laique* in contemporary usage), meaning "of the people" as distinguished from "the clergy." (p. 1)

….By "secular state," one understands a "religion-free" state. (p. 2)

> …Laicization is the process of rendering something (e.g., governance, education etc.) lay or transferring it to lay control, and, while this process may entail a radical separating of religious and state affairs (as in French laicism after 1905), this separation may certainly be less extensive than that found in secularist arrangements for the simple reason that lay are not expected to be non- or antireligious. (p. 2)
>
> The founders of the contemporary institutional relationship between the state and Islam in Turkey named that relationship *laiklik*, after the French term *laicism* and it was, in terms of the conceptual possibilities for describing the new relation between the state and Islam, a relatively good choice. (p. 3)

Although a great many of the changes undertaken by the founders of the Republic had a secular thrust, nonetheless Davison says,

> *Laiklik* emerged as a governing principle of the Republican People's Party (RPP) during the 1920s as it maneuvered and battled for control over the reigns of the new state. In this context the RPP abolished the Caliphate, the Sharia, and the *medrese* school system, demoted Islam from its previous place of constitutional and legal significance, banned the use of religion for political purposes, closed the institutions of folk Islam, created a new nationalist education system, and promulgated nonreligious codes of governance (e.g., revised Swiss civil and Italian penal

> codes)- all *secularizing* moves of significance[1]. But it did not remove religion from the state. The founding and operative institutional matrix is best understood as a form of laicism, not secularism. (p. 3)

To illustrate Davison's point, after the abolition of the Caliphate on March 3, 1924, the General Directorate of Religious affairs was formed, while religion courses were reintroduced to the elementary and secondary schools in the 1950s, first as electives, then as required courses with the possibility of parental permission for exemption. Nonetheless, the operating principle was laicism because according to Davison,

> …the operative understanding of the founding principle of *laiklik* is that state sponsored religious training and instruction and "national education" go together. It is not that *laiklik* "does not prevent" the mixing of religious instruction and state education. The relation is stronger than that: *laik* institutional arrangements make their mixing possible in "national education." Also noteworthy in this regard is the religious socialization given by the military to its general recruits (pp. 3-4).

Although Suna Kili does not make the distinction between laicism and secularism, her explanation of the fifth principle of Atatürk is presented in the following passages. According to Kili, secularism is a necessary component of modernization. Many of the reforms related to modernization were indeed based upon this concept. Kili says,

> Kemalist secularism did not merely mean separation of state and religion, but also the separation of religion from educational, cultural, and legal affairs. It meant the realization of independence of thought and independence of institutions from the dominance of religious thinking and religious institutions.

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[1] Other reforms toward the laicization of society were the closure of the religious courts in 1924. On October 4, 1926, the Swiss civil code rather than the prescription of *sheriat* (the Islamic Holly Law) was adopted. In the social domain, On October 25, 1925, the style of dress of the Turkish people was replaced with the Western style. This revolution was followed by the change in calendar and measurement systems in the same year (Kazamias, 1966, pp. 185-186; Yıldıran, 1997, pp. IV-V).

> The Kemalist principle of secularism did not advocate atheism – it was not an anti-God principle. There was no liquidation of religion in Kemalist Turkey, but religion and religious men were removed from areas which they had traditionally controlled and asked to confine themselves to their own field (1969, pp. 103-104).

Kılıç Ali, Atatürk's aide de camp, states in his book *Atatürk'ün Hususiyetleri* (The Characteristics of Atatürk, 1955) that on the topic of laicism Atatürk used to say, "Religion and religious sects is the business of the conscience of people. No one can force anybody to accept any religion or any sect. Religion and sects can never be used as the instrument of politics[1]." (p. 57). According to Atatürk, laicism implied the integration of science to life and institutions, in order to reach the level of contemporary civilization. In his Great Speech which he read in the second meeting of the Republican People's Party between October 15 and 20, 1927, Mustafa Kemal said, "Until the expertise and knowledge of humanity on religion is separated from all kinds of superstition and becomes purified and perfect with the heavenly light of knowledge and science, the actors of the play of religion will be confronted everywhere[2]".

The last and the sixth principle of Atatürk is Reformism (*Revolutionism*). According to Kili, the concept first of all meant the total independence of Turkey. Secondly,

> …this principle meant that through many reforms which were made, modern concepts and institutions replaced traditional concepts and institutions which had been inimical to the progress of the country. Third, this principle meant that more reforms

[1] The English form was translated directly from the text of Kılıç Ali (1955, p. 57) on August 9, 2006. The original Turkish form is, "*Din ve mezhep herkesin vicdanına kalmış bir iştir. hiç bir kimse hiçbir kimseyi ne bir din, ne de bir mezhep kabulüne icbar edebilir. Din ve mezhep hiç bir zaman politika aleti olarak kullanılamaz*".

[2] The English form was translated directly from *Nutuk; II.* (1997, p. 708) on August 13, 2006. The original Turkish form is, "*Beşeriyette, din hakkındaki ihtisas ve vukuf, her türlü hurafelerdentecerrüdederek, hakiki ulûm ve fünun nurlariyle musaffa ve mükemmel oluncıya kadar, din oyunu aktörlerine, her yerde tesadüf olunacaktır*".

> needed to be made in order to completely modernize Turkey. In other words, this was a commitment to take all the reformist, radical and if need be revolutionary measures to make Turkey a modern state. Fourth, in order to maintain the modern character of the Turkish state Turkey needed to continually take and apply the necessary reformist, radical, and revolutionary measures. The principle of reformism of the ideology of Kemalism was committed to Turkish modernization then and in the future. Reformism was in reality a commitment to the necessity of self-renewal of Turkish society because a society which was capable of self-renewal would not be stagnant and would be able to maintain its modern character (1969, p. 109).

This principle of Reformism (*Revolutionism*) is defined by Atatürk in a speech that he gave to the RPP party members in Kastamonu on August 30, 1925. He stated that

> …The aim of the reforms (revolutions) we have made and are making is to bring the people of the Turkish Republic to the level of a totally contemporary civilized society with all its meaning and form. This is the essential principle of our reforms (revolutions).[1]

As can be observed, all of the six principles of Atatürk are complementary to each other. Within the paradigm of a republic, the nation state is not only economically responsible to the people but must also guarantee them the privileges of a civilized modern society.

As stated before, education becomes the institution which creates the citizen who will not only further the aims of the principles stated above, but will also be the protector of the new regime, the Republic. Atatürk viewed education and educators as the main components in the creation of a new nation. Atatürk saw education as the means for nation building as he saw teachers as the agents responsible for the transmission of the necessary knowledge, skills, and values required by the regime.

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[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II*. (1997, p. 224) on August 5, 2006. The original Turkish form is, "*Hakiki inkilapçılar onlardır ki, terakki ve teceddüt inkilâbına sevketmek istedikleri insanların ruh vevicdanlarındaki temayyülü hakikiye nüfuz etmesini bilirler...Yaptığımız ve yapmakta olduğumuz inkilapların gayesi, Türkiye Cumhuriyeti halkını tamamen asri ve bütün mâna ve eşkâliyle medeni bir heyeti içtimaiye haline îsal etmektir. İnkilaplarımızın umdei asliyesi budur*".

In the Congress of the Teachers' Union on August 25, 1924, he stated, "The self-sacrificing teachers and educators of the Republic, you will raise the new generation, the new generation will be your creation. The worth of your production will be in proportion to the degree of your skillfulness and your sacrifices[1]". The statement is important on several accounts, the first of which is the immense responsibility given to the teachers for the creation of a new generation. Atatürk, then, states what this responsibility will be based upon (the skillfulness and the sacrifices expected from the teachers). Finally, Atatürk makes a causal link between the outcome and what is done (the worth of the product will be in proportion to what is done). The inference from this causal statement is that if the outcome is desirable, those who are responsible can feel proud, if not, it is due to their shortcomings. The statement also reveals the respect shown to teachers, since respect is in proportion to the responsibilities allocated.

The Educational Policies of Atatürk

Researchers (Akyüz, 2001, p. 313, Çelenk, 2000, pp. 27-29; Topses, 1999, p. 9) of Mustafa Kemal's philosophy of education agree on several of the principles that comprise his view of education for a contemporary society. These writers state that according to Atatürk, education had to be national (related to the principles of nation building; nationalism), rational (based on science; related to the principle of laicism), and practical (resting on a foundation of life experiences; pragmatic), under the control of the state (centralized; related to the principle of étatisme), guaranteed by

[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II.* (1997, p. 178) by the author of the thesis on May 13, 2006. The original Turkish form is, "*Yeni nesli; cumhuriyetin fedakâr muallim ve mürebbileri, sizler yetiştireceksiniz, yeni nesil, sizin eseriniz olacaktır. Eserin kıymeti, sizin maharetiniz ve fedakarlığınız derecesiyle mütenasip bulunacaktır*".

the Turkish Republic (related to the principle of republicanism). In addition to these principles, Akyüz (2001, p. 313) emphasizes Atatürk's humanistic approach to education. As a system, on the other hand, education had to be based on the principle of equality of opportunity, (related to the principles of populism, étatisme, and republicanism) its sine qua non (Akyüz, 2001, p. 313, Çelenk, 2000, pp. 27-29; Topses, 1999, p. 9). One can deduce these principles from Mustafa Kemal's speeches and writings.

In opening the First Teachers Congress on July 16, 1921, right before the Sakarya War (August 23-September 13, 1921), Mustafa Kemal addressed the teachers. That Mustafa Kemal would have such a meeting during the war years where there was no guarantee for a sovereign nation is indeed noteworthy and can be interpreted as a sign of his considering education as the vehicle in the creation of the citizen of the new regime to be. Mustafa Kemal said,

> Our educational system will be different, will be national, our national genius will be developed only through our national culture.[1]

And he continued,

> When I talk about the national education program, I intentionally mean a culture harmonious with our national and historical character, devoid of the superstitions of the past and totally distant from foreign ideas and all influences from the East and the West which have nothing to do with our inherited characteristics.[2]

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[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; I.* (1997, p. 19) on May 13, 2006. The original Turkish form is, "*Bizim eğitim sistemimiz farklı olacaktır, milli olacaktır, milli dehamız ancak milli kültürümüz aracılığı ile geliştirilebilir*".

[2] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; I.* (pp. 19–20) on June 16, 2006. The original Turkish form is, "*...milli terbiye programından bahsederken, eski devrin hurafatından (batıl inançlarından) ve evsaf-ı fıtıriyemizde (doğuştan sahip olduğumuz özelliklerle) hiç de münasebeti olmayan yabancı fikirlerden, şarktan ve garptan gelebilen bilcümle tesirlerden tamamen uzak, seciye-i milliye ve tarihimizde (milli ve tarihi özelliğimizle) mütanasip bir kültür kastediyorum*".

These comments show that Mustafa Kemal visualized a contemporary and national education emerging from the historical characteristics of the people rather than being modeled after other histories or geographies.

In relation to the principle of laicism, Atatürk's philosophy of education also emphasized a *laic* perspective resting on science. One can see the importance which Atatürk gave to knowledge and science in his speech in Bursa on October 27, 1922. He stated that,

> We can not assume that we live isolated by closing our eyes. We can not live unrelated to the world by putting our country in a circle… On the contrary, we will live above the level of civilization as a progressive and continuous nation. This life can only be possible with knowledge and science. We will take knowledge and science from wherever they are and place it into the head of every individual of our nation. There is no restriction and condition for knowledge and science.[1]

This statement emphasizes the importance of knowledge and science for the creation of a contemporary nation. The way to surpass the level of modern civilization is through the education of the citizen of the new Republic. Atatürk's aim of reaching the level of modern civilization was clear in his speech on the occasion of the 10th Anniversary of the Turkish Republic:

> …We shall enable our nation to possess the maximum amount of resources and means for prosperity. We will elevate our national culture above the level of contemporary civilization.

[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II.* (1997, p. 48) by the author of the thesis on July 8, 2006. The original Turkish form is, "*Gözlerimizi kapatıp mücerret yaşadığımızı farzedemeyiz. Memleketimizi bir çenber içine alıp cihan ile alâkasız yaşayamayız... Bilâkis müterakki, mütemeddin bir millet olarak medeniyet sahasının üzerinde yaşıyacağız. Bu hayat ancak ilim ve fen ile olur. İlim ve fen nerede ise oradan alacağız ve her ferdi milletin kafasına koyacağız. İlim ve fen için kayıt ve şart yoktur*".

> Therefore, in our view, the measure of time should be thought of not according to the lethargic conceptions of the past centuries but according to the concepts of speed and mobility of our century.[1]

In fact, Mustafa Kemal viewed science as the only path for life, for civilization, for success. In his speech at a tea party of the teachers of Samsun İstiklal Ticaret Mektebi (Samsun Independence School of Commerce) on September 22, 1924, he said,

> For everything in the world, for civilization, for life, for success, the true guide is knowledge, is science. To seek guides other than knowledge and science is negligence, ignorance and heresy. However, it is necessary to be aware of the developmental phases of knowledge and science every moment that we live, following this development through time. To try to implement in the same way today the principles drawn by the language of knowledge and science of a thousand, two thousand, so many thousands of years ago is, of course, not being within the frame of knowledge and science.[2]

Atatürk's approach to knowledge is based upon rational, *laic*, contemporary scientific developments. Other ways of knowing, such as those based on religious heritage, is absent in Mustafa Kemal's epistemology.

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[1] The English form was translated directly from *Nutuk* (2006, p. 31) on July 31, 2006. The original Turkish form is, "… *Milletimizi en geniş refah, vasıta ve kaynaklarına sahip kılacağız. Milli kültürümüzü muasır medeniyet seviyesinin üstüne çıkaracağız.*

Bunun için, bizce zaman ölçüsü geçmiş asırların gevşetici zihniyetine göre değil, asrımızın sürat ve hareket mefhumuna göre düşünülmelidir."

[2] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri II.* (1997, p. 202) on July 4, 2006. The original Turkish form is, "*dünyada herşey için, medeniyet için, hayat için, muvaffakiyet için en hakiki mürşit (yol gösterici) ilimdir, fendir. İlim ve fennin haricinde mürşit aramak gaflettir, cehalettir, dalalettir. Yalnız; ilmin ve fennin yaşadığımız her dakikadaki safhalarının tekamülünü idrak etmek ve terakkiyatını zamanla takip eylemek şarttır. Bin, ikibin, binlerce sene evvelki ilim ve fen lisanının çizdiği düsturları, şu kadar bin sene evvel bugün aynen tatbika kalkışmak elbette ilim ve fennin içinde bulunmak değildir*".

Another principle of Mustafa Kemal Atatürk related to education is the pragmatic view of education. He emphasized this view during the yearly opening speech of the National Assembly on March 1, 1922, by stating that "It is necessary to obey the principle that even in secondary education, instructional and educational methods have to be applied and practical[1]." Also during the Congress of the Teachers' Union on August 25, 1924, Atatürk stated that "It is important that instruction and education, at all levels of education, should be practical in the same way for our boys and girls. The children of our country, at every level of education, must be equipped to be active, effective, and successful in economic life[2]". These statements of Atatürk clearly show that he wanted education to be pragmatic at all levels for the individual to be an effective participant in the economy.

Even though Atatürk fought for independence against the imperialist powers, he desired peace for all people as expressed succinctly in 1931 through his words, "Peace at home, peace in the world[3]". Atatürk also thought that war would be acceptable if and only if the independence of a nation was jeopardized. Atatürk declared this view in his speech to the farmers of Adana on March 16, 1923. He stated,

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[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; I.* (1997, p. 245) by the author of the thesis on June 5, 2006. The original Turkish form is, "*Orta tahsilde dahi terbiye ve talim usulünün ameli ve tatbikî olması esasına riayet şarttır*".

[2] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; I.* (1997, p. 179) by the author of the thesis on June 3, 2006. The original Turkish form is "*Erkek ve kız çocuklarımızın aynı suretle bütün tahsil derecelerindeki talim ve terbiyelerin ameli olması mühimdir. Memleket evlâdı, her tahsil derecesinde iktisadi hayatta âmil, müessir ve muvaffak olacak surette teçhiz olunmalıdır*".

[3] The original Turkish form is "*Yurtta sulh, cihanda sulh*."

> Come what may, for these and those reasons, I am not for dragging the nation into war. War must be indispensable and vital. My real opinion is this: When I plunge the nation into war, I must not feel any guilt in my conscience. Against those who say "we will kill", we may enter war saying "we will not die". However, if the life of the nation is not exposed to danger, war is a crime.[1]

This humanistic view of Atatürk can also be observed in his philosophy of education. In one of his speeches for the teachers in Bursa on October 27, 1922, he stated that "Schools teach respect for humanity, love of the nation and the country, honor and independence to young minds…[2]". This sentence clearly states that schools do not only have the responsibility to instruct. As institutions they must also aid in the development of values which not only encompass the individual and the nation but also all of humanity. During one of his conversations with his aide de camp Hasan Rıza Soyak, Atatürk stated,

> In short, we must, now, train our children to state their thoughts clearly and unreservedly, to defend their sincere beliefs, and on the other hand, to respect the sincere thoughts of others.[3]

And he continued,

> At the same time, we must try to awaken in their pure hearts love and interest for the true, the good and the beautiful together with love for the homeland, the nation, the family and the citizen. For me, these are the important points of emphasis in the education of the children from the arms of the mother to the highest educational institutions, everywhere and always. Only this way, our children

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[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II.* (1997, p. 128) on June 8, 2006. The original Turkish form is "*Behemehal şu ve bu sebepler için, milleti harbe sürüklemek taraftarı değilim. Harp zaruri ve hayatî olmalı. Hakiki kanaatim şudur: Milleti herbe götürünce vicdanımda azap duymamalıyım. "Öldüreceğiz" diyenlere karşı, "ölmeyeceğiz" diye harbe girebiliriz. Lâkin, hayat-ı millet tehlikeye maruz kalmayınca, harp bir cinayettir*".

[2] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II.* (1997, p. 47) on June 3, 2006. The original Turkish form is, "*Mektep genç diğmalara, insanlığa hürmeti, millet ve memlekete muhabbeti, şerefi, istiklali öğretir*".

[3] The English form was translated directly from the text of Soyak (1966, p. 78) on August 15, 2006. The original Turkish form is, "*Kısacası çocuklarımızı artık düşüncelerini hiç düşünmeden açıkça söylemeye, içten inandıklarını savunmaya, buna karşılık da başkalarının samimi düşüncelerine saygı göstermeye alıştırmalıyız*."

> can become useful citizens of the country and very good human beings.[1]

What Atatürk proposes here clearly reflects a humanitarian perspective. We see the reflection of Atatürk's care for the coming generations in his dedication of the 23rd of April, the day of the opening of the first Grand National Assembly in 1920, which became a national holiday in 1929, to children (Atilla, 2004).

In addition to the educational principles stated before, Mustafa Kemal Atatürk emphasized the concept of equality of opportunity in education. In the yearly opening of the National Assembly on March 1, 1922, Mustafa Kemal Atatürk focused on the insuperable ignorance of a large proportion of citizens and suggested the solution of educating the people who live in the villages. He said,

> The first goal of our educational program is to teach all peasants reading and writing and to give enough information in geography, history, religion, and morality in order to familiarize them with their country, nation, religion, and the world and to teach them the four operations [addition, substraction, multiplication, and division].
>
> Gentlemen! Reaching this aim will constitute a sacred phase in our history of education.[2]

Besides the differences in education between rural and urban areas, Atatürk also focused on the differences between men and women in his speeches. During his speech to the women in Konya on March 21, 1923, he said,

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[1] The English form was translated directly from the text of Soyak (1966, p. 78) on August 15, 2006. The original Turkish form is, *"Aynı zamanda onların temiz yüreklerinde yurt, ulus, aile ve yurttaş sevgisiyle birlikte, doğruya, iyiye ve güzele karşı sevgi ve ilgi uyandırmaya çalışmalıdır. Bence bunlar çocuk eğitiminde ana kucağından, en yüksek eğitim ocaklarına kadar her yerde, her zaman üzerinde durulacak önemli noktalardır. Ancak bu suretledir ki, çocuklarımız memlekete yararlı birer vatandaş ve çok iyi birer insan olurlar"*.

[2] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; I.* (1997, p. 245) on June 5, 2006. The original Turkish form is, "*...Umum köylüye okumak, yazmak ve vatanını, milletini dinini, dünyasını tanıtacak kadar coğrafi, tarihi, dini ve ahlaki, malumat vermek ve amel-i erbaayı öğretmek maarif programımızın ilk hedefidir. Efendiler! Bu hedefe vusul, tarih-i maarifimizde mukaddes bir merhale teşkil edecektir*".

> There is still a road to travel with more soundness and more honesty. This road is to render the exalted Turkish woman our mutual partner in our common work, to continue our life with her, to make the Turkish woman the male's partner, wife, assistant, and helper in scientific, moral, social and economic life[1].

According to Atatürk, the Turkish woman had to take her place beside the Turkish man in every area of life.

The educational philosophy of Atatürk and the idea about the importance of education not only for national independence and development but also for the creation of the citizen of the new regime, who had the knowledge, the skills and the values to accommodate the new reforms and revolutions constituted the framework of the educational innovations including curricular changes during the period of Atatürk between 1919 and 1938 (Topses, 1999). In the following paragraphs, the study will address the most crucial initiatives and reforms in the area of education which characterized this period, in their chronological order.

The Ministers of Education (1919-1938): Their Ideologies and Implementations

In this section, the study aims to address the most crucial initiatives and reforms in the area of education which characterized the period of Atatürk (1919-1938) in their chronological order. This will try to be achieved through an analysis of the ideologies and implementations of all the Ministers of Education, who influenced the formation of educational policies during Atatürk's period.

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[1] The English form was translated directly from *Atatürk'ün Söylev ve Demeçleri; II.* (1997, pp. 154-155) on June 9, 2006. The original Turkish form is, "*Daha selâmetle, daha dürüst olarak yürüyeceğimiz yol vardır. Büyük Türk kadınını mesaimizde müşterek kılmak, hayatımızı onunla birlikte yürütmek, Türk kadınını ilmi, ahlâki, içtimai, iktisadi hayatta erkek şeriki, refiki, muavin ve muzahiri yapmak yoludur*".

Before the proclamation of the Republic, on April 23, 1920 the first Turkish Grand National Assembly (*Türkiye Büyük Millet Meclisi, TBMM*) met in Ankara. The Council of Ministers of the national assembly of 1920 established the Ministry of Education (Maarif Vekâleti)[1] as one of the first ministries (Sakaoğlu, 1993, p. 13; Akyüz, 2001, p.360). On May 4, 1920, the Turkish Grand National Assembly appointed Dr. Rıza (Nur)[2] as the first Minister of Education of the Ankara Government. Dr. Rıza (Nur) prepared the strategies for public education, which were announced in the program of the Ankara government even before it was legitimated. These educational strategies were[3]:

1. Religious and national education
2. Pragmatic education which encourages productivity
3. Text books that are aligned with the national structure, geography, culture and traditions
4. Schools which enhance contemporary and scientific opportunities
5. Publication of dictionaries and historical, societal, and literary works; the development of nationalistic feelings

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[1] During this time another Ministry of Education (*Maarif-i Umumiye Nezareti*) of the Istanbul government continued to exist. The ministers were Ali Kemal (March-May 1919), Sait Bey (May 1919-March 1920), Abdurrahman Şeref (March-April 1920), Rumbeyoğlu Fahrettin (April–July 1920), Hadi *Paşa* (July–October 1920), Sait Bey (August 1921–October 1922) (Akyüz, 2001, 292).

[2] On June 21, 1934, Mustafa Kemal made another reform for the modernization of the nation. This reform was the admission of the 'surname law'. Afterwards, the Turkish Grand National Assembly gave Mustafa Kemal the surname of 'Atatürk' as an expression of the nation's gratitude on November 24, 1934 (Temur, 2006). Therefore, in this section of the study which follows a chronological order from the establishment of the ministry of education in 1920, surnames will be used in parentheses until the admission of the 'surname law'.

[3] The English form was translated on September 5, 2006. The original Turkish form is (Sakaoğlu, 1993, p. 13),

1. *Dinî ve millî eğitim,*
2. *Hayatî, işe dönük, üretkenliği aşılayan eğitim,*
3. *Millî yapıya, coğrafyaya, kültüre, geleneklere uygun ders kitapları,*
4. *Çağdaş ve bilimsel olanaklara sahip okul,*
5. *Sözlük, tarihsel, toplumsal, edebî eserler yazdırılması, bunlara ulusal duyguların geliştirilmesi, Doğu'nun ve Batı'nın bilim-fen kaynaklarının Türkçe'ye çeivrilmesi,*
6. *Elde bulunan okulları en iyi biçimde, dikkatle ve özel çabalarla yönetmek…*

through these works; translation of the scientific resources of the East and the West to Turkish

6. Administration of the existing schools in the best way with care and effort…

From these strategies, one can infer that Dr. Rıza (Nur) supported the concept of contemporary pragmatic education that also included the parameters of religion as well as national and cultural traditions.

Dr. Rıza (Nur) served as the Minister of Education for seven months (May 4, 1920-December 14, 1920), late falling into conflict with Mustafa Kemal (Nutuk, 1997, pp. 885-886; Özakman, 2006, pp. 232-233). Hamdullah Suphi (Tanrıöver) was appointed as the second Minister of Education (December 14, 1920-November 20, 1921). During the period of Hamdullah Suphi (Tanrıöver), a budget was prepared for educational expenditures for the first time. Furthermore, the ministry prepared a draft bill about primary and secondary education in the middle of 1921. According to this draft bill[1];

1. Primary schools would be reduced from six to four years. After the fourth year, one extra year of instruction would be given optionally. Moreover, a new primary school curriculum would be prepared according to needs.
2. Village centered labor schools would be established.
3. Secondary education would be four-year like primary education. Three years of this would be allocated to general instruction and one year to vocational instruction.

[1] The English form was translated by the author of the thesis on September 29, 2006. The original Turkish form is (Ergün, 1997, 1.2.4. "*İlk ve Ortaöğretim*"),

1. İlkokullar altı yıldan dört yıla indirilecekti. Dördüncü yıldan sonra bir yıl da isteğe bağlı öğretim yapılacaktı. Ayrıca ihtiyaçlara göre yeni bir ilkokul programı yapılacaktı.

2. Köy bünyeli işçi mektepleri kurulacaktı.

3. Ortaöğretim de ilköğretim gibi dört yıl olacaktı. Bunun üç yılı genel öğretim, bir yıl da meslekî öğretime ayrılacaktı.

As can be clearly seen from the items of the draft bill, these items were generally about the duration of primary and secondary education. In item 1, the draft bill also states a development of a new primary school curriculum "according to need". In addition, in item 2, it is possible to see the idea of "village structured labor schools".

Hamdullah Suphi gave importance to the pragmatic view of education, based on the needs of contemporary Turkey. His view of education is pragmatic and geared to meet the local and national needs of the country. He states that the problem of schools does not rest in religion but in the fact that graduates are incapable of earning their living. In his speech on November 17, 1922 at the Teachers Union Congress in Ankara, later published in the *Hakimiyet-Milliye* newspaper on November 23, 24, 26, 27, he says,

> The crisis of schools and education is not due to religious reasons as the conservatives suppose, never. There is only one reason for this crisis; children whom we educate are incapable of earning their living. They are not prepared for life. They are devoid of the theoretical and practical knowledge of earning their bread from their fields, counters and stores.[1]

Hamdullah Suphi emphasizes the obligation of schools to meet local economic needs. He emphasizes the need to relinquish theoretical instruction in favor of the practical. "Turkish schools must undergo a general conversion of speedily passing from the theoretical to the practical[2]". He then focuses on the training of those who will impart this practical education. He says,

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[1] The English form was translated directly from the text of Tanrıöver (*Dağ Yolu II*, 1987, pp. 144-145) on June 16, 2006. The original Turkish form is, "*Mektep buhranı, maarif buhranı, muhafazakârların zannettiği gibi dinî sebeplerden doğmuyor, asla. O buhranın bir tek sebebi vardır; yetiştirdiğimiz çocuklar maişetlerini temin etmekten âcizdirler. Hayat için hazırlanmamışlardır. Tarlasından, tezgâhından, dükkanlarından ekmeğini çıkaracak amelî ve nazarî malumattan mahrumdurlar*".

[2] The English form was translated directly from the text of Tanrıöver (*Dağ Yolu II*, 1987, p. 146) on June 16, 2006. The original Turkish form is, "*Türk mektepleri suratle nazariden ameliye geçmek üzere umumi bir istihaleye tabi tutulmalıdır*".

> The school rises from a need and teaches the means to satisfy that need out of which it is borne under the most perfect conditions…. We should replace our lifeless and otherworldly education which leads our children to brutality, dejection, cowardice, and to a supplicant position in life with contemporary and practical education that will raise a generation of workers full of life and who have their own crafts and skills in their hands.[1]

When Hamdullah Suphi (Tanrıöver) was the Minister of Education, Mustafa Kemal made an important attempt, which clearly shows the priority and importance of education in his mind. While the Ankara government was fighting for independence and just before the Sakarya war (August 23 - September 13 of 1921), Mustafa Kemal held the First Congress of Education (*I. Maarif Kongresi*) in Ankara between July 16 and 21, 1921, and met with teachers. He thought that teachers could instruct and inform the public about the necessities and reasons for creating a contemporary nation. In this meeting, the subjects discussed were the project of the People's Schools (*Halk Mektepleri*), increasing the years of primary education from four to five years, deficiencies of the curriculum, and the difficulties of the people who lived in villages where schools did not exist. That Mustafa Kemal would have such a meeting in the years when there was no guarantee for a sovereign nation is indeed noteworthy.

Mehmet Vehbi (Bulak) was appointed as the third Minister of Education of the Ankara government (November 20, 1921-November 5, 1922). According to Mehmet Vehbi (Bulak), the function of education was "…the development and improvement of our national culture and knowledge within the fundamentals of

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[1] The English form was translated directly from the text of Tanrıöver (*Dağ Yolu II*, 1987, p. 145-147) on June 16, 2006. The original Turkish form is, "*Mektep ihtiyaçtan doğar ve kendini doğuran ihtiyacı en mükemmel şartlar dahilinde tatmin edecek yolları öğretir. Çocuklarımızı kansızlığa, neşesizliğe, cesaretsizliğe ve hayatta ricacı bir vaziyete düşüren bu günkü ölgün ve uhrevi terbiyemiz yerine hayata merbut, elinde sanatı, hüneri, yarınki işçi nesli yetiştirecek muasır ve ameli (uygulamalı) terbiyeyi ikame etmeliyiz.*".

religion and national heritage, free of all foreign influence[1]". This definition of education shows that Mehmet Vehbi (Bulak), like Dr. Rıza (Nur), thought that the foundations of education were religion and nationalism. What seems important in Mehmet Vehbi's ministry was the formation of committees (rather than the implementation of his own decisions) to formulate various curricula including art, music, foreign languages, and mathematics. Another committee was formed to restructure the programs of the *sultanis* (lycées[2]). A final committee was formed in order to specify the aims and means of general education. However, none of the decisions of the committees were put into action during his short ministry (Ergün, 1997, 1.3.3. "*Bakanlıkta Komisyonların Çalışmaya Başlaması*").

After the victory of August 30, 1922, which finalized the war of independence, Mehmet Vehbi (Bulak)'s ministry ended on November 5, 1922 and İsmail Safa (Özler) was appointed as the Minister of Education (November 6, 1922-March 7, 1924). According to Ergün (1997), İsmail Safa (Özler) was the most effective Minister of Education before the proclamation of the Republic. He had the Kemalist view of education and is thought to be the first minister whose ideas were aligned with those of the Turkish Republic. İsmail Safa (Özler) circulated the reports of the prior committees on curricula. However, the curricula prepared by the previous committees became inactive due to the harsh criticisms of educators. (Ergün, 1997, 1.3.3. "Bakanlıkta Komisyonların Çalışmaya Başlaması", 1.4. "İsmail Safa Bey'in Bakanlığı").

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[1] The English was translated directly from the text of Ergün on May 30, 2006. The original Turkish form is, *"...her türlü yabancı tesirlerden âzâde olarak esasât-ı diniyye ve milliyemiz dahilinde millî hars ve irfanımızın inkişaf ve t*aâlisi (1997, 1.3.1 "Genel İlkeler")".

[2] Lycées in the Turkish educational system are high schools in American educational system.

The most important problem related to education was to form a system which was capable of meeting the social and cultural needs of the country. Starting from 1923, foreign and national educational experts offered their ideas related to the formation of an adequate educational system (Wilson & Başgöz, 1968). During the Izmir Economic Congress, on February 17, 1923, certain decisions were taken not only about economics but also on education. These decisions implied radical changes in education. Under the heading of 'Educational Issues in Agriculture' some of these decisions were[1]:

> Article 1: To print and distribute among the villagers and the peasants books and magazines containing practical instruction on various branches of agriculture.
>
> Article 2: To introduce practical industrial and agricultural courses to all primary and secondary schools.

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[1] The English form was translated directly from the text of Afetinan (1989, pp. 21-22) on September 6, 2006. The original Turkish form is,

Madde 1: Köylülere çiftçilere ziraatin muhtelif şubelerini amelî olarak öğretecek surette yazılmış kitab ve mecmualar bastırılarak bedava dağıtılması.

Madde 2: Umum iptidâî ve talî mekteblerde müterakkî memleketlerde olduğu gibi sanayi ve ziraatin de amelî olarak gösterilmesi.

Madde 3: Her Livada birbirine yakın olan köyler için kâfi arazisi olan leylî birer iptidâî mektebi açılması ve bu mekteblerde iptidâî derslerle beraber amelî ve nazarî basit ziraat dersleri gösterilmesi.

Madde 4: Her Liva'nın büyüklüğüne göre birden ikiye kadar nazarî olmaktan ziyade amelî ziraat tedrisatında bulunmak üzere münasib nahiyelerde nümune çiftliği mahiyetinde talî mektebler yapılması.

Madde 5: Âlî tahsil için bir ziraat mektebi kâfi görülerek bu mektebin Anadolu'da tesis ve mektebin teessüsünden ve Halkalı'nın bilumum levazımı tedrisiye ve demirbaş eşya ve sairesinin naklinden sonra Halkalı Ziraat Mektebinin yeni mektebe nakli ve yeni tesis edilecek mektebin mevkiinin tayin edilmesi hususunun hükûmete bırakılması.

Madde 6: Köylerdeki iptidâî mekteblerinin mutlaka beş dönümlük bir bahçesi ve iki inelik fennî bir ahır ve kümesi yeni usul bir arılığı ve muallimler için iki odalı bir evi olması ve arazinin bir kısmı çiçek bir kısmı da fidancılığa tahsis edilerek muallimlerin nezareti altında bizzat talebe tarafından idare edilerek masraf ve hasılâtının köy muallimlerine ait olması ve bu suretle çocuklara amelî olarak çiftçiliğin öğretilmesi ve münevver zevatın da köylerde yerleşmenin teşviki.

Madde 7: Türkiye ve Ecnebî Darülfünûn, Âlî ve Talî mektebler mezunları ve mezunelerinin ve medreseleri ikmâl ederek icazetname alanların en az bir sene müddetle altıncı maddeyi tatbik eden köy muallimliklerinde istihdamı.

Madde 8: Kışla ve Askerî talimgâhlarda amelî ziraat tedrisatı yapılması.

Madde 9: Ahlâka mugayir olanları men'edilmek şartiyle ziraî, Sınaî, Coğrafî, iktisadî ve sıhhî sinema filmleriyle köylülere lâzım gelen faydalı malûmatı vermek ve köylerin istatistikî malûmatlarını zapteylemek ve amelî konferanslar vermek üzere şimdilik her liva'da birer seyyar Ziraat Mektebi açılması.

> Article 3: To establish in every province of the country, boarding schools which have a suitably large amount of land at the primary level that would serve groups of neighboring villages, and to include, alongside the primary curriculum both theoretical and applied agricultural instruction.
>
> Article 4: To establish, according to the size of each province, one or more schools in the form of model farms with the aim of teaching practical agriculture.
>
> Article 5: After seeing satisfactory to have an agricultural school for higher education, thefoundation of this school in Anatolia and establishment of this school, and carriage of the general teaching materials of Halkalı, fixtures and etc., to leave the decision to the government for the transportation of the Halkalı Agricultural School to the new school.
>
> Article 6: To provide the primary schools in the villages with a plot comprised of a sanitary stable with two cows, a hen coop, a modern bee hive, and two-room houses for the teachers; a portion of the land should be devoted to the planting of flowers, another to vegetables and another to an orchard. These should be managed by the students under the supervision of teachers with the expense and profits belonging to the teachers and through these means children should be thought farming, and enlightened people should be encouraged to reside in villages.
>
> Article 7: Girls and boys who have completed their education in Turkey or in foreign countries must serve for at least one year as teachers in the village schools established under article 6.
>
> Article 8: Practical agricultural instruction must be given in military posts and in military training quarters.
>
> Article 9: For the present, a mobile agricultural school should be established in every province, thus conferences and films should be presented to the villages to increase their agricultural knowledge.

The above stated model attaches the concept of agricultural economic development to the schools in the villages. These schools are seen as the working centers for agricultural enterprise, in which teachers and students work together. Furthermore, the income obtained would be used for teachers' salaries, contributing to the economy of the state (Wilson & Başgöz, 1968, p. 124). This state of affairs is very much related to the concept that education had to have practical outcomes.

During the period of İsmail Safa (Özler), in 1923, the Ministry of Education was comprehensively organized for the first time. This organization included two functional categories; the scientific and the administrative (Milli Eğitim Bakanlığı Talim ve Terbiye Kurulu Başkanlığı - MEBTTKB - Şûra Genel Sekreterliği, 1998, pp. 7-8). The administrative section (idari bölümler) consisted of

- Higher Education Department (*Yüksek Tedrisat Dairesi*)
- Secondary Education Department (*Orta Tedrisat Dairesi*)
- Primary Education Department (*İlk Tedrisat Dairesi*)
- Supervision Council (*Teftiş Heyeti*)
- Department of Personal Records (*Sicil Dairesi*)
- Department of Literature and Fine Arts (*Harf ve Sanayi-i Nefise Dairesi*)
- Directorship of the Principal Clerk (*Kalem-i Mahsus Müdiriyeti*)

The scientific organizations (*ilmi teşkilatlar*) included

- The Council of Supervision and Translation (*Teftiş ve Tercüme Heyeti*)
- Scientific Council (*Heyet-i İlmiye*)
- Secretariat of the Board of Principles (*Müdürler Encümesi Katibi*)
- Permanent Board of the Scientific Council (*Heyet-i İlmiye Daimi Encümeni*)

The Scientific Council had scientific meetings during which the educational policies of the new Turkish state were determined and educational problems were discussed by educational experts, leading to decisions which had a certain power of implementation (MEBTTKB Şûra Genel Sekreterliği, 1998, p 8). The First Scientific Council Meeting, arranged under the leadership of the Minister of Education İsmail Safa (Özler), took place between July 15, 1923 and August 15, 1923.

İsmail Safa (Özler) was still the Minister of Education when Mustafa Kemal proclaimed the Republic on October 29, 1923. When the Turkish Republic came into

being in 1923, the opportunities for education were limited and varied. Students were exposed to very different opportunities and conditions, under the rubric of the common name of "*Mektep*" (School). Although there is no data related to the population and the proportion of the population which was literate and/or in school, the results of the 1927 census data have been taken as a base and are assumed to be similar to the numbers in 1923. The population of Turkey was 12.000.000 in 1927. Table 1 shows the number of schools, teachers and students as well as their proportions to the total population of 1927, taken to be similar to 1923. The table shows the situation before the Unification of the Education Act (Sakaoğlu, 1993, pp.21-22).

Table 6: The Number of Schools, Teachers, and Students at Each Level of Schooling in Turkey, in 1923

	School	Teacher	Student	Proportion of Students in the Total Population (%)
Primary School	4,894	10,238	341,941	2.8
Junior High School	72	796	5,905	0.050
High School	23	513	1,241	0.010
Vocational School	64	583	6,547	0.054
	5,053	12,130	355,634	2.96

* Adapted and translated from Sakaoğlu, 1993, p. 21

In the transition from empire to Republic, only one million of the twelve million was literate, 98% of women were illiterate. Moreover, from 12,130 teachers, only 3-4 thousands were graduates of the teacher training schools (*Muallim Mektepleri*), high schools, and junior high schools. The others were graduates of primary education only, or had been trained in the *medreses* (Sakaoğlu, 1993, pp.21-22).

Just after the proclamation of the Republic (October 29, 1923), parallel to the National Pact (*Misak-ı Milli*), İsmail Safa (Özler) formulated a Pact of Education

(*Maarif Misak-ı*), which included the general aims of Education for the new Turkish Republic. The main principles of this pact are as follows[1]:

1. To move the Turkish nation to the highest point in the ranks of civilization and to educate the new generations with the love, will and power that makes it possible to reach this goal in the shortest amount of time required by the dignity of being a Turk.
2. To bring up nationalist, populist, reformist and *laic* citizens of the Republic.
3. To generalize primary education and to make everyone literate;
4. To have the new generation go through all of the levels of education and to provide for them knowledge which will make them successful in economic life;
5. Instead of morality stemming from the fear of punishment in this world and the otherworld, to have true morality and virtue prevail in freedom and in peace.

The above stated items of İsmail Safa shows similarity to the principles and ideas of Mustafa Kemal. Like Mustafa Kemal, the minister emphasized nationalism (items 1, 2), populism (items 2, 3, 4), laicism (items 2, 5), republicanism (item 2), reformism (items 1, 2) and practicality in education (items 1, 4).

The direct result of the principles of republicanism, populism, étatisme, and laicism is the Unification of Education Act [2] (*Tevhid-i Tedrisat Kanunu*) of March 3,

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[1] The English form was translated directly from the text of Ergün (1997, 1.4.1 "İsmail Safa Bey'in Görüşleri") on September 6, 2006. The original Turkish form is,

1. *Türk milletini medeniyet safında en ileriye götürmek ve yeni nesilleri, Türk olmak haysiyetinin gerektirdiği bu amaca en kısa zamanda varmayı mümkün kılacak aşk, irade ve kudretle yetiştirmek;*
2. *Milliyetçi, halkçı, inkılâpçı ve lâik cumhuriyet vatandaşları yetiştirmek;*
3. *İlköğretimi yaygınlaştırmak; herkese okuma-yazma öğretmek;*
4. *Yeni nesilleri bütün öğretim kademelerinden geçirmek, onları, ekonomik hayatta başarılı kılacak bilgilerle donatmak;*
5. *Toplum hayatında dünya ve âhiret cezaları korkusundan doğan ahlâk yerine, hürriyet ve barış içindeki gerçek ahlâk ve erdemleri hâkim kılmak.*

[2] Professors Rıfat Okçabol and Güzver Yıldıran translate this as the 'Unification of Education Act rather than the Unification of Instruction as has been translated by others. The reason is due to the content of the law, which has little to do with instruction.

1924, during the ministry of İsmail Sefa. This law is an important attempt for the laicization (principle of laicism) of education under the auspices of the Turkish state (principle of étatisme). Through this law, all education was to be under the central control and authority of the Ministry of Education. The law not only obliterated the control of religion over education but also served the principle of equality of opportunity (Topses, 1999, p.10; Sakaoğlu, 1993, pp. 22-25). As stated, the law not only strongly points to the centralization of education but also delineates the necessary organizations in order to achieve this aim. The articles of this law were stated as[1]:

> Article 1: All educational and scientific institutions within Turkey are affiliated to the ministry of Education.
>
> Article 2: All medreses and schools administered by the Ministry of Justice and Foundations or private foundations are transferred and attached to the Ministry of Education.

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[1] The English form was translated directly from the text of Sakaoğlu (1993, pp. 23-24) on September 6, 2006. The original Turkish form is,

Madde 1: Türkiye dâhilindeki bütün müessesat-ı ilmiye ve tedrisiye (öğretim ve bilim kurumları) Maarif Vekâletine merbuttur (bağlıdır).

Madde 2: Şer'iye ve Evkaf Vekâleti veyahut hususi vakıflar tarafından idare olunan bilcümle medrese ve mektepler Maarif Vekâletine devir ve raptedilmiştir.

Madde 3: Şer'iye ve Evkaf Vekâleti bütçesinde mekâtip ve medarise (okullar ve medreseler) tahsis olunan mebaliğ (ödenekler) Maarif bütçesine nakledilecektir.

Madde 4: Maarif Vekâleti, yüksek diniyat mütehassısları yetiştirilmek üzere Dârülfünun'da (Üniversite) bir İlahiyat Fakültesi tesis ve imamet ve hitabet (imamlık-hatiplik) gibi hidemat-ı diniyenin (din görevlilerinin) ifası vazifesiyle mükellef memurların yetişmesi için de ayrı mektepler küşat edecektir (açacaktır).

Madde 5: Bu kanunun neşri tarihinden itibaren terbiye ve tedrisat-ı umumiye (genel öğretim ve eğitim) ile müştegil (uğraşmakta) olup şimdiye kadar Müdafaa-yı Milliye (Milli Savunma)'ye merbut (bağlı) olan askerî rüştî ve idadîler (orta ve liseler) ile Sıhhiye Vekâletine merbut olan Dârüleytamlar (öksüz yurtları-Yetiştirme yurtları) bütçeleri ve heyet-i tâlimiyeleri (öğretim kadroları) ile beraber Maarif Vekâletine raptolunmuştur (bağlanmıştır). Mezkûr rüştî ve idadîlerde bulunan heyet-i tâlimiyelerin cihet-i irtibatları (ilişki durumları) âtiyen (ileride) ait olduğu Vekâletler arasında tahvil ve tanzim (değiştirme ve düzenleme) edilecek ve o zamana kadar orduya mensup olan muallimler orduya nisbetlerini (bağıntı) muhafaza edecektir. (637 Sayılı 22.4.1925 Tarihli Kanunla eklenen fıkra: Harbiye Mektebine menşe (kaynak) teşkil eden askerî liseler bütçe ve kadrolarıyla Müdafaa-yı Milliye Vekâletine devrolunmuştur).

Madde 6: İşbu kanun tarih-i neşrinden (yayım tarihinden) muteberdir.

Madde 7: İşbu kanunun icra-yı ahkâmına (hükümlerinin yürütülmesine) İcra Vekilleri Heyeti (Bakanlar Kurulu) memurdur.

> Article 3: Appropriations allocated to the budget of schools and medreses will be transferred to the budget of the Ministry of Justice and Foundations.
>
> Article 4: The Ministry of Education will establish a Faculty of Theology in the university (Darülfünün) to train high level religious experts and will open different schools to train officials obligated to perform religious functions like religious leadership and lecturing.
>
> Article 5: Military junior and senior high schools dealing with general education and instruction attached to the Ministry of Defense and orphanages attached to the Ministry of Health until now will with their budgets and educational staff be under the auspices of the Ministry of Education from the time of the publication of this law. The status of the relationships of the instructional staffs in the above mentioned junior and senior high schools will in the future be exchanged and organized between the related ministries and until then teachers connected to the army will keep their ties with the army. (The item annexed to the law number 637 on April 22, 1925: The Military High Schools which lead to the military academy will be transferred to the Ministry of Defence with their budgets and cadres)
>
> Article 6: This law will be in effect on the date of its publication.
>
> Article 7: The Council of Ministers is authorized to execute the provisions of this law.

Afterwards, five-year primary education became obligatory for all men and women (principle of populism) with the 87th article of the 1924 constitution (guaranteed by the principle of republicanism) admitted on April 20, 1924 (TBMM, 1945). Article 87 states that "Women or men, all Turks have the obligation of going through primary education. Primary education is free of charge in State schools[1]". Although the law of the Unification of Education Act as expressed does not include nationalism per se, Mustafa Kemal emphasized the national character of education in many of his speeches (for example; see his speech on July 16, 1921. Article 88 of the

[1] The English form was translated directly from the official web page of the Turkish Grand National Assembly on September 5, 2006. The original Turkish form is, "*Madde 87- Kadın, erkek bütün Türkler ilk öğretimden geçmek ödevindedirler. İlk öğretim Devlet okullarında parasızdır*".

1924 constitution states that, "Everyone is called a "Turk" in terms of citizenship without regard to religion and race[1]".

In order to disseminate the idea of the law, Atatürk went to the different parts of Turkey and met with teachers in order to inform them about the aims and the implementation of the Law of Unification of Education (Topses, 1999, p.10; Sakaoğlu, 1993, pp. 22-25).

Right after the declaration of the Law of Unification of Education, Vasıf (Çınar) was appointed as the Minister of Education (March 8, 1924-November 21, 1924). Thus the implementation of the Law occurred during Vasıf Çınar's ministry. Vasıf (Çınar) arranged the Second Scientific Council meeting on April 13, 1924. The chair of the meeting was the Minister of Education, Vasıf (Çınar). Again during the time of Vasıf Çınar, in order to get advice from the major educators of the western world, experts were to be invited to Turkey. During the ministry of Vasıf Çınar in 1924, the Ministry of Education invited John Dewey, who was the famous American philosopher, to observe and analyze the existing educational system of Turkey and to make recommendations for reform and restructuring (Turan, 1997, p. 9). This choice is indeed interesting. Why did the new Republic invite an American educator and philosopher rather than someone from Europe? The reason was the overlap between Dewey's progressivism, and Mustafa Kemal's, İsmail Safa's (Özer), and Vasıf Bey's (Çınar) ideas on what education as a system had to achieve for the new Turkish Republic.

John Dewey, the pioneer of progressive education in the United States, had established the Laboratory School of the University of Chicago. He also thought that

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[1] The English form was translated directly from the official wab page of the Turkish Grand National Assembly on September 5, 2006. The original Turkish form is, "*Madde 88-Türkiye'de din ve ırk ayırdedilmeksizin vatandaşlık bakımından herkese "Türk" denir.*"

educating the majority of the citizens of a country would contribute to the basic foundation of a democratic society. According to Dewey, the most important element of a democratic society was the literacy level of the masses. This was the common ground on which Mustafa Kemal and John Dewey met in the summer of 1924 (Wolf-Gazo, 1996).

John Dewey came during the ministry of Vasıf Çınar. His famous preliminary report was sent to the Ministry during his time, although the actual report was published in 1939. On September 8, 1924, right after John Dewey's *Preliminary Report,* for the 1924-25 academic year, Vasıf (Çınar) determined the main principles of the national educational policy with a published declaration. The items of this declaration are as follows[1]:

1. Education based on national principles and methods of Western civilization.
2. Schools giving civilized and exemplary education on matters like human relations, social rules of life, cleanliness and organization.
3. Students having in their hearts and souls the ideal of making sacrifices for the Republic.
4. Schools inspiring freedom of conscience and thought and consciousness of responsibility.
5. Making education applied and practical.

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[1] The English form was translated directly from the text of Akyüz (2001, p. 301) on October 5, 2006. The original Turkish form is,

1. *Eğitimin milli esaslara ve Batı medeniyetinin yöntemlerine dayanması.*
2. *Okulların insana ilişkileri, toplumsal yaşama kuralları, temizlik, düzen vs. gibi hususlarda medeni ve örnek alınacak bir eğitim yapmaları.*
3. *Çocukların kalplerinde ve ruhlarında Cumhuriyet için fedakâr olmak ülküsünü tartışmaları.*
4. *Okulların vicdan ve fakir hürriyeti ve bilinçli bir sorumluluk telkin etmesi.*
5. *Okulların, uygulamalı ve işe yarar bir hale getirilmesi.*
6. *Okulların ilim ve okuma zevkini vermesi.*
7. *Okulların, halka, sağlığın değerini ve sağlıklı olmanın yollarını öğretmesi.*
8. *Okulların, beden ve fikrin dengeli gelişimini sağlaması.*
9. *Okulların toplumun ve ailenin ihtiyaçlarını dinleyip gözönünde tutması.*
10. *Okulların tasarruf, yardımlaşma ve iktisat fikirleri vermesi.*
11. *Okulların çocuklarda hür ve mâkul bir disiplin oluşturması.*

6. Schools giving the joy of knowledge and reading.
7. Schools teaching the public the means related to the value of health and being healthy.
8. Schools ensuring the balanced development of body and mind.
9. Schools listening to and focusing on the needs of society and family.
10. Schools giving ideas on savings, mutual aid, and economics.
11. Schools developing in children free and reasonable discipline.

This document shows the intention of developing in the youth of the Republic democratic, nationalistic, self-sacrificing attitudes for the new regime, equipped with the scientific and practical skills required of the new citizen. It further gives the schools the responsibility of reaching out to the needs of the community and the family. As can be inferred, these statements are not only similar to the ideas of Mustafa Kemal but they also reflect Dewey's suggestions on progressive education. Although serving for a relatively short time (eight months), Vasıf Çınar's impact on the future of Turkish education becomes evident, not only through this document but also through what John Dewey contributed to the system.

After the ministry of Vasıf (Çınar), Şükrü (Saraçoğlu) became the Minister of Education for only four months, between November 21, 1924 and March 4, 1925. This was followed by the ministry of Hamdullah Suphi (Tanrıöver) during March 4-December 19, 1925.

During Hamdullah Suphi's ministry, experts on vocational education were invited, this time from Germany. The renowned pedagogue Georg Kerschensteiner was invited in order to examine the vocational schools in the Turkish Republic. Kerschensteiner suggested Alfred Kühne from the Ministry of Commerce in Germany, and the founder of one of the major vocational schools in Berlin. Professor

Kühne came to Turkey in 1925 and wrote his report entitled "Report on the Improvement of Vocational Education" (*Mesleki Terbiyenin İnkişafına Dair Rapor*).

The ministry of Hamdullah Suphi (4 Mart 1925-19 Aralık 1925) lasted until the appointment of Mustafa Necati (Uğural) on December 20, 1925. Mustafa Necati was the minister of education until January 1, 1929. During the period of Atatürk (1919-1938), Mustafa Necati's three-year ministry was the longest among the others (see table 3). According to Binbaşıoğlu, Mustafa Necati was a true Republican reformist, trusted by Mustafa Kemal (Binbaşıoğlu, 1999, pp. 118-121).

Just after becoming the Minister of Education, Mustafa Necati organized the Third Scientific Council Meeting on December 27, 1925. One of the most important Ministers of Education, Mustafa Necati applied all six principles of Atatürk to education even before these principles were formally expressed in totality in 1935 in the Program of the Republican Peoples Party (*Cumhuriyet Halk Partisi*) and before they were included in the second article of the 1937 revision of the 1924 Constitution. His implementations were revolutionary, coming to life as major organizational contributions as well as the foundation of the necessary educational institutions for the Republic. His most lasting contribution is the passing of the Law of General Education (*Maarif-i Umumiye Kanunu*) on March 20, 1926. As a background to this law, in his speech to the journalists on February 9, 1926, Mustafa Necati referred to the recommendations of John Dewey, and his suggestions for restructuring the Ministry of Education. Dewey had suggested that the ministry should be organized around the educational needs of the country. Mustafa Necati focused on Dewey's suggestion that the gist of schooling had to be the social and economical conditions of practical life. He touched upon Dewey's point that the effective and functional reorganization of the ministry would make it "a source of

ideas and inspiration" (Cumhurbaşkanları, Başbakanlar ve Milli Eğitim Bakanlarının, Millî Eğitimle ilgili Söylev.ve Demeçleri, 1946, p. 353).

The Law of General Education reorganizes the Ministry of Education into necessary divisions, with the directors having authority over their sections. Most importantly this law forms two bodies, namely the Language Council (*Dil Heyeti*), and the Board of Instruction and Education under its articles 1 and 2. The Language Council would be responsible for language and scientific issues. The Board of Instruction and Education, the most important department of the ministry, was designed to be a permanent advisory board of experts, which, from then on, would make decisions on the

1. development of related educational proposals of laws
2. decisions related to levels of schooling and instructional and school programs and regulations
3. supervision and selection of textbooks. (Binbaşıoğlu, 1999, pp. 118-121)

There would be at most ten experts on the Board of Instruction and Education. Furthermore, according to articles 19 and 20 of the same law, Turkey was to be divided into regions of educational organization (*Maarif Mıntıkası*). In the "Educational Regions" composed of one or a few provinces, there would be a Director of Education (*Maarif Emini*). In their regions, the Directors of Education would appoint the teachers and supervisors of primary education as well as the clerks and civil servants of other educational centers under the Ministry of Education. In addition, these directors would supervise the primary and secondary institutions in their regions, (Ergün, 1997, 2.2 "Eğitim Bakanlığı Örgütü").

The second major contribution of Mustafa Necati is his focus on primary education. Mustafa Necati's speech of February 9, 1926 to journalists gives some information about the situation of primary schools when he became the minister. According to this speech, there were 4770 primary schools and 32 boarding schools at the primary level with 302,500 students in these institutions. There were 17 orphanages in the country that were in fact primary boarding schools with 5160 students. In these orphanages, weaving, tailoring and sewing, carpentry, iron smithery, shoemaking and carpet weaving were taught (Cumhurbaşkanları, Başbakanlar ve Milli Eğitim Bakanlarının, Millî Eğitimle ilgili Söylev.ve Demeçleri, 1946, pp. 346-347).

In his speech on June 5, 1926, at the dinner given in his honor in the *Darülfünûn* (the University), he states that the first obligation of the ministry is primary education, the crux of educational politics. All Turks, male and female must have primary education in order to become good citizens and to acquire the knowledge, skills, and moral values to work effectively at their jobs. In the same speech, he stated his thoughts on institutions of education as, "We want the school to bring children into contact with nature, matter, and events, orienting them to activities of observation, reasoning and creativity in joy and freedom.[1]". He further said that the school ought to be a laboratory where children work cooperatively, completing and helping each other, (Ibid, p. 375).

Aligned with the above stated ideas, Mustafa Necati says in the same speech that the newly formed Board of Instruction and Education had studied issues related

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[1] The English form was translated directly from Cumhurbaşkanları, Başbakanlar ve Milli Eğitim Bakanlarının, Millî Eğitimle ilgili Söylev.ve Demeçleri (1946, p. 375) on September 5, 2006. The original Turkish form is, *"Biz çocukları tabiatle, eşya ile, şe'niyetlerle, neşe ve hürrüyet havası içinde faaliyete, müşahede ve muhakemeye, ibdaa sevkeden bir mektep istiyoruz*."

to primary education and had prepared the primary education program. In order to update the curriculum to meet the needs of a modern democratic state, curricula from various countries were analyzed (Binbaşıoğlu, 1999, pp. 118-121). Mustafa Necati says in his speech of June 5, 1926 that the draft of the 1926 curriculum would be sent to educators for feedback before formulating the final version (Cumhurbaşkanları, Başbakanlar ve Milli Eğitim Bakanlarının, Millî Eğitimle ilgili Söylev.ve Demeçleri, 1946, p. 375).

Mustafa Necati himself visited several countries such as Czechoslovakia, Germany, France, Britain, and Italy for two months during the end of 1926 and the beginning of 1927, upon the suggestion of Mustafa Kemal and the Prime Minister İsmet Pasha (İnönü). In his speech to the journalists of Istanbul on February 3, 1927 upon his return from Europe, he stated that reading the reports of Turkish and foreign experts and educators was not the same as personally visiting and observing the educational systems of European countries (Ibid, pp. 382-383).

Finally, the curricula of Central European countries were taken as the examples of group learning for the Turkish Republic (Binbaşıoğlu, 1999, pp. 118-121). This new curriculum was accepted in 1926 and implemented in pilot schools. In 1927, it was universally implemented in all the provinces of Turkey (Ibid, pp. 382-383).

The new 1926 curriculum was one of the most important attempts of Mustafa Necati for improving the quality of institutions of primary education. Until 1926, the curriculum for primary education was from the period of the Second *Meşrutiyet* (1908-1918). According to Çelenk, (2000, p. 39), while the 1924 curriculum was transitory, the 1926 curriculum was the first comprehensive curriculum of the Republic. For Binbaşıoğlu, this curriculum was a reform which included the

principles of contemporary education. In this curriculum, instruction was planned by "units" in primary education. Moreover, the 1926 curriculum was based on life experiences, reasoning and creativity rather than rote memorization. The main teaching methods in the curriculum were observation, experimentation, examination and investigation, now the topic in the 2000's of constructivist approaches (1999, pp. 118-121).

Another interesting point was Mustafa Necati's foreshadowing emphasis on cooperative learning and peer interaction before the beginning of research relating these variables to classroom environments in the early 1970s. At that time, cooperative learning methods in classroom settings were studied by three research groups in the United States and by one in Israel, (Slavin, 1991, p. 72). In 1975 and 1978, Roger T. Johnson and David W. Johnson studied on the cooperative versus individualistic learning environments and introduced that cooperative learning can be more beneficial through effective communication. Wheeler and Ryan (1973), Johnson, Johnson, and Scott (1987), Gunderson and Johnson (1980), Sharan (1980), Slavin and Karweit (1981), Jacobs (1988), and Dalton, Hannafin, and Hooper (1989) conducted studies showing the positive effects of cooperative learning on students attitudes. Furthermore, the meta-analyses of Johnson, Maruyama, Johnson, Nelson and Skon (1987), with 122 studies; and Johnson and Johnson (1987) with 349 studies showed both the cognitive and affective advantages of cooperative learning. Moreover, studies on peer interaction started with Vigotsky's (1978) definition of learning as a socially constructed variable during interaction and activity with others. In the 1990s, Cohen (1994), O'Donnell & King (1999), and Webb & Palincsar (1996) conducted research about peer learning and its effects on cognitive processing which lead to learning (King, 2002, p. 33). Mustafa Necati also claimed in the same speech

that children are not to be listeners but active participants of learning, again much before active learning became an important variable of quality of instruction, as in Bloom's model (1956), Anderson (1973), Özçelik (1974) and Smith's (1977) works.

The teacher, who was to understand the contemporary philosophy of education and who had to have the skills to implement the methodologies necessary, became the center of attention. For Mustafa Necati, teacher training was of utmost importance. In fact, when he was appointed as the Minister of Education, Mustafa Necati was the head of the Teachers Union. Naturally, he was thus able to form close relationships with teachers and understood their problems. In fact some of the articles of the Third Scientific Council Meeting, which he held right after he became the minister were directly related to teacher training in terms of pedagogical principles and physical structures, the equipment and resources necessary for such an education (Binbaşıoğlu, 1999, p. 118-121).

When Mustafa Necati was appointed to be the minister of education, as was stated in his speech to the journalists on February 9, 1926, there was a total of 9062 teachers. Of these, 3960 were graduates of teacher training institutes (*Muallim Mektepleri*), and 5102 had obtained teaching licenses. There were 25 boarding teacher training institutes with 4200 students (Cumhurbaşkanları, Başbakanlar ve Milli Eğitim Bakanlarının, Millî Eğitimle ilgili Söylev.ve Demeçleri, 1946, pp. 346-347). Moreover, these teacher training schools were in poor condition. There was a lack of school buildings, equipment and materials in teacher training schools, for which the expenditures were paid by special administrative bodies in the provinces (*İl Özel İdareleri*). Since funding was inadequate, Mustafa Necati thought that it was necessary to collect a tax of education. The needs of these schools were met by 10 % of this tax (Binbaşıoğlu, 1999, p. 118-121).

The provinces were responsible for training their teachers. This was wrong according to Mustafa Necati. The training of teachers had to take place in schools with 500-600 students (Binbaşıoğlu, 1999, pp.118-121). The Music Teachers Training School (*Müzik Öğretmen Okulu*) was established in Ankara in 1925, followed by the Teacher Training School for Secondary Education (*Orta Öğretmen Okulları*) in Konya (Okçabol, 2005, pp. 42-43). Within five years, the number of teacher training schools increased to 10 (Binbaşıoğlu, 1999, pp.118-121).

A very important concept, the Village Teacher Training Schools (*Köy Öğretmen Okulları*), institutions which educated local primary school graduates to become the teachers of village elementary schools, was conceptualized and instituted during Mustafa Necati's ministry. Inspired by Dewey's ideas that each school had to be flexible enough to respond to local economical needs, Mustafa Necati thought that instead of forming perfect institutions where the attendance of children would not be guaranteed, it would be better to implement what conditions allowed (Cumhurbaşkanları, Başbakanlar ve Milli Eğitim Bakanlarının, Millî Eğitimle ilgili Söylev.ve Demeçleri, 1946, p. 353). Two such schools, one in Kayseri (1926), and the other in Denizli (1927) were established (Okçabol, 2005, pp. 42-43).

Mustafa Necati also talked about the preparation of course books in his speech on June 5, 1926. For one year (1926), the books would be published by the Ministry of Education, after corrections and modifications were made by teachers who were experts in each area. However, Mustafa Necati stated that this process was just to meet urgent needs. Later, the Ministry would suggest to the schools the well written books by teachers and authors who would be rewarded by the ministry. However, the ministry would not dictate the books to be taught in the schools, but rather would suggest for well written books. The ministry would help those who

prepared complete sets of reading materials and journals for children (Cumhurbaşkanları, Başbakanlar ve Milli Eğitim Bakanlarının, Millî Eğitimle ilgili Söylev.ve Demeçleri, 1946, p. 377). As is clear, the task of The Board of Instruction and Education was advisory according to Mustafa Necati, a trend which later changed into a high level of control over school text books.

Another contribution of Mustafa Necati was in the area of vocational and technical education. In 1926, Mustafa Necati (Uğural) invited Professor Ömer Buyse, who was the director of vocational education in Belgium. Previously, Ömer Buyse, who was from Egypt, had been in the United States and had written a book about the educational system of the United States. Later, he founded the 'Labor University' in Belgium and became the Director of this university for four years. Buyse published the program and the results of the university in a book called, *Labor University* (Ergün, 1997, 2.8.2. "Eğitim İnkilâpları Döneminde Getirilen Yabancı Uzmanlar").

At the end of 1926, Professor Ömer Buyse signed a contract to make observations in Turkey and to prepare programs for agricultural, industrial, technical, commercial, artistic, and vocational schools. Buyse came to Turkey in February 1927 and stayed until July, 1927 (Ergün, 1997, 2.8.2. "Eğitim İnkilâpları Döneminde Getirilen Yabancı Uzmanlar"). Buyse wrote the *Report on Technical Instruction (Teknik Öğretim Hakkında Rapor)*.

.During the ministry of Mustafa Necati, the crucial reform of changing the Arabic alphabet to the Latin alphabet was carried out, on November 1, 1928. The issue was complex and the topic had been under discussion since 1860. During the *Tanzimat* period, the intellectuals focused on the difficulties of learning reading and writing skills using the Arabic alphabet. The Arabic alphabet used letters differently at the beginning, middle and at the end of a word, increasing the number of symbols

to 100. In addition, because the vowels were not always present, a particular word would be vocalized in various different ways. In fact some of the army officers had already started using the Latin alphabet. The argument that it took an enormously long time to learn reading and writing at school, while in European countries literacy was possible in schools in a relatively short time was educational. However, even though the change of the alphabet was an educational issue, the problem was confounded by political and religious issues. Arabic was the language of the Qur'an and its elimination from education could be a threat to Islam as well as to the unification of the nations under the Ottoman Empire (Başgöz and Wilson, 1968, pp. 112-113).

After the declaration of the Second *Meşrutiyet*, another factor was added to the issue of the change of alphabet. This was the movement of Turkism (being Turkish). Ziya Gökalp and the other followers of the movement considered the Arabic language to be the connection between all the Turkish cultures in the world including the ones in Russia. On the other hand, the supporters of the Latin script increased after the Second *Meşrutiyet*. Cenap Şahabettin, Kılıçzade Hakkı, Hüseyin Cahit, Celal Nuri were among those who thought a reform in the alphabet necessary. In these years, even though some changes were made to facilitate the usage of the Latin alphabet, these changes remained an issue of culture and westernizing the country (Başgöz and Wilson, 1968, p. 114).

After the proclamation of the Republic, the problem of keeping the nations together through the Arabic script was no longer viable. Despite the factor of Turkism, the Turkology congress in Bakü, in the Soviet Union in 1926, changed the ideas positively toward the Latin alphabet. Even though the Soviet Union gave the freedom of choice of alphabet to the Turkish Republics, it supported the change in

the direction of the Latin alphabet. As a consequence, Azerbaijan in 1927, Turkmenistan and Uzbekistan in 1928, Kyrgyzstan in 1929 changed their alphabets to the Latin script.

These changes prepared the necessary conditions for the alphabet reform in Turkey. In June 1927, Mustafa Kemal wanted the Ministry of Education to make the necessary arrangements for the alphabet reform. According to Başgöz and Wilson, this decision of Mustafa Kemal was influenced by Kühne's ideas on the difficulties of the Arabic script for reading and writing as well as by the low literacy rate (% 10.6) of the nation (Başgöz and Wilson, 1968, pp. 114-117). Until the admission of the law of alphabet change on November 1, 1928, the Language and Alphabet Council (Dil ve Alfabe Kurulu) prepared the principles of the Turkish Alphabet and presented them to Mustafa Kemal. Two meetings in Istanbul were arranged by Mustafa Kemal in order to explain the new alphabet to the public and the intellectuals. A literacy campaign was launched and Atatürk temporarily became the 'principal instructor of the nation' (*Başöğretmen*). Newspapers started to publish their news with the new alphabet and gave courses on their first pages, Mustafa Kemal went to schools, cafés, and squares to instruct the public about the new alphabet in front of a black board. Governmental departments, prisons, the Republican People's Party (*Cumhuriyet Halk Partisi*) and the Turkish Hearts (*Türk Ocakları*) designed courses to teach the new alphabet to the citizens. After four months, 5000 teachers learned the new alphabet and took responsibilities in the campaign (Başgöz and Wilson, 1968, pp. 114-117).

Moreover, in order to increase the literacy level of the public, the 'National Schools' (*Millet Mektepleri*) were opened in different parts of the country starting from November 11, 1928. In these examples of non-formal education, basic

knowledge, literacy, and the structure of the new state were the topics of instruction. The aim was to educate the adults who could educate their children, the future generations of the newly born Turkish Republic (Sakaoğlu, 1993, pp. 44-47).

The Ministry of Mustafa Necati ended on January 1, 1929. Afterwards, prime minister İsmet (İnönü) became the acting Minister of Education from January 1, 1929 to Febuary 27, 1929 (approximately two months). This short period was followed by the ministry of Vasıf (Çınar) for the second time from February 28, 1929 to April 7, 1929 (approximately one month). On April 9, 1929, Recep (Peker) was appointed as the acting Minister of Education for one day. These short term Ministries ended when Cemal Hüsnü (Taray) was appointed as the Minister of Education on April 10, 1929. His ministry lasted until September 15, 1930 (see table 1 in Chapter III).

When Cemal Hüsnü (Taray) became the Minister of Education in 1929, like Mustafa Necati (Uğural), he emphasized teacher education. In his speech, Cemal talked about the excessive teacher numbers in relation to the student population. This initiated the movement against the Village Teacher Training Schools which were closed down in 1932 and 1933 due to similar arguments (Ergün, 1997, 3.4.1 Köy Öğretmen Okullarının Kapatılması).

After the Ministry of Cemal Hüsnü (Taray), Esat (Sagay) became the Minister of Education from September 27, 1930 to September 18, 1932. Esat (Sagay) saw the aim of the schools as educating the citizens of the Republic. He said in his declaration of 1931 that the aim of every class was enabling the students to become

"adaptive to national life and [to be] a profoundly worthwhile citizen of the Turkish nation and the Turkish Republic.[1]"

The opening of the 'People's Houses' (*Halk Evleri*) in 1931 also served the equality of opportunity principle of Atatürk. The aim of the People's Houses was the dissemination of Atatürk's principles, and the Republican regime. The idea behind these institutions was the creation of unity in the nation and elimination of the differences between intellectuals living in urban areas and the rest of the public who lived in the villages (Sakaoğlu, 1993, p. 51).

Another important issue in the 1930's was related to higher education, primarily the status of the *Darülfünûn* (Istanbul University). While making reforms in all of the old institutions, the Turkish Republic needed to modernize the Istanbul *Darülfünûn* established in 1863. There were two views about the reform of the *Darülfünûn*. One view stated that it was the Ministry of Education which should reform the *Darülfünûn* to adapt it to the current conditions of the Turkish Republic. The statements of the second minister of the Turkish Republic, Vasıf (Çınar) in his speech in the Grand National Assembly on April 17, 1924, seem to be in favor of this view. He stated that,

> …the current situation of the *Darülfünûn* is not even one fourth [of the state] of the Universities of Europe. In terms of chairs, professors, courses, it is not one fourth. …The Turkish Nation is going towards a goal. It is going towards civilization. The example of civilization will be the *Darülfünûn*. The Ministry of Education

[1] The English form was translated directly from the text of Akyüz (2001, p. 301) as, "*milli hayata uyumlu ve Türk milletine ve Türk cumhuriyetine son derece faydalı birer vatandaş haline getirmektir*."

> can not let the *Darülfünûn* stay in a simple condition. If it does, it will have failed its obligation.[1]

On the other hand, the followers of the Minister of Education, Mustafa Necati, were opposed to the idea of interfering with the *Darülfünûn*. According to this view, the *Darülfünûn* was an autonomous institution and its improvement could only be achieved by itself. The interferences of the politicians in order to ameliorate the *Darülfünûn* would make the situation worse (Wilson and Başgöz, 1968, p. 178). However, the autonomy of the *Darülfünûn* caused difficulties. Some events urged the government to intervene in the *Darülfünûn*. One such event occurred in 1924. Students had taken their photographs in the garden of the *Darülfünûn*. Some instructors saw this as being sinful according to Islamic orientations and punished the students. Because of this, Mustafa Kemal criticized the instructors of the *Darülfünûn* in his speech at Bursa. At the same time, while the Ministry was preparing to ccary out reforms, a young group of instructors stated that the *Darülfünûn* could solve its problems. Nevertheless, the events which occurred in later years showed that the *Darülfünûn* could not bring solutions to its problems. One year later, students made a demonstration and it was understood that the Rector was behind their demonstration. This led the Ministry of Education to prepare a regulation for the students and to impose it on the *Darülfünûn*. However, according to Wilson and Başgöz, these were not the real reasons neccesitating reform. Instead, there were two main reasons. First, the Istanbul *Darülfünûn* did not help in the preparation and the implementation of the reforms of the modern Turkish Republic. Sometimes, the *Darülfünûn* was against

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[1] The Eglish form was translated directly on April 11, 2007. The original Turkish form is, "*…Darülfünunûn bugünkü vaziyeti Avrupa Darülfünunlarının rub'u bile değildir. Kürsüler, Müderrisler, derslar itibariyle rub'u bile değildir. ...Türk Milleti yeni bir hedefe doğru yürüyor. Medeniyete doğru yürüyor. Timsali medeniyet, Darülfünun olacaktır. Maarif Vekâleti Darülfünûn'u basit bir vaziyette bırakamaz. Bıraktığı vakit vazifesini yapmamış olacaktır"* (İlgili Söylevleri, p. 269).

these reforms (like in the alphabet reform), and in some cases, it remained passive during the preparation of the reforms. Secondly, scientific productions of the Dârülfünun were not at the expected level. A few books were published and these were either the copies of each other or poor translations of the books written in foreign languages. As another threat to scientific improvement, in the appointment of instructors, instead of academic efficiency, personal relations were taken into consideration (Wilson and Başgöz, 1968, pp. 178-179). In order to reform the *Darülfünûn* in 1931, the Government invited Albert Malche, a pedagogue and one of the professors of Gelf University in Switzerland. Albert Malche came to Istanbul on January 16, 1932 (Ergün, 1997, 3.2.1. "From '*Darülfünûn*' to 'University'") and after his study on the Darülfünun, he prepared the report entitled *Istanbul Üniversitesi Hakkında Rapor* (The Report on Istanbul University). After the report of Malche, Mustafa Kemal and the Ministry of Education gave a proposal to the Grand National Assembly on July 31, 1933. With this proposal, it was decided to close the old *Darülfünûn* and to establish the new Istanbul University by the Ministry of Education (Wilson and Başgöz, 1968, p.182).

The Ministry of Dr. Reşit (Galip) was followed by the short-period, acting ministry of Dr. Refik (Saydam) from August 14, 1933 to October 26, 1933. Afterwards, Hikmet Bayur was appointed as the minister of education on October 27, 1933. Durign the ministry of Hikmet Bayur, the American Board came to make economic examinations in Turkey. During their examinations, they also observed the educational institutions in Turkey and made suggestions.

In 1935, the results of the population census showed that the country's population had increased from 12,000,000 to 17,000,000. At the same year, in the total population, the percentage of students attending school had alsos also increased

from 2.96 to 4.4. The opportunities for education in Turkey in the 1935-1936 academic year were as shown in the table below:

Table 7: The Number of Schools, Teachers, and Students at each level of schooling in Turkey, in 1935

	School	Teacher	Student	Proportion of Students Total Population (%)
Primary	6,112	13,858	669,344	3.9
Junior High	100	1,799	44,551	0.26
High	36	564	10,882	0.06
Teacher Training	13	248	2,805	0.016
Vocational and Technical	36	507	5,772	0.033
	6,297	16,976	733,354	4.4

* Adapted and translated from Sakaoğlu, 1993, p. 57

The results showed an improvement in the area of education. However, this was not enough to reach the high level of civilization. Therefore, the attempts for the dissemination of education continued. In connection with this principle, during the ministry of Saffet Arıkan (June 10, 1935 - December 28, 1938), İsmail Hakkı Tonguç, the General Director of Primary Education proposed the Village Educators Project (*Köy Eğitmenleri Projesi*). The aim of this project was to train educators in a shorter time to meet the needs of the country. Atatürk wanted these educators to be selected from among the successful sergeants and corporals. The educators are thought to be earned the main part of their salaries from farming. In 1936, the first course for these educators was opened and after the positive results of this course, on June 11, 1937, the law for the village educators passed. This was followed by the establishment of three new courses (Wilson and Başgöz, 1968, pp. 172-174).

Another important event during the Ministry of Saffet Arkan was the curricular change in primary education. Among the general aims of the 1936 currciulum, the six principles were explicetely stated (MEB, 1936, p. 2).

Until this point, we have looked at the effects of the ideology and initiatives of Mustafa Kemal Atatürk and the Ministers of Education on the formation of educational policies between 1919 and 1938. Under the following heading, the analyses of the Scientific Council Meeting Reports (*Heyet-î İlmiye Toplantı Raporları*) and the foreign expert reports will be offered.

Scientific Council Meetings during the Period of Atatürk (1919-1938)

The Scientific Council had meetings during which the educational policies of the new Turkish state were determined and educational problems were discussed by educational experts, leading to decisions which had a certain power of implementation (MEBTTKB Şûra Genel Sekreterliği, 1998, p. 8).

The First Scientific Council Meeting

The First Scientific Council Meeting under the leadership of the Minister of Education İsmail Safa (Özler) took place between July 15, 1923 and August 15, 1923. The participants of this first meeting were the Undersecretary (*Müsteşar*) Samih Rıfat, the Director of the Press (*Matbuat Müdürü*) Ağaoğlu Ahmed, high level representatives of the other ministries, section directors of the Ministry of Education, the Director of the Copyright and Translation Council (*Telif ve Tercüme Encümeni Reisi*) Ziya Gökalp, the representatives of the *Darülfûnun* (the university before the

university reform), the *Darülmuallim* (the teacher training schools), representatives of Fine Arts (*Sanayi-i Nefise*), Directors of Education and Culture of the office of the governor of the provinces, and teachers (Sakaoğlu, 1993, p. 19). The topics of discussion of the first meeting of the Scientific Council were (MEBTTKB Şûra Genel Sekreterliği, 1998, pp. 7-9):

1. The Executive Program of National Education (*Milli Eğitim Yürütme Programı*)
2. National Culture (*Milli Hars*)
3. Rules to be applied for the translation of valuable reference books into our language (*Üstün değerde müracaat kitaplarının dilimize çevrilmesinde takip olunacak esaslar*)
4. The Organization of the General Directorate of Statistics (*İstatistik Genel Müdürlüğü Teşkilatı*)
5. Comprehensive National Dictionary (*Milli Büyük Sözlük*)
6. National Music, Language and Literature (*Milli Müzik, Milli Dil ve Edebiyat)*
7. Library of National History (*Milli Tarih Kitaplığı*)
8. Documents of National Treasure (*Milli Hazine Evrakı*)
9. The Institutes of National History and Geography (*Milli Tarih ve Coğrafya Enstitüleri*)
10. Museum of Ethnography (*Etnoğrafya Müzesi*)
11. National Museum (*Milli Müze*)
12. Museums of Schools (*Okul Müzesi*)
13. Advanced Level Courses in Ankara (*Ankara'da Yüksek Seviyede Dersler*)
14. Changes in Primary Education Curriculum (*İlkokul Programında Değişiklikler*)
15. Instructional Programs for Lifelong Learning after Primary Education (*İlköğretimden Sonra Hayati Öğretim Programı*)
16. Proposal to Change the Primary Education Statutory Order (*İlköğretim Kararnamesinin Değiştirilmesi Teklifi*)
17. Regulations and Curricula for Male and Female Teacher Training Schools (*Kız ve Erkek öğretmen Okulları Tüzük ve Programları*)
18. The Organizational Structure and the Duration of Education in the Sultanis, and Changing the Name of Sultanis

(*Sultanilerde Teşkilaat ve Öğretim Süresi ve Sultani Adının Değiştirilmesi*)

19. The Esential Organization of High School Scouting (*Lise İzcilik Esas Teşkilatı*)
20. The Proposal about By-Laws for the Council of Supervision (*Teftiş Kurulu Tüzük Teklifi*)
21. By-Laws of Historical Artifacts (*Eski Eserler Tüzüğü*)
22. The Opening of Middle Level Sections in the Istanbul Male/Female Teacher Training Schools (*İstanbul Kız ve Erkek Öğretmen Okullarında orta kısım açılması*)
23. The Organizational Structure and Programs of Galatasaray Lyceé (*Galatasaray Lisesinin Teşkilat ve Programları*)
24. Vocational Information to be given to the Students of Higher Level Teacher Training Schools (*Yüksek Öğretmen Okulu Öğrencierine Mesleki Bilgiler Verilmesi*)
25. Principles for Education in Religion (*Din Eğitimi Esasları*).

According to Sakaoğlu, the first meeting of the Scientific Council was the first forum where problems related to education were discussed comprehensively and in detail. The issues under discussion were delegated to specific commissions where detailed analyses were made and reports were prepared. These reports were then presented to the general council. What is important is that the decisions made by this First Scientific Council were generally implemented (Sakaooğlu, 1993, p. 19).

When the topics of this first council are analyzed, one notices a framework which brings forth the principle of nationalism (National Education, National Culture, National Dictionary, National Music, Language, and Literature, National Documents, National History and Geography, National Museum). Secondly, the topics have a central theme of organization (The executive program of national education, rules for translating reference books, organization directorate for general statistics, organization of various curricula at different levels, organization of the *sultanis*, organization of the programs of Galatasaray Lyceé). Furthermore, according to Yıldıran (personal communication, September 7, 2006), the topics under

discussion are related to both formal and non-formal education, although this division is not overt but remains tacit (formal education related to the executive program of national education, organizations of various curricular programs, opening of various levels of schools; non-formal education topics related to national culture, national dictionary, national music, language, and literature, various museums, advanced level courses in Ankara, instructional programs for life-long learning). In addition, although program development is a central topic related to explicit curricula, there are implicit topics related to the hidden curricula. To illustrate, in the organization of high school scouting, there might have been shades of nationalism; while in the topic related to the principles of religious education, there might have been issues related to the laicization of education (Sakaoğlu, 1993, pp. 18-19).

The Government Program presented in the meeting of the Grand National Assembly on August 14, 1923, one day before the completion of the meeting of the First Scientific Council, included a large section on education. According to Sakaoğlu (1993, p.19), the emphasis given to education in the government program was inspired by the meeting of the First Scientific Council. The Government Program presented in the Grand National Assembly included the following topics[1]:

- The preparation of opportunities for the education of children, the public and the élite
- Enhancing vocational orientations by providing practical experiences to children of primary education

[1] The English form was translated directly from the text of Sakaoğlu (1993, pp. 19-20) on September 6, 2006. The original Turkish form is,

- *Çocukların eğitimi, halkın eğitimi, seçkinlerin eğitimi için imkânlar hazırlanması;*
- *İlköğretim çağındakilere, mesleklere yönelmelerini sağlayıcı pratikler kazandırılması;*
- *İlkokulu bitirenlerin devam edecekleri tarım, sanat, ticaret alanlarında iki yıllık bütünleme sınıfları açılması;*
- *Kız liseleri, kız sanayi idadileri ve kız öğretmen okullarının çoğaltılması;*
- *İlköğretimin bütün yurtta zorunlu kılınması programda yeralmıştı.*

- The opening of two-year complementary courses for graduates of primary education in the area of agriculture, art, and trade
- Increasing the number of lyceés, industrial *idadis* (secondary schools), and teacher training schools for girls
- Making primary education compulsory throughout the country.

The decisions of the Scientific Council of July 15, 1923 as well as the Government Program presented on August 14, 1923 have had an impact on the 1924 educational programs.

The Second Scientific Council Meeting

Vasıf (Çınar) arranged the Second Scientific Council meeting on April 13, 1924. The chair of the meeting was the Minister of Education, Vasıf (Çınar) and the other participants were the Undersecretary of the Ministry of Education, directors of the departments of instruction, some university professors, and directors of the teacher training schools for boys and girls, and high school principals. The subjects of the meeting were[1]

1. Decreasing the period of primary education from six to five years,
2. To divide junior and senior high schools into two separate levels, and to determine the duration of each level as three years, thus decreasing the number of years of secondary education from seven to six years,

[1] The English form was translated directly from the text of MEBTTKB Şûra Genel Sekreterliği (1998, pp. 9-10) on September 28, 2006. The original Turkish form is,

1. *İlkokul öğretim süresinin altı yıldan beş yıla indirilmesi,*
2. *Ortaokul ve liselerin ayrı ayrı birer bölüm haline getirilmesi ve her ikisinin sürelerinin üçer yıl olarak tesbit edilmesi, böylece orta öğretimin yedi yıldan altı yıla indirilmesi,*
3. *Öğretmen okullarının öğretim sürelerinin dört yıldan beş yıla çıkarılması,*
4. *Kız liselerinin de erkek liseleri gibi tam sınıflı hale getirilmesi,*
5. *Ortaokul, lise ve öğretmen okulu programlarının genişletilerek sosyoloji derslerinin eklenmesi,*
6. *İlkokul öğretim programlarının geliştirilmesi,*
7. *Ders kitaplarının yazdırılması.*

3. Increasing the period of instruction of teacher training schools from four to five years,
4. To make high schools for girls having complete classes[1] like high schools for boys,
5. Extending the programs of junior, senior, and teacher training high schools to include a sociology course,
6. The development of the primary school curricula,
7. The writing of the textbooks.

The main topic of the Second Scientific Council Meeting was again organizational. Among the topics discussed was the determination of the levels of education through secondary schooling (inclusive of the teacher training schools), their duration, and the development of the curricula of the primary schools, and the addition of a course (sociology) to secondary education. Item 4 deals with the equality of opportunity for girls and boys in secondary education. During the Second Scientific Council Meeting, special committees related to the topics on the agenda were formed, and reports were prepared by these committees which were discussed in the general council. Most of the decisions of the Council were implemented.

The decisions of the Second Scientific Council required major organizational efforts to form the modern educational system of the Republic. In order to get advice from the major educators of the western world, experts were to be invited to Turkey. During the ministry of Vasıf Çınar in 1924, the Ministry of Education invited John Dewey, who was a famous American philosopher, to observe and analyze the existing educational system of Turkey and to make recommendations for reform and restructuring (Turan, 1997, p. 9).

[1] In the book *Atatürk Devri Türk Eğitimi* (Turkish Education during Atatürk's Period) Prof. Mustafa Ergün explains item 4 of the Second Scientific Council Meeting as equalizing the programs of high schools for girls and boys. Therefore, the concept of a complete class for girls means a complete program for girls as for boys (1997, 2.4.1. "İkinci Heyet-i İlmiye Toplantısı").

The Third Scientific Council Meeting

Just after becoming the Minister of Education, Mustafa Necati organized the Third Scientific Council Meeting on December 27, 1925. The participants of the meeting were the Undersecretary to the Minister of Education, Chairman of the Committee of Supervision, Chairman of the Copyright and Translation Council, Supervisors, General Directors, Department Heads from the Ministry of Education, directors and teachers from high schools and teacher training schools. In this meeting, the following decisions were taken[1]:

1. More efficient use of subsidies for the National Education Organization allocated by the state and province budgets
2. Taking precautions to increase the capacity of schools in order to accept all children who apply for registration
3. Reorganization of lycées and the gradual increase of powerful lycées in specified centers
4. Gathering teacher training and other vocational schools in specified centers and strengthening them
5. Implementation of co-educational instruction in non-boarding junior high schools
6. Determination of pedagogical formation principles for teacher trainees
7. Establishment of a Board of Instruction and Education which will deal with issues related to instruction and education.

[1] The English form was translated directly from the text of MEBTTKB Şûra Genel Sekreterliği (1998, pp. 10-11) on September 5, 2006. The original Turkish form is,

1. *Devlet ve il bütçelerinden Millî Eğitim Teşkilâtına ayrılan ödeneklerin daha yararlı bir şekilde kullanılması,*
2. *Okullara kayıt için başvuran çocukların, tümünün kabul edilmeleri için okul kapasitelerini artırıcı önlemlerin alınması,*
3. *Liselerin yeniden düzenlenmesi ve belirli merkezlerde kuvvetli liseler açarak yavaş yavaş çoğaltılması,*
4. *Öğretmen okulları ile diğer meslek okullarının, belirli merkezlerde toplanması güçlendirilmesi,*
5. *Yatısız ortaokullarda karma öğretim uygulaması,*
6. *Stajyer öğretmenlere verilecek pedagojik formasyonun esaslarının tesbit edilmesi,*
7. *Talim ve Terbiye işleri ile meşgul olmak üzere bir "Talim ve Terbiye Dairesi" kurulması.*

As can be observed from the items, the Third Scientific Council Meeting was about the efficient use of the budget allocated to the ministry (item 1), the betterment of school facilities (items 2, 3), training of teachers (items 4 and 6), coeducational instruction (5), and the establishment of the Board of Instruction and Education (7).

The Reports of Foreign Experts on Turkish Education during the Period of Atatürk (1919-1938)

"Preliminary Report" and "Report and Recommendation upon Turkish Education" by John Dewey (1924)

I. Preliminary Report

Dewey studied the Turkish educational system and observed the instruction given in the schools. Dewey completed his short seven-page *Preliminary Report* in September 1924 while he was in Turkey, and submitted it to the Turkish government, (Turan, 1997, p. 9).

Dewey generally deals with three topics in this preliminary report: The structure of the Turkish educational system, the structure and architecture of schools for practical, active learning and their functions as community centers of "industrial regeneration as well as of intellectual" contribution, and the importance of teacher training (Dewey in Boydston, 1988, p. 301-307).

1. Teacher Training

According to Dewey, teacher training is the most important aspect of education. He says, "It is most important therefore that the question of the construction and the equipment of the school building be given attention second only to that of the preparation of teachers", (p. 303). On teacher education Dewey makes the following

suggestions "...no real improvement of education can be made without improvement in the preparation of the teachers both in scholarship and in acquaintance with the most progressive and efficient pedagogical methods…" (p. 301). In order to train teachers, Dewey suggests an increase in the facilities for translating, publishing, and circulating the educational literature from countries which have progressive education. The second recommendation is the formation of discussion groups among teachers so that they will share the different reading materials which are assigned to them. Thirdly, Dewey emphasizes the importance of learning through "actual experience" in order to secure the "initiative and self-activity of pupils" (p. 302). Thus teachers instead of demonstrating the experiments themselves through the use of the apparatus for physics and chemistry courses in high schools, or showing students the charts illustrating plant and animal life in schools, must learn to develop and construct simpler and less expensive material which can be used by every child. Dewey also suggests for teacher training that the Ministry of Education together with the cooperation of local authorities might send 'traveling exhibits' of models of instructional materials which can be given to a school for a few weeks for reproduction there and then be sent to the location of another school. Unless students have the experience themselves, other teacher centered methods, according to Dewey, have the disadvantage of putting "premium on passive methods and an almost exclusive use of the memory at the expense of judgment, invention and executive capacities" (p. 303). Another suggestion is the "provision for sending abroad each year for a number of years a commission of experienced teachers, together with representatives of the central and local educational authorities who should visit different countries and make comparative investigations of assigned topics", (p. 304).

For teacher education, Dewey also suggests the development of normal schools. In the United States, the concept of normal school was used for the primary school teacher training institutions. The name originally comes from the French *école normale* because, in the early nineteenth century, these schools trained teachers who were expected to uphold norms or rules (Stamp, 2007). For Dewey, in normal schools which will be established in Turkey, there should be departments for domestic science teaching, manual training and industrial education with industrial drawing and design, mechanics, physical education with outdoor sports, physiology and hygiene, and agriculture. Into these teacher training schools, students could at first be admitted after elementary school. Secondly, those, who are graduates of the first three years of secondary education, should be accepted. Further, Dewey suggests that during the last two years of the normal school, there should be sections to train directors and inspectors, selected from among the most promising students (pp.301-306).

Architecture and the Planning of School Buildings: In terms of the architecture and the planning of school buildings, which in importance Dewey sees only secondary to teacher education, he suggests, "No steady development of a progressive education is possible without buildings which have proper sanitary and toilet facilities, places for manual training, domestic science, drawing and art, library, museum, etc. " (p. 303). The buildings should be adapted to the promotion of manual and other personal activities. For this aim Dewey suggests the training of architects who not only know their profession but also the functionality of school buildings (pp.303-304).

2. The Turkish Educational System

Dewey also focuses on the formulation of a step by step plan for the future considerations of the Turkish educational system. Dewey suggests practical and vocational work for the elementary school, including the upper grades. He suggests the establishment of middle or continuation schools for those who are not going to apply to the university but want to wprk in the agricultural and industrial sectors as well as for those who have not completed elementary schools but want some practical training. He also suggests the establishment of normal schools, with a vocational middle school including agricultural, industrial and commercial, vocational and practical sections. These new types of normal schools may be added to the other normal schools or may start as separate institutions. Dewey also emphasizes rural schools and rural development, cooperative societies and adult education, giving Denmark as the most prominent example, and Holland and Switzerland as other possible examples (pp. 304-305).

3. Summary of Budget

In the second part of the preliminary report, John Dewey recommends a summary of the budget, including items and sub-items for educational expenditures. After this summary of the budget, he gives two underlying principles for the above stated recommendations. These are,

1. The Turkish schools do not need particular isolated forms as much as they need a consecutive plan of development considering number of years. It is better to postpone even desirable developments until the questions have been thoroughly studied and persons have been prepared to carry out the new plans, rather than to introduce them prematurely. The latter course will lead to aimless changes and to instability.
2. The Ministry of Public Instruction is the proper centre for forming commissions to study and prepare plans for these

> developments. This method will protect the Ministry from the danger of becoming bureaucratic, too much preoccupied with formalities, "red-tape," and clerical routine work. It should concentrate its activities upon becoming the intellectual and moral leader and inspirer of Turkish education and avoid all activities which do not lead to this end. Intellectual centralization and diversity and decentralization of practical execution and details should be the aim, (p. 307).

Dewey's general warning for the structuring of the educational system is that it must develop in proportion to the expertise obtained to make the changes.

I. Report and Recommendation upon Turkish Education

The final report of Dewey, which he completed in the States, was published in 1939 (Turan, 1997, p. 9). Entitled *Report and Recommendation upon Turkish Education,* it consists of twenty three pages.

1. Aims and purposes of schools in Turkey

John Dewey begins with an introduction, focusing on the statement of the aims and purposes of schools in Turkey as a means to form a program of progressive and gradual development. In the introduction, Dewey states the main end to be secured by the educational system in Turkey as "...the development of Turkey as a vital, free, independent, and lay republic in full membership in circle of civilized states" (Dewey, op. cit., p.275). Dewey also states what schools must do in order to achieve this end:

> 1. form political habits and ideas
> 2. foster the various forms of economic and commercial skill and ability
> 3. develop the traits and dispositions of character, intellectual and moral, which fit men and women for self government, economic self support and industrial progress; namely, initiative and initiativeness, independence of judgment, ability to think scientifically and to cooperate for common proposes socially (p. 275)

Thus, Dewey emphasizes the education of the masses not only for them to become leaders but also for their intellectual participation in the political, economic and cultural growth of the country. According to Dewey, these demands require schools to be community centers besides training students in different academic subjects. In addition, schools should be centers of economic and industrial information for the community. Dewey, however, emphasizes the cooperation of schools and industries. He states, "Just as the schools should be in connection with the public, hygienic and industrial life of the nation, so all industries, especially those under public control, should have an educational aspect" (p. 276).

Later in the *Report and Recommendations upon Turkish Education*, Dewey gives specific and detailed suggestions about the program (formation of an educational plan), the Organization of the Ministry of Public Instruction, the training and treatment of teachers, the school system, health and hygiene, and school discipline (pp. 277-295).

2. Educational Programs

What he says for the educational programs is that these must be well-planned and stable, not requiring changes later on. The ministry must conduct preliminary studies of the program with existing educational organizations (pp. 277-279).

3. Organization of the Ministry of Public Instruction:

The section entitled Organization of the Ministry of Public Instruction specifies the different sections required by the ministry which include "the Educational Literature" section responsible for the translation and provision of progressive educational material, and the dissemination of books to school libraries as well as homes, to raise public awareness for acquiring knowledge. Another section,

according to Dewey, must be 'School Construction', where schools which include practical learning are designed by educational experts working with architects. "The Information" section should have the statistical data of students, teachers, and schools, in service and leaving service. In this section, Dewey delineates the function of the Ministry as "intellectual and moral leadership and inspiration, rather than detailed administrative supervision and executive management", (p. 281).

Dewey makes a distinction between unity and uniformity, stating that the Ministry must have a unifying role through centralization; however, this centralization should not stifle the different needs of various localities and local interest and initiative. Dewey suggests that a mechanical system of uniformity which stifles local needs and diversities may be harmful to unity. Dewey states, "Unity is primarily an intellectual matter, rather than an administrative and clerical one. It is to be attained by so equipping and staffing the central Ministry of Public Instruction that it will be the inspiration and leader, rather than the dictator of education in Turkey", (p. 281). He suggests differentiated middle schools, agricultural or industrial, according to the givens of different local communities. Inspectors should not only report what goes on in schools, but there should be a group of traveling inspectors who can make suggestions for the improvement of local teaching staff and administrators (pp. 278-283).

4. Training and Treatment of Teachers

The next topic Dewey deals with is under the heading of Training and Treatment of Teachers. According to Dewey, there are two problems related to this topic. The first is related to the administrative treatment of teachers and their salaries. Unless teachers earn adequate salaries so that they can deal with the cost of living, teacher

candidates will not be attracted to the profession, there will be resignations and teaching will not be a respected profession. He states, "thus the question of scale of salaries is the central question of Turkish education." (p. 284). Dewey, after stating that "There is unanimity that present conditions are not satisfactory in either of these respects" (p. 283), begins to list his recommendations. First, Dewey suggests a considerable amount of increase in the salaries of teachers since the conditions are not satisfactory for teachers to attain "a suitable standard of living". Unless provided with a sufficient level of income, teachers may see the teaching profession as their second jobs and they may not be able to give their whole heart and mind to their teaching because they have to work in another job to support their families and pay their bills. For Dewey, the situation is more difficult for teachers living in large cities. Therefore, Dewey proposes a scale of salaries. Moreover, as financial support for schools, Dewey suggests "…allotting unused lands to school purposes" (p. 284). The second consideration of Dewey is about the tentative positions of the administrative staff. Since quick changes in the staffs' positions affect their life styles, Dewey recommends the provision of a continuous residency. He further suggests, for cases when changes are necessary, that the persons should be informed before the end of the previous school year. Dewey, who sees the third problem as the "housing of teachers", proposes "…a land and a house for the teacher in close connection with the school", (p. 285). Lastly, Dewey focuses on procedures related to the expenditures of schools which are managed by the directors. Especially in larger cities, to save the energy and time of the directors, Dewey states that "…there should be two administrative directors, one for educational matters, and the other for business and clerical details" (p. 286).

The second issue is the *Training of Teachers*. In this part, Dewey includes the normal schools and the professional development of teachers already in service as well as the selection of directors, inspectors, and members of the staff of the central ministry and provincial offices from teachers in service (p. 286).

The first point Dewey states is about the needs of normal schools. Related to normal schools, Dewey suggests that these schools should be the model of progressive teaching by practice or precept in terms of the methodology used, equipment, and the management of the elementary and secondary practice schools, their buildings and grounds. According to Dewey, for the teachers in normal schools, there should be a one-year program (in every five or six) for studying in Turkey or abroad with full pay. As another necessity of the normal schools, Dewey points to differentiation between these schools. According to Dewey, there should be separate schools for training rural school teachers, industrial and commercial school teachers, school administrators, and inspectors. Unless teachers from rural areas are given instruction related to rural needs, undesirable outcomes may be observed according to Dewey. He states,

> It would give a system of education which would be theoretical and scholastic, and which might easily divert the younger generation from rural life without giving them capacity for anything else. Moreover the development of national prosperity of Turkey depends so closely upon improvement of agricultural processes… (p. 287)

The second point Dewey makes about teacher training is the opening of "correspondence courses" as an additional suggestion to the reading circles, where teachers meet in the school library or community centers to discuss material that is shared in terms of books and other published works both from Turkey as well as from other countries. This he had discussed in the preliminary report. These courses

can be provided by the ministry of public instruction or by the normal schools. Dewey sees it worthwhile to prepare a summer school program for these courses. Thirdly, Dewey proposes a sending abroad plan for experienced teachers, directors and administrative officers inclusive of the Ministry of Education. Dewey thinks that great pedagogic benefit can be gained from sending these professionals abroad. They may be more discriminating, and not copy the methods of the foreign country in which they receive training (p. 286-288).

5. The School System

The other heading in the final report of John Dewey is The School System. In this section, Dewey suggests that each level of the schools should be a "complete unit" in itself (pp. 288-289). For elementary schools, Dewey proposes that they should be adapted to "local conditions and needs", so that the school studies will be connected with the life of the pupils. As a result, the school studies will attract students' interest by serving them practically. Dewey considers the flexibility of the system "to accommodate to the local conditions especially the economic (p. 289)". This can be the arrangement of the school hours for working children in order to lower attrition rates. In addition Dewey also recommends the establishment of continuation elementary schools, in the towns or rural districts which include practical studies of agriculture and industry (p. 289), depending upon local needs. As stated in the *Preliminary Report*, these schools are intended for those who have not completed elementary schools or who wish to gain practical training without continuing to higher levels of education.

For the middle schools, Dewey again recommends the adaptation of school studies to the "life-needs of pupils". After he focuses on the necessity of

differentiation among middle schools, as agricultural, industrial and commercial schools, Dewey suggests the development of studies of the sciences and foreign languages in some lycées in Istanbul and Erzurum. For the choice of second language, Dewey suggests that probably French would be the most common foreign language, but that German and English should also be taught in some schools. Moreover, Dewey proposes the establishment of premedical courses for the preparation to medical schools. In addition, as far as the teaching of subjects in middle schools is considered, Dewey warns against two undesirable outcomes. The first is the isolation of the subjects from one another (e.g. science from mathematics) and the second is the irrelevancy of the school subjects to practical life. Lastly, Dewey focuses on the problem of having teachers teach in several schools, in order to fulfill time requirements. Thus according to Dewey the teacher "…feels little or no responsibility for the welfare and social and moral tone in general; there is little spirit de corps; and at the best he is an instructor rather than an educator", (p. 291).

For the Superior Schools (University), Dewey sees the most important issue as the selection of the right teachers "…who are thoroughly trained in modern methods and who are devoted to the improvement of the intellectual condition of Turkey." (p. 291). Then specifically for teacher training, he recommends that even though the university prepares teachers for the upper classes of the middle school, the teachers of lower levels should be trained in normal schools to prevent the middle schools from becoming too academic. Besides teacher training, Dewey also thinks that technical and engineering training are the most important needs of Turkey. This need can be met by sending students to foreign countries to study. Other than teacher training and technical and engineering training, Dewey recommends the establishment of the Department of Archeology, mainly for the protection of ancient

remains. Another recommendation is the establishment of the Department of Public and Social Service, which would be staffed by those who are interested in charity and philanthropy (pp.291-292).

In "the School System" section, Dewey mentions his views about orphanages. Although Dewey thinks that "The great weakness of almost all schools, a weakness not confined in any sense to Turkey, is the separation of school studies from the actual life of children and the conditions and opportunities of the environment.", (p. 293)", he was very impressed with the practical learning environment in the orphanage that he visited in Istanbul. According to Dewey, their agricultural and horticultural activities, animal caring, and bee-raising could be "educational experiment stations" for other public schools (pp. 292-293).

6. Health and Hygiene

The sixth topic in the final report is called Health and Hygiene. For Dewey, Health and Hygiene are the most fundamental issues. After focusing on the loss of Turkey, especially from malaria and trachoma, Dewey suggests

> …cooperation of physicians and health authorities with teachers and pupils in the schools… an active health campaign to call the attention of citizens in general, and students and teachers in particular to the question of health, and the possibility, with modern scientific methods and the dissemination of knowledge, of immensely reducing the amount of physical ills from which the people of Turkey suffer (pp. 293-294).

Dewey recommends the cooperation of the ministry of public instruction with the department of public health to inform people. At the end, Dewey praises the admittance of women to medical schools as well as the establishment of nursing colleges (pp. 293-294). He says that women would facilitate the public's access to health services by home visitations.

7. School Discipline

As the seventh topic, Dewey mentions his views on *School Discipline*. Dewey finds the school discipline and the methods of training too formal for the citizens of the Republic. Dewey states "Methods of dictation, arbitrary control and mechanical obedience do not fit pupils to be citizens in a democracy", (p. 294). Therefore, John Dewey recommends educational authorities and teacher organizations to form "…systems of school management which ensure participation and understanding on the part of the students", (pp. 294-295).

8. Miscellaneous

Finally, in the section called Miscellaneous, Dewey focuses on three different issues. As the first issue, Dewey praises the printing office of the Ministry of education for doing excellent work and for having an efficient management. However, he suggests the modernization of the obsolete machines. Dewey states that this will make the printing five times faster and protect the director from detailed bureaucratic procedures of purchasing. The second issue which Dewey points out is the convincing capacity of the Turkish youth in drawing, painting, and the arts of design. Dewey evaluates this capacity as worthy of being cultivated and having economic value. From this aspect, he appreciates the work of the art school in Istanbul. However, Dewey points to the need for building the school for the special purposes of art work and for providing the necessary equipment. As the third and final issue, Dewey focuses on the private and non-governmental schools. Dewey recommends these schools to supplement some public schools and also to engage in the development of new methods. Since private schools have better opportunities, Dewey thinks that private schools can implement new methods. If satisfactory results

are obtained, these methods can be implemented in the public schools. In other words, private schools can be experimental stations for public schools (pp. 295-296).

In summary, John Dewey wrote his report on the general aims of the Turkish educational system of the Republic. According to Dewey, an educational system with a gradual, long-term developmental plan is necessary in order to educate the active citizens of a modern, democratic society. He suggests a pragmatic philosophy of education that implies the consideration of the practical needs of the country, agricultural, social, medical, industrial, technical, and commercial. In his report, by introducing the problems of the Turkish educational system and by making suggestions to overcome these problems, Dewey tries to explain how Turkey can actualize such an educational system. Dewey makes suggestions for the organization of the Ministry of Education and focuses on the unifying role of its centralization, but warns against uniformity. Especially for middle schools, his suggestions are the meeting of local needs by making education relevant to these, while for normal schools he suggests different agricultural, industrial, technical, commercial and medical (nursing schools) curricula for teacher training to meet local and national needs.

Report on the Improvement of Vocational Education (*Mesleki Terbiyenin İnkişafına Dair Rapor*) by Alfred Kühne (1925)

Alfred Kühne investigated in vocational schools in Ankara, Eskişehir, Bursa, İzmir, Istanbul in Life Schools (*Hayat Mektepleri*). Life schools were the five-year vocational schools established in 1924 against the arguments for decreasing compulsory education from 6 to 5 years, the decision of the Second Scientific

Council taken on April 13, 1924. The Minister of Education Vasıf Çınar had promised that Life Schools would compensate for the loss of a year in compulsory education. Some such schools for boys and girls had already been established starting from March 1924. Instruction in these schools would be given in French, teaching French first, and gradually shifting from Turkish to French as the language of instruction. Life schools would train mechanics, drivers, electricians, cinema operators, hotel personnel, tourist guides, etc. These schools, however, were closed down in 1928, because they did not produce the desired outcomes (Ergün, 1997, 2.6.1.1. "Genel İlkeler").

Kühne gave a report called the "Report on the Improvement of Vocational Education" (*Mesleki Terbiyenin İnkişafına Dair Rapor*), after his investigations in these schools (Ergün, 1997, 2.8.2. "Eğitim İnkılâpları Döneminde Getirilen Yabancı Eğitim Uzmanları"). The seventeen-page report of Kühne (which was published in February 1, 1939, during the ministry of Hasan Âli Yücel), starts with the need for better education in Turkey. At the beginning of his explanation, he states that the reforms in Turkey could be compared to the reforms of Western Europe of the eighteenth and nineteenth centuries. According to Kühne, improvements in the political, military, and intellectual arena are not enough to create a modern nation state. Modernizing the administrative system is necessary not only as a powerful vehicle for development but also for efficiency in economic life. In order to organize and form the necessary administrative system, Kühne suggests better education. He says, "It is necessary to educate people better than was the case under the old regime

in order to meet the requirements of economic life[1]". The report focuses on two points to answer the question of how education can be ameliorated. According to Kühne, at first, it is necessary to consider the conditions and the needs of the public. Secondly, he states that "The experiences of Germany and Western Europe cannot be directly transferred,…[2]". Instead he suggests the investigation of what the conditions in Turkey require. Aligned with this thought, Kühne proposes the study of the experience of Germany under the leadership of Kershensteiner in the formation of a system of vocational instruction and education (pp. 1-2).

I. Schools Which Give General Education (*Umumi tahsil veren mektepler*)

In the section Schools Which Give General Education (*Umumi tahsil veren mektepler*), Kühne emphasizes the importance of general education as the foundation for vocational education. He focuses on several obstacles in the educational system of Turkey. First, he points at the shortage of teachers trained in teacher training schools in relation to the population requiring compulsory education. This point was also made by John Dewey. Another point on which Kühne and Dewey agree is the inadequacy of the number of school buildings. Kühne suggests dual instruction in school buildings, where these buildings would be used twice a day for two different groups of students. Each group would attend school for half a day (morning or afternoon) for 24 hours a week. Another point Kühne focuses on iss the length of time reading and writing required. His suggestion was changing the script where languages having the same roots as Turkish like Hungarian and Finnish could be

[1] The English form was translated directly from the text of Künhe (1939, p. 1).by the author of the thesis on October 2, 2006. The original Turkish form is, "*İnsanları iktisadiyatın vazifeleri için eski rejim tahtında olduğundan daha iyibir surette yetiştirmek lâzımgelmektedir*".

[2] The English form was translated directly from the text of Künhe (1939, p. 1) on October 19, 2006. The original Turkish form is, "*Almanya ve Garbi Avrupa'da yapılmış olan tecrübeler doğrudan doğruya deruhte olunamaz;*".

taken as examples. Kühne saw changing the script as an important step in westernization (pp. 2-6).

The next point Kühne focuses on is the training and education of primary school teachers. According to Kühne, "The most fundamental point in vocational education is the education of primary school teachers so that they become aware of the requirements of practical life and educate their students to develop the right idea for a profession[1]", (p. 3).

Kühne praises the arts and crafts courses in primary schools as well as the special arts and crafts courses for women in schools for girls. He further condones the newly developing teacher training institution at the Gazi Education Institute (*Gazi Eğitim Enstitüsü*) For Boys in arts and crafts under the auspices of İsmail Hakkı (Tonguç), who was educated in Germany in arts, sports and labor schools, and who later wrote the proposals of The Village Educators Project (*Köy Eğitmenleri Projesi*) and the Village Institutes Project (*Köy Enstitüleri Projesi*) (Başgöz & Wilson, 1969, pp. 161-162). Like Dewey, Kühne emphasizes practical agricultural education. He suggests field work and gardening experience for teachers. Rather than being agricultural specialists, teachers would then be familiar with the tasks of farming. Kühne states that there are already some teachers who are equipped with practical skills. This kind of practical education included in teacher training would meet the requirements of instruction in labor schools. While praising the "very

[1] The Eglish form was translated directly from the text of Künhe (1939, p.3) by the author of the thesis on October 2, 2006. The original Turkish form is, "*Mesleki terbiyede en esaslı nokta, ilkmektep muallimlerinin pratik hayat ve vezaifini idrak etmeleri ve talebelerini doğru bir meslek fikri ile terbiye eylemeleridir*".

effective and exemplary[1]" Teacher Training School in Istanbul (*Istanbul Muallim Mektebi*), he focuses on the need for adequate facilities for practical training. Kühne suggests the formation of three higher educational institutions, i.e, a school of agriculture, a school of engineering, and a school of commerce, to develop the manpower for practical educational needs (pp. 3-4).

An important problem that Kühne focuses on is the low number of primary and secondary schools in proportion to the population of Turkey. In addition, Kühne emphasizes the low number of students graduating from lycées through matriculation, which results in the shortage of academic staff trained in various academic subjects. He suggests a revision of the education and examination system so that the student progress through the year becomes an important criterion for decisions. Kühne states that the "final examination gives the absolute result only in suspicious conditions", (p. 3).

According of Kühne, the method of instruction must also change from passive listening to the active participation of all students in instruction. Active participation must follow teacher presentations. This kind of instruction, he states, takes place in the Teacher Schools of Istanbul and Izmir which seem to be equivalent to the education given in Germany. The other schools, however, follow methods in which students are mere listeners to teacher presentations followed by only one student's repetition of the lecture. Kühne suggests that active methods must be used especially in higher teacher training schools which will educate the professors of secondary education (pp. 3-4).

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[1] The English form was tarsnlated directly from the text of Kühne (1939, p. 3) on September 19, 2006. The original Turkish form is "*...pek mükemmel bir tarzda müesses ve numune olacak surette çalışan Istanbul Muallim Mektebi*".

Kühne also states the possible threats to improvements in education, based on his observations. Firstly, Kühne draws attention to the speed of the reforms combined with the frequent replacement of directors, which he warns to have negative effects on education and instruction. In his report, Dewey also focuses on the difficulties the directors whose living and working environments change frequently experience. For this problem, Kühne's suggestion is waiting until the present reforms lead to desired consequences rather than making new reforms constantly without obtaining results. As a second important threat, Kühne focuses on the inadequacy of teacher salaries. This was also the topic which Dewey emphasized in his report. Like Dewey, Kühne understands the difficult conditions of the new Turkish state, trying to build its administration, army, and railways. However, both educators think that the salaries do not allow teachers to live even modestly, requiring them to seek additional jobs. Again for Dewey and Kühne, the problem is even more dangerous for teachers who work in cities with a high standard of living. Kühne suggests increasing salaries according to the standard of living in the particular place where the teacher works. Kühne thinks that if the salary problem is not solved, capable and energetic people will not want to be teachers. This is especially important for the industrial and commercial school teachers who have opportunities of earning better salaries because of the need for their qualifications elsewhere in society. Thirdly, Kühne recommends allocating more money to schools. Kühne states that the amount of scholarships students in boarding schools receives seem excessive despite the fact that the economic conditions of civil servants merit this. He sees no other solution than parents having to make economical contributions to schools (pp. 2-6).

II. Vocational Training and Educational System (*Mesleki Tahsil ve Terbiye Tesisatı*)

In the section Vocational Training and Educational System (*Mesleki Tahsil ve Terbiye Tesisatı*), Kühne makes suggestions related to vocational education based on his observations (p. 6). First, Kühne focuses on the "Education of vocational careers" (*San'at meslekleri terbiyesi*), in which he makes suggestions for vocational institutions.

1. Education of vocational careers (*San'at meslekleri terbiyesi*)

He states that even though there is a viable functioning foundation for primary and secondary education, this is not the case for vocational specialist education. However, Kühne sees the possibility of future improvement in some of the vocational institutions. Kühne divides vocational education into (1) training apprentices and specialized skilled workers, and (2) training technicians.

a. Institutions for training apprentices and specialized skilled workers (*Çırak ve ihtisas amelesinin yetiştirilmesine mahsus müesseseler*)

On the "Institutions for training apprentices and specialized skilled workers" (*Çırak ve ihtisas amelesinin yetiştirilmesine mahsus müesseseler*), Kühne makes the following comments (pp. 6-7):

1) Railway apprentice ateliers in Eskişehir and Haydarpaşa (Eskişehir ve Haydarpaşada şimendifer çırak atelyeleri): These are four-year schools which admit students who have completed their primary education. Students live with their parents and they get an allowance. In these schools, besides practical education, students gain knowledge in art, algebra and vocational education which lasts six hours a week.

2) Military ateliers in Tophane (Tophanede ordu atelyeleri): These are the four-year boarding schools which admit students who complete

primary (*iptidai*) education. In these schools, theoretical courses last for 18 hours a week.

3) Industrial schools in Istanbul, Izmir, and Ankara (Istanbul, Izmir ve Ankarada sanayi mektepleri): The entrance to these schools requires five years of primary education (for Ankara, three years). The education in these schools lasts four years (for İzmir, three years). For some students, the schools offer board and are free of charge. The subjects taught are mining and woodwork, (also tailoring in Ankara).

4) Apprentice ateliers in Ortaköy *darüleytams* (dormitories for orphanages Ortaköy darüleytamları çırak atelyeleri): In these schools, children who are between the ages 12-18 and who have completed their primary education get apprentice education in woodwork and tailoring.

5) Two-year education in the department of industry in Ankara Agricultural School (Ankara Ziraat Mektebinde iki senelik sanayi şubesi)

6) Private basket weaving schools in Izmir (Izmirde hususi sepet örme mektebi): Students enroll without payment, not receiving an allowance, receiving practical training. The state pays for the students. In these schools, students do not get any theoretical education.

Vocational education in Turkey differs from that is Germany and Western Europe due to the absence of apprenticeship with a master. In Europe, master craftsmen train their apprentices totally by themselves, a system that has lasted 600 years. Apprentices are trained 3-4 years under the supervision of the master, after which they take an examination given by the experts of the chamber of industry. If apprentices pass the examination, they become foremen (*kalfa*). After a few years, they pass the mastery exam and gain the right to train their own apprentices. Kühne

thinks that, in Turkey, it is not easy to allocate resources to such a system of training apprentices because of the shortage of master workmen, craftsman's organizations, and the binding force of traditions. For Turkey, Kühne suggests that learning ateliers can be developed in the existing institutions of the railways, the military, and the navy to supply the necessary skilled workers. These institutions must train large numbers of apprentices. While in Germany the ratio of apprentices to specialized workes is 10%, in Turkey, Kühne suggests that this could be 25-30%. (pp. 7-8). It is indeed curious that Kühne does not know or write about the master/apprentice system which existed in the Ottoman Empire, which provided the only method of becoming skilled in any trade. As a matter of fact, those who did not pass through the experience of apprentice-foreman-master were not included in the guild of any trade and were not admitted to *bedestens* (an international trade organization which symbolizes the center of a city and in which rich merchants worked) during the fifteenth and sixteenth centuries (İntepe, 2006).

Considering the training of crafts, Kühne thinks that the importance of handicrafts must be recognized. He praises the industrial schools in Istanbul and Izmir as examples. However, he thinks that there is a need to repair the buildings of these schools, and even suggests the rebuilding of the school in Ankara. Moreover, Kühne suggests changing the stipulations of industrial schools. He proposes that the reforms in the Istanbul and Izmir schools could serve as guidelines. Secondly, Kühne states the necessity of common theoretical courses for different vocations as well as particular theoretical ones for each. According to Kühne, especially during the second phase of vocational education, available technology, professional knowledge, and price calculations should be taken into consideration. Kühne states that the practical and theoretical courses to educate apprentices for mining in Germany

constitute a "perfect" guide for Turkey. He also points to the fact that the foreign language taught in the school of handicrafts is French. However, the well-administered school of the army teaches German instead of French because according to the principal, in technical education the German language seems to be more beneficial. Thus, the switch to the German language even in the school of handicrafts, must be investigated. Furthermore, Kühne makes two suggestions for the school of handicrafts. First he suggests decreasing practice hours to a minimum so that students can do productive work not only to meet the expenses of the school but also to make economic contributions to the school beyond these expenses, which seems to be best implemented in the Izmir school. Kühne's second suggestion is the opening of courses for day students in the school of handicrafts. While boarding students take theoretical courses, day students could use the ateliers. In addition, Kühne suggests the training of handicraftsmen in *darüleytams* (dormitories for orphanages). For Kühne, the crafts produced in *darüleytams* could be solicited by the public for a fee, and should be exhibited at least during the final years of education. Theoretical work should not exceed 6-8 hours per week (pp. 8-10).

b. Training of technicians (*Teknisyen yetiştirmek*)

The second topic examined under the heading of "Education of Vocational Careers" is the training of technicians (*teknisyen Yetiştirmek*). Kühne begins this section by stating the absence and inadequacy of different types of technical schools to train the necessary manpower in Turkey (p. 10-12). First, he focuses on the inadequacy of institutions which train technicians to supervise arts and crafts, and make and draw technical plans. As an example, Kühne focuses on the Istanbul School of Conductors (*Istanbul Kondüktör Maktebi*), which trains people for the railways in four semesters. Kühne thinks it necessary to enlarge this school to meet the needs for conductors in

the railways. Further, he recommends that this institution be transformed later into a construction school which trains architects. The architecture department of the school of fine arts (*Sanayiî Nefise Mektebi*) could then merge with this school. Kühne states that only artistic education is not sufficient. It is also necessary to provide a strong education for construction technicians who would help the settlement plans of the country and its population policies. This school could also train land surveyors so that regulations related to land ownership could be formulated. Kühne draws attention to the training of experts to draw the birds-eye view of the landscape so that borders could be established. In addition, Kühne focuses on the need for a machine construction school to train experts for middle level technical responsibilities in clerical and managerial work. He suggests the necessity of forming such an institution in the Istanbul Industrial School (*İstanbul Sanayi Mektebi*), the Higher School of Engineering (*Mühendis Mektebi Âlisi*) and the apprentice ateliers of the army. The cost of a school for machine construction would be around two million golden German marks. Although there might be teachers in Turkey who could teach in schools of machine construction, it is also suggested that foreign experts be used and students be sent abroad. Kühne states that he was not aware of any vocational schools for industrial textiles except for the ones in Ankara and Izmir. The establishment of such schools would be expensive and must depend upon the development of the industry proper. Kühne says that there are no institutions for decorative arts. The School of Fine Arts only deals with painting and sculpture. In both areas, Kühne states, the quality of work seems excellent. But as in Germany, these areas can be transformed to handcrafts. Lastly, Kühne writes his comments on the Higher School of Engineers in Istanbul. For this school, he suggests

decreasing the years of education from 6 to 4, the implementation of more practical education, and the addition of a science section as in Germany (pp. 10-12).

2. Education for commercial vocations (*Ticaret mesleği için terbiye*)

The second main issue under the heading *Vocational Training and Educational System* is the "Education for commercial vocations" (*Ticaret mesleği için terbiye*). His comments on the issue are as follows:

1. Applied commercial schools for youngsters who have completed primary education and are suitable to be trained for small enterprises. Such a school seems to exist within the structure of the Istanbul Higher School of Commerce (İstanbul Ticaret Mektebi Âlisi). Kühne states that has been told that similar schools exist in Trabzon Konya, etc.

2. Commercial high schools which provide strong education of commerce and foreign language and train associates for large scale commercial banks and industrial enterprises. Kühne states that he found four different schools which had this responsibility. Among these are:

   A. The Istanbul Commercial High School (Istanbul *Yüksek Ticaret Mektebi*) attached to the Higher School of Commerce (*Ticaret Mektebi Âlisi*): This three-year school admits boys and girls who have successfully completed the first phase of secondary education or applied commercial schools.

   B. Galatasaray Commercial High School (*Galatasaray Yüksek Ticaret Mektebi*): This two-year school admits students who have completed the first stage of secondary education (*tâli kısım*) in the Galatasaray lycée.

   C. Istanbul Life School (*Istanbul Hayat Mektebi*): This five-year commercial school offers practical education for boys and girls who have completed primary education.

D. Izmir Language and Commercial School (*İzmir Lisan ve Ticaret Mektebi*): This four-year school admits students who have completed primary education.

3. Istanbul Higher School of Commerce (*İstanbul Ticaret Mekteb-i Âlisi*) is the three-year school which admits students who are graduates of high school and commercial high schools. Accounting (*usulü defteri*), banking (*bankacılık*), economy (*ulûmu iktisadiye*), and law (*hukuk*) comprise the departments of this school. The aim of this school is to educate high level officials and autonomous directors, (pp. 12-13).

Kühne focuses on the inequality among different schools. For example, while some schools (i.e. Galatasaray High School) had all the necessary equipment, in life schools (*hayat mektepleri*), the opportunities were very limited. Despite the limitations however, schools were able to function with enthusiasm. Kühne suggests that life schools should also be well equipped for practical training. He complains about the absence of schools which give serious commercial instruction for 8 hours a week to apprentices who learn commerce practically in trade centers. The most important point for the development of commercial education, according to Kühne, is teacher training. Teachers in these schools of commerce have either deficient knowledge of commerce because they are teachers who have graduated from any institution of higher education, or they know commerce but lack the pedagogical knowledge necessary to teach (pp.13-14). The Istanbul Higher Commercial School does not give theoretical knowledge at the level of its German counterpart. Kühne suggests the seminars offered by the German higher commercial institutions.

3. Home economics education (*Ev İdaresi Terbiyesi*)

The third topic under the heading of *Vocational Training and Eduacational System* is "Home economics education" (*Ev İdaresi Terbiyesi*). Kühne states that aside from

commercial schools and orphanages, he is aware of only two industrial schools for girls, in Üsküdar and in Istanbul. These schools had accepted the curriculum of the Belgium School, training girls in sewing, embroidering, and dress making in three years. The female principals of these schools stated that they found the curriculum inadequate to meet the needs of Turkey and wished for radical curricular changes. In addition, the directors complained about the inadequacy of machinery and equipment and material such as sewing machines and textiles. However, the girls still produced excellent hand work and knitting with great effort. According to the principal in Üsküdar, students became economically independent through their skills obtained in the school. Young girls could earn their living by selling their products. Kühne thinks that the women work force seems to be on the verge of great development. This, Kühne thinks, will be important because girls are the future home-makers. For this reason, Kühne also suggests teaching hygiene to the girls to prevent infant mortality because he thinks that population growth would be positively important for Turkey (pp. 14-15). Some of these skills could be taught in primary schools as well. But in these schools for girls, attention had to be paid to the acquisition of equipment and materials. The examples Kühne suggests were the commerce and industrial school in Potsdam and the equipment of the Lette society in Berlin.

III. Administration of the vocational school affairs (*Mesleki mektep umûrunun idaresi*)

Finally, Kühne writes his observations, comments, and suggestions on the "Administration of the vocational school affairs" (*Mesleki mektep umûrunun idaresi*). For Kühne, there was no plan for the administration and organization of vocational schools in Turkey. For life schools and the like, The Ministry of Education had the authority. For the schools which were administered by the

provinces, the Ministry of Education decided to provide help. On the other hand, the Ministry of Public Works was responsible for the schools of train conductors of the railways, and the higher school of engineering; the school for postal services and telegraphs was administered by the Ministry of Internal Affairs; the school of applied commerce and the Higher School of Commerce (*Ticaret Mekteb-i Âlisi*) were under the control of the Minister of Commerce while schools of agriculture were under the Minister of Agriculture. Kühne thinks that this relation of the ministries with their special vocational schools was useful. These schools under the ministries, according to Kühne, were among the best in terms of equipment, but Kühne states that he is not in a position to evaluate their quality of education. He leaves this to Mr Schmidt, another expert from Germany. Kühne's primary suggestion is that these schools must be developed in terms of equipment and materials because hundreds and sometimes thousands of applicants want to obtain vocational education where only a small number can be admitted. Secondly, these schools must not be under centralized authority, but must develop locally to meet the needs of different areas. However, construction, machine construction and textile schools and vocational schools of higher education must fall under the administration of the related ministries. The Ministry of Education must, however, assist in providing help, give directions on instruction, train teachers and provide consultation for vocational education. He concludes his report by recommending Professor Lütse, a consultant of vocational education from Königsberg, Germany (pp. 16-17).

The report of Kühne is the first report on vocational education. Comprehensive in its description of the state of affairs in vocational education of the time, the report gives detailed suggestions to improve vocational education in Turkey, from the organization of vocational education to teacher training, school

buildings, equipment, materials, and the relation between the development of the country and needed manpower. Furthermore, the report shares with Dewey the importance of practical applied education to societal development. The complaints about teacher salaries and frequent changes of the teaching staff and administration due to superfluous reforms are again shared by Dewey and Kühne. Through the report, Kühne gives examples of the implementations in Germany. Unfortunately this comprehensive report was not put into action, perhaps due to the lack of resources needed by vocational education as well as the lack of will or effort required for the organization of vocational technical education. According to Ergün, because the report of Kühne did not provide comprehensive and applicable projects, the ministry did not take this report into consideration and later invited other experts (1997, 2.8.2."Eğitim İnkılâpları Döneminde Getirilen Yabancı Eğitim Uzmanları").

Report on Technical Instruction (*Teknik Öğretim Hakkında Rapor*)
by Ömer Buyse (1927)

In order to prepare the programs for vocational schools, Buyse thought it was necessary to examine the specific conditions of the present vocational schools and the developments in industry, vocational arts, and agriculture, in their locations. For this reason, Buyse went to the important centers of Turkey; Ankara, Kütahya, Konya, Adana, Mersin, Uşak, Izmir, Istanbul. During his visits, Professor Buyse prepared his report, entitled the Report on Technical Instruction *(Teknik Öğretim Hakkında Rapor)*. This 370-page report consists of 12 sections (projects), each of which is about the establishment of vocational schools with departments to meet the needs of

the location of the school. The projects in the report with their submission dates are the following (Buyse, 1939):

1. Ankara Atatürk Labor University (*Ankara Atatürk İş Üniversitesi*), May 2, 1927
2. İsmet İnönü Institute for Girls (*Ankara İsmet İnönü Kız Enstitüsü*), May 11, 1927
3. Vocational Instruction in Kütahya (*Kütahya'da Mesleki Tedrisat*), May 15, 1927
4. Vocational Instruction in Konya (*Konya'da Mesleki Tedrisat*), May 29, 1927
5. Vocational Instruction in Adana (*Adana'da Mesleki Tedrisat*), June 4, 1927
6. Vocational Instruction in Mersin (*Mersin'de Mesleki Tedrisat*), June 7, 1927
7. Vocational Instruction in Uşak (*Uşak'ta Mesleki Tedrisat*), June 14, 1927
8. Vocational Instruction in Izmir (*Izmir'de Mesleki Tedrisat*)[1]
9. Vocational Instruction in Aydın (*Aydın'da Mesleki Tedrisat*), June 12, 1927
10. Vocational Instruction in Istanbul (*Istanbul'da Mesleki Tedrisat*), June 8, 1927
11. Middle Agricultural Schools (*Orta Ziraat Okulları*), May 8, 1927
12. Vocational Education in the Navy (*Orduda Mesleki Tedrisat*), June 23, 1927

In order to prepare his projects, Professor Buyse used a questionnaire which he explains in the report. The title of the section explaining the questionnaire is "Suggestions for a program and the determination of the principles" (*Bir mesaî programı teklifi ve esasların tayini*). The purpose of the questionnaire was the determination of local needs. For Buyse, this would give information on the

[1] The submission date of the project entitled "Vocational Instruction in Izmir" (*Izmir'de Mesleki Tedrisat*) is not given in the report of Ömer Buyse.

following issues[1]:

1. Proposals with justifiable reasons for opening schools or establishing sections in existing schools
2. Designation and determination of programs, organizations, and levels of schools and sections to be opened according to local needs and opportunities on the basis of absolute and sound knowledge
3. Explanation of the expected aims, organizations, and consequences of extensive education in order to enlighten related participants.

Buyse stated that he would discuss the main principles related to the vocational-technical education programs in the places which he would visit. He would share these principles with governors, mayors, directors of education, directors and secretaries of the chamber of commerce and industry, directors of agriculture, male and female school principals and teachers, people interested in public and vocational-technical education, and local authorities. The principles of vocational-technical education are stated as[2]:

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[1] The English form was translated directly from the text of Buyse (1939, p. 4) on September 5, 2006. The original Turkish form is,

1. *Okul açılması veya mevcut okullarda şube ihdası için mucip sebepli teklifler;*
2. *Mahalli ihtiyaçlar ve imkânlara göre açılacak okul ve şubelerin program, teşkilât ve seviyesini elde edilecek kat'î ve emin bilgilere göre tayin ve tesbit etmek.*
3. *Vâsi tedrisattan beklenilen gayeyi, teşkilât ve bunun neticelerini izah maksadile alâkadar mahfilleri tenvir için.*

[2] The English form was translated directly from the text of Buyse (1939, pp. 4, 5), on November 26, 2006. The original Turkish form is

1. *Mahallî ihtiyaçlar ve mali imkânlar nisbetinde çoğaltılacak gündüz ve akşam meslek okullarının gayesi, halka çalışmasından en iyi neticeleri alabilmek, malûmatı umumiye vermek ve teknik kabiliyetlerini genişletmeğe fırsat vermektir.*
2. *Okulları resmi memurların reisliği altında nezaret komisyonları idare edecektir.*

   Bu komisyonlar devlet tarafından tesbit olunacak idari bir nizamnameye tevfikan teşekkül edecek ve vazife görecektir.

   Devletin bir mümessilinin reisliği altında toplanacak bu komisyonlarda devletin, resmî dairelerin murahhasları ve salâhiyet sahibi kimseler bulunacaktır.
3. *Resmî daireler ve birliklerden gelecek teklifleri Hükûmet memnuniyetle tetkik edecektir. Bu birlikler kendi bölgelerinde halk terbiyesine ait ne yapılmak lâzım geleceğini inceleyeceklerdir; tecrübe ile müterafik konferanslar tertibi, patronlar ve yetişmiş amele için muvakkat kurslar açılması umumî malumat için akşam dersleri tesisi ve gündüz kurslarının genişletilmesi ilâh… gibi.*

1. The aim of day and evening vocational schools, which would be increased in proportion to local needs and financial opportunities, is to enable the public to get the best outcomes out of their work, to give general knowledge, and the opportunity for improving their technical abilities.
2. Schools will be administered by supervision commissions under the directorship of civil servants.

   These commissions will be formed and will function according to the regulations determined by the state.

   In these commissions, there will be members of the state, government offices and people in positions of authority under the directorship of a representative of the state.
3. Suggestions coming from offices and associations will be readily reviewed by the Government. These associations will investigate what must be done to educate the public in their localities [such as] the organization of conferences based on experiences, opening of courses for businessmen and skilled workers, establishment of evening courses for general knowledge, and extension of day courses, etc.

According to Buyse the questionnaire could give information on the following issues[1]:

1. A strong base would be established for the administration of technical and vocational education.
2. The general public would understand the aim of the government; would develop interest, and would participate in it.
3. The continuity of the system would be guaranteed, the opportunity for maximum development would occur with the help of people in authority and interested participants.

Besides these prospects, Buyse thinks that the questionnaire would be helpful for the establishment of vocational schools for girls. This would be important in providing

[1] The English form was translated directly from the text of Buyse (1939, p. 5) on November 26, 2006. The original Turkish form is,

1. *Teknik ve mesleki tedrisat rejimi için sağlam bir esas elde edilir.*
2. *Efkârı umumiye hükümetin gayesini anlar; alâkadar olur ve ona iştirak eder;*
3. *Bu sistemin devamı temin olunur, salâhiyettar ve alâkadar mahfillerin yardimile azamî inkişaf imkânı hâsıl olur.*

opportunities for girls, which under the existing conditions were sparse (Buyse, 1939, pp. 3-4).

After his observations and interviews with the questionnaire, Ömer Buyse stated his suggestions for present vocational schools in the provinces he visited. The report proposes the establishment of new vocational schools which could be either evening or day schools for girls or boys according to local needs. In the report, the proposed schools are stated with the necessary conditions of admission and graduation, sections and departments including their schedules and course descriptions as attachments, and expenditures.

The proposals of Buyse will be examined under four headings:

I. The Ankara Atatürk Labor University (related to project 1),
II. Vocational Education in Different Provinces of Turkey (related to projects 2-10),
III. Middle Agricultural Schools (related to project 11),
IV. Vocational Education in the Navy (related to project 12)

I. Ankara Atatürk Labor University (*Ankara Atatürk İş Üniversitesi*)

The first issue of Buyse's report deals with the organization of a Labor University in Ankara. According to Buyse, the aim of the *Anakara Atatürk Labor University* was multifold. The first was to educate the technicians and the skilled workers who would be capable of producing materials and equipment. The second was to educate expert technicians and competent teachers for vocational and technical schools, (p.

6). The University would also undertake several functions concerning the economic and technical education of the public. As stated by Buyse[1], these were,

1. The Labor University first of all will develop and disseminate the technical instructional methods that will display samples of the work and the products of the work-shifts of the existing vocational, technical, agricultural and commercial schools in a continuous exhibition.

   This exhibition will always be open to artisans, vocational school teachers, primary school teachers and the general public.

2. The General Library and the Material Testing Laboratories of the Labor University will make admirable contributions to the courses of instruction as well as to the affairs of the members of commerce and industry, serving the local district as well as the country.

3. The students and the general public will have the opportunity to see and to examine the valuable products constructed through the efforts of the old and the new industry of both Turkey and the foreign countries, by visiting the technological collections of the Labor University and the decorative industry branch of the industrial museum.

   These collections will also be the means of instruction for various specializations.

For this university, Buyse proposes four sections with various departments. These are:

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[1] The English form was translated directly from the text of Buyse (1939, p. 7) on December 7, 2006. The original Turkish form is,

1. İş Üniversitesi evvelemirde memlekette mevcut meslek, san'at, ziraat ve ticaret okullarının iş ve mesai numunelerini daimi bir sergide gösterecek teknik tedrisat metodlarını tekâmül ettirmeğe ve yaymağa çalışacaktır.

Bu sergi ustalara, meslek okulları öğretmenlerine, ilkokul öğretmenlerine ve halka daima açık bulundurulacaktır.

2. İş Üniversitesi umumi kütüphanesi ve malzeme tecrübe lâboratuarları hem müessesenin dersleri ve hem de ticaret ve sanayi erbabının işleri için kullanılmakta bulunduğu muhite ve memlekete takdir değer hizmetler ifa edecektir.

3. İş Üniversitesinin teknolojik koleksiyonları ve tezyini sanayi şubesine mülhak tezyini sanayi müzesini ziyaret ederek mektep çocukları ve halk gerek Türkiye'de gerekse ecnebi memleketlerde eski ve yeni endüstrinin çalışmasile meydana getirilmiş kıymetli eserleri görmek ve incelemek fırsatını bulacaklardır.

Bu koleksiyonlar aynı zamanda muhtelif ihtisas işleri için ders vasıtası olarak kullanılacaktır.

A. The Preparatory Section (*İhzari Kısım*): This three-year section would be for youngesters between the ages of 12 and 14, involving day, evening and seasonal departments for various trades such as carpentry, leveling, and general technology.

B. The Technical Section (*Teknik Kısım*): This three-year day section involves the following departments:

   a. The Department of Stonecutting (*Taş İşleri Şubesi*)
   b. The Department of Carpentry (*Ağaç İşleri Şubesi*)
   c. The Department of Mining (*Maden İşleri Şubesi*)
   d. The Department of Electrical Works (*Elektrik İşleri Şubesi*)
   e. The Department of Sanitary Installations (*Sıhhi Tesisat Şubesi*)
   f. The Department of Decorative Arts (*Tezyini San'atlar Şubesi*)

C. The Higher Technical Section (*Yüksek Teknisyenler Kısmı*): This two-year section involves the following departments:

   a. The Department of Public Construction and Roads (*Nafıa İnşaatı ve Yollar Şubesi*)
   b. The Department of Electrical Works (*Elektrik İşleri Şubesi*)
   c. The Department of Construction of Agricultural Machines, Machine Operation, and Technical Drawing (*Ziraat makineleri constrüktörü, makine kondüktörü ve ressamlar şubesi*)
   d. The Department of Trades (including courses like technology and applied work, drawing, physics, chemistry, applied mechanics, Turkish, accounting, industrial economy, hygiene, and physical education; *San'atlar Şubesi*)
   e. The Department of Decorative Arts (*Tezyini San'atlar Şubesi*)
   f. The Department of Teacher Education for Technical and Vocational Schools (*Teknik ve Meslek Okulları için Öğretmen Şubesi*)

D. Sequential Courses to Train Specialists (*Mütehassıs Yetiştirmek için Fasılalı Kurslar*): This one-year section of the university would be the highest department, training specialists who would be comparable to the specialists in other countries.

II. Vocational Education in the Different Provinces of Turkey

The second issue of the report deals with vocational education in the different provinces of Turkey. After his observations and interviews in these provinces, Ömer Buyse proposed various types of vocational schools aligned with the local needs of the provinces. This section will give information on the proposed vocational schools:

1. Evening School for Boys (*Erkek Akşam Okulları*) in Kütahya, Konya, Adana, Mersin, Uşak, Izmir, Aydın, and Istanbul
2. Evening School for Girls (*Kız Akşam Okulları*) in Ankara, Kütahya, Konya, Mersin, and Uşak
3. Day School for Girls (*Kız Gündüz Okulları*) in Ankara[1], Adana, Izmir, Aydın, and Istanbul
3. The School of Sugar Cane Industry (*Şeker Endüstrisi Okulu*) in Uşak
4. Schools of Chemical Industry (*Kimya Endüstrisi Okulu*) in Izmir and Istanbul
5. The School of Textile Industry (*Menşucat Endüstrisi Okulu*) in Izmir

This section will also focus on Buyse's recommendations for already existing technical and trade schools[2] in Konya, Izmir and Istanbul as well as the commercial schools in Istanbul.

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[1] The vocational schools for girls in Ankara were conceptualized as part of the 'Ankara İsmet İnönü Institute for Girls (*Ankara İsmet İnönü Kız Enstitüsü*)'. In the report, the departments of the Day School for Girls in this institution were arranged under two ascending sections; the Profession and Commerce Section (*Meslek ve Ticaret Kısmı*) and the Higher Section (*Yüksek Kısım*), respectively. The Profession and Commerce Section (*Meslek ve Ticaret Kısmı*) would include the Department of Styling and Sewing (*Biçki ve Dikiş Şubesi*), the Department of Lingerie and Embroidery (*Çamaşır ve Nakış Şubesi*), the Department of Fashion Design and Floristry (*Moda ve Çiçekçilik Şubesi*), and the Department of Commerce and Languages (*Ticaret ve Lisan ve Şubesi*). The Higher Section (*Yüksek Kısım*) would include the Department of Arts for Women (*Kadın San'atları Şubesi*), the Department of Commerce and Secreterial Instruction (*Ticaret ve Kâtiplik Şubesi*), the Department of Teacher Education (*Öğretmen Şubesi*), and the Department of Social Services (*İçtimai Hizmetler Şubesi*), (Buyse, 1939, p. 67-68).

[2] When translating the consept of '*San'at Okulu'* to English, the structures of both 'Trade School' and Technical School' have been used. The structure 'Technical School' is used when the departments like electrical works, and mining are included as part of the curriculum. The structure of 'Trade School' is used when the curricula include trades such as carpentry, stonecutting, decorative arts, etc.

1. Evening Schools for Boys

These three or four year schools would admit boys who had completed their primary education. In these schools, courses would be for eight mounths, for 10 hours a week. The departments proposed for the Evening Schools for Boys ordered according to the number of provinces in which they were formed are:

a. The Department of Commerce and Languages (including French, English or German; *Ticaret ve Lisan Şubesi*) in all of the provinces in which the schools were to be established
b. The Department of Mining (*Maden İşleri Şubesi*) in Kütahya, Konya, Mersin, Uşak, Aydın, and Istanbul.
c. The Department of Carpentry (*Ağaç İşleri Şubesi*) in Kütahya, Konya, Mersin, Uşak, Aydın, and Istanbul
d. The Department of Concrete Masonry (*Duvarcılık ve Betonculuk Şubesi*) Kütahya, Konya, Adana, Uşak, Aydın, and Istanbul
e. The Department of Cobbling (*Kunduracılık Şubesi*) in Kütahya and Istanbul
f. The Department of Tile Making (*Çinicilik Şubesi*) in Kütahya
g. The Department of Spinning and Filature Industry (*İplikçilik Şubesi*) in Konya
h. The Department of Tanning (*Tabaklık Şubesi*) in Adana
i. The Department of Agriculture (*Ziraat Şubesi*) in Adana
j. The Department of Trades (including courses like technology, applied work, drawing, arithmetic, geometry and Turkish; *San'atlar Şubesi*) in Adana
k. The Department of Textile Industry (*Mensucat Endüstrisi Şubesi*) in Adana;
l. The Department of Marine Construction in Mersin
m. The Department of Carpet Weaving (*Halıcılık Şubesi*) in Uşak
n. The Department of Stonecutting (*Taşişleri Şubesi*) in Izmir
o. The Department of Sanitary Installation (*Sıhhi Tesisatçılık Şubesi*) in Istanbul
p. The Department of Electrical Works (*Elektrik İşleri Şubesi*) in Istanbul
q. The Department of Tailoring (*Terzilik Şubesi*) in Istanbul
r. The Department of Public Construction and Roads (*Nafia İnşaatı ve Yollar Şubesi*) in Istanbul

Evening schools for boys would also include a two-year preparatory section (Meslek Hazırlık Kursları) for those not having completed primary education. These courses would be given for eight months, for 10 hours a week. Buyse calculates the expenditures necessary for the establishment of evening schools for boys as 11,520 Turkish Liras (12,973 Sterling[1]) for Kütahya, 13,280 Turkish Liras (14,955 Sterling) for Konya, 10,560 Turkish Liras (11,892 Sterling) for Adana, 18,240 Turkish Liras (20,541 Sterling) for Mersin, 21,120 Turkish Liras (23,784 Sterling) for Uşak, 15,360 Turkish Liras (17,297 Sterling) for Izmir, and 13,440 Turkish Liras (15,135 Sterling) for Aydın.

2. Evening Schools for Girls

In stating the aim of Evening Schools for Girls in relation to the İsmet İnönü Institute in Ankara, Buyse says that vocational schools for girls would enable them to take their place in society by providing them with the necessary knowledge and skills particular to women. These three or four year schools would admit girls who had completed their primary education. In these schools, courses would be for eight months, for 20 hours a week. The departments proposed for the Evening Schools for Girls ordered according to the numbers of provinces in which they were formed are:

a. The Department of Commerce and Foreign Languages (including French, English or German; *Ticaret ve Lisan Şubesi*) in all of the provinces in which the schools were to be established
b. The Department of Styling and Sewing (*Biçki ve Dikiş Şubesi*) in Kütahya, Konya, Mersin, and Uşak
c. The Department of Agricultural Home Economics (*Zirai Ev İdaresi Şubesi*) in Kütahya, Konya, Mersin, and Uşak
d. The Department of Decorative Arts (*Tezyinî San'atlar Şubesi*) in Kütahya, Konya, and Uşak

[1] Between 1923 and 1946, the Turkish Lira flactuated based on the Sterling. Between 1923 and 1928, 1 Sterling was approximately equal to 0,888 Kurush (Arat, 2003, p. 36).

e. The Department of Home Economics and Arts (*Evişleri ve Sa'atlar Şubesi*) in Ankara
f. The Department of Carpet Weaving (*Halıcılık Şubesi*) in Uşak.

Evening schools for girls would also include a two-year preparatory section (Meslek Hazırlık Kursları) for those not having completed primary education. These courses would be given for eight months, for 20 hours a week. Buyse calculates the expenditures necessary for the establishment of the schools as 9,600 Turkish Liras (10,811 Sterling) for Kütahya, 11,520 Turkish Liras (12,973 Sterling) for Konya, 15,360 Turkish Liras (17,297 Sterling) for Mersin, and 21,760 Turkish Liras (24,505 Sterling) for Uşak.

3. Day Schools for Girls

Another recommendation of Buyse was the establishment of Day Schools for Girls. These three or four year institutions would admit girls who had completed their primary education. In these schools, courses would be for eight months, for 20 hours a week. The departments proposed for the Day Schools for Girls ordered according to the numbers of provinces in which they were formed are:

a. The Department of Styling and Sewing (*Biçki ve Dikiş Şubesi*) in Adana, Izmir, Aydın, and Istanbul
b. The Department of Commerce and Languages (including French, English or German; *Ticaret ve Lisan Şubesi*) in Ankara, Adana, Izmir, and Aydın
c. The Department of Decorative Arts (*Tezyinî San'atlar Şubesi*) in Adana, Izmir, Istanbul
d. The Department of Agricultural Home Economics (*Zirai Ev İdaresi Şubesi*) in Adana and Aydın
e. The Department of Lingerie and Embroidery (*Çamaşır ve Nakış Şubesi*) in Ankara and Istanbul
f. The Department of Social Services (*İçtimai Hizmetler Şubesi*) in Ankara and Istanbul
g. The Department of Fashion Design and Floristry (*Moda ve Çiçekçilik Şubesi*) in Ankara

h. The Department of Arts for Women (including courses like the History of Costumes, Vocational and Decorative Drawing, Physiology and Hygiene, Applied Studies, Physical Education; *Kadın San'atları Şubesi*) in Ankara
i. The Department of Commerce and Secretarial Instruction (*Ticaret ve Kâtiplik Şubesi*) in Ankara
j. The Department of Teacher Education (*Öğretmen Şubesi*) in Ankara
k. The Department of Nursing (*Hastabakıcılık Şubesi*) in Izmir
l. The Department of Fashion Design (*Moda Şubesi*) in Izmir
m. The Department of Millinery (*Şapkacılık Şubesi*) in Istanbul

Like evening schools, day schools for girls would also include a two-year preparatory section (*Meslek Hazırlık Kursları*) for those not having completed primary education. The preparatory course would also be for eight months, for 20 hours a week. Buyse calculates the expenditures necessary for the establishment of the schools as 11,520 Turkish Liras (12,973 Sterling) for Adana and Aydın, and 25,600 Turkish Liras (28,829 Sterling) for Izmir.

4. The School of Sugar Cane Industry

After his observations and interviews in Uşak, Buyse saw the sugar cane industry as a developing trade. As was stated in the report, there was a sugar factory in Uşak producing 480 tons of sugar in 1926. He thought that in Uşak, the sugar cane industry could be further improved by means of vocational and technical education. Therefore, Buyse proposed the establishment of the School of Sugar Cane Industry annexed to the Sugar Cane Factory in Uşak. Buyse thought that the factory would enable the students to do applied work. Ömer Buyse suggests two sections for the School of Sugar Industry:

A. The Preparatory Section (*İhzari Kısım*): This two year section would admit primary school graduates.

B. The Technical Section (*Teknik Kısım*): This three year section would admit secondary school graduates or those having completed the preparatory section.

Buyse states that the School of Sugar Cane Industry would be established only in Uşak, and would admit only 20 students. According to Buyse, the number of schools and students could be increased when other sugar cane factories were established in the country.

5. Schools of Chemical Industry

During his observations and interviews in Izmir and Istanbul, Buyse saw the opportunity for future development in the chemical industry. He suggested the establishment of Schools of Chemical Indurstry (*Kimya Endüstrisi Okulu*) in Istanbul and Izmir. In schools of chemical industry, courses would be given for eight months, 10 hours a week. Buyse suggested that these schools should contain well equipped laboratories and ateliers. Due to the differences of chemical industries in Istanbul and Izmir, Buyse designed different programs for the two schools. For the five-year School of Chemical Industry in Izmir, Buyse suggests the following sections with various departments:

A. The Preparatory Section (İhzari Kısım): Primary school graduates (12-14 years old) would be admitted to this school having a two-year preparatory section. The program of the preparatory section was designed to prepare students for positions in the chemical industry.

B. The Technical Section (Teknik Kısım): Graduates of junior high schools would be directly admitted to the technical section. For this three-year section of the chemical industry school, Buyse proposes the following departments (p. 262),

   a. The Department of Oil Rendering (Yağcılık Şubesi)

b. The Department of Tanning (Tabakatlık Şubesi)
c. The Department of Food Products (Gıda Maddeleri Şubesi)

For the four-year Evening School of Chemical Industry (Akşam kimya endüstrisi okulu) in Istanbul, Buyse suggests the following departments (pp. 328-329):

a. The Department of Chemistry (*Kimya Şubesi*)
b. The Department of Dry Cleaning and Dyeing (*Boyacılık ve Lekecilik Şubesi*)
c. The Department for Apothecary Assistants (*Eczacı Kalfası Şubesi*)

6. The School of Textile Industry

After his observations and interviews, Buyse proposed the development of a textile industry in Izmir. Therefore, he suggested the establishment of the School of Textile Industry. This three-year school includes a two-year preparatory and a three-year technical section. For admission to this school, students had to be at least 13 years old and primary school graduates (p. 267).

7. Existing Vocational Schools

Ömer Buyse examined the existing vocational schools in Konya, Izmir, and Istanbul and made the following suggestions:

The Technical School (*San'at Okulu*) in Konya: This three-year school would admit students above 12 years of age. Buyse emphasizes the fact that children below 12 years of age lack the cognitive and affective maturity to learn a profession. Secondly, Buyse suggests the addition of a section for technicians, due to possible demands which could exceed the opportunities for technical education in Konya with a population of 60,000. Buyse recommends the following sections and departments for the Technical School in Konya (pp. 169-202);

A. Preparatory Section (*İhzari Kısım*)

B. Technical Section (*Teknik Kısım*)

a. The Department of Electrical Works (*Elektrik İşleri Şubesi*)

b. The Department of Mining (*Maden İşleri Şubesi*)

C. Section for Technicians (*Teknisyen Kısmı*)

a. The Department of Mining (*Maden İşleri Şubesi*)

b. The Department of Governmental Construction Operations (*Resmi İnşaat İşleri Şubesi*)

The Technical School (*San'at Okulu*) in Izmir: This existing school in Izmir included a one-year preparatory and a four year technical section. Buyse suggested that the preparatory section had to be for two years instead of one. This was because primary school graduates did not have the physical and mental maturity necessary for technical drawing, theory comprehension, and handling the work load (pp.264-265).

The Technical School (*San'at Okulu*) in Istanbul: Buyse criticizes the limited scope of the Technical School in Istanbul. According to Buyse, the curriculum of this school was no more than an apprenticeship program. He stated that instruction about important industries, like mining, iron and copper smithery, was not given in this school. Buyse also stated the absence of applied work in some departments which could train specialists who would likely be employed for high salaries. Another criticism of Buyse was the lack of information given in the Department of Electrical Works. Furthermore, Buyse stated the absence of courses about illumination, handicrafts, central telephone and telegraph operations, oxygen welding, addition of mobile machines, and engine house. On the other hand, Buyse appreciated the production of fire pumps in the Technical School of Istanbul. Buyse suggested the effective usage of ateliers by the devotion of the time to the production

of orders while the rest had to be devoted to the development of technical skills (pp. 327-328).

III. Middle Agricultural Schools (*Orta Ziraat Okulları*)

In the third section of the report, Buyse writes his suggestions on the two or three year middle agricultural schools which admit primary school graduates. For Buyse, since these schools were designed for students about 12 years of age, instruction could not be at a high level. The report states the aim of the agricultural schools as the education of effective farmers who would help their fathers in improving their vocations. Buyse defines these schools as experience schools, emphasizing mostly applied work in order to educate professional farmers (pp. 349-350).

IV. Vocational Education in the Army (*Orduda Mesleki Tedrisat*)

Finally in the report, Buyse proposes that vocational training could be given during military service. His proposals are included in the section of the report entitled the "Directions related to instruction which can be annexed to military regulations when necessary" (*Askeri nizamlara icabında eklenecek, tedrisata dair, hükümler*). There are eight items in this section of the report. According to the items, soldiers would take courses for 10 months, for 10 hours a week. For soldiers not having completed their primary education, these courses would give basic knowledge. For those having completed primary education, the courses would be offered under the following departments (p. 359);

a. The Department of Agriculture (*Ziraat şubesi*)
b. The Department of Commerce (*Ticaret Şubesi*)
c. The Department of Trades (including courses like paramedicine, carpentry, and stonecutting; *San'at Şubesi*)

Courses would be opened if at least 20 soldiers needed the skills offered by the departments. Attendance would be required. The report says that the course hours would be arranged according to the givens of military service. Courses would be given by army officers or by soldiers having graduated from schools related to industry, commerce or trades. If no army personnel were available, then civilians could be consulted. Considering the administration of the courses, Buyse recommends a commission under the direction of the Ministry of National Defense composed of high ranking officers, representatives from the Ministries of Education, Agriculture, and Public Works. In every location, this administrative committee would be responsible for opening the necessary courses. Courses could be held in the living quarters of the military. When weather conditions allowed, the courses could be outside. Ömer Buyse finalizes this section with his wishes that this project will be beneficial for the general development of moral and vocational education during military service. For him, if Turkey applies this project, the Turkish nation will be the first to have an army which will not only be the defender of the nation, but also the provider of its education. (pp. 359-360).

Buyse's report is highly analytical and extremely detailed (370 pages) in terms of his proposals and models for vocational and technical education in Turkey. The proposals of Buyse rest on the assessment of local needs related to second-level man-power which in the end would produce the skilled and educated labor force to match the needs of the newly formed Republic.

After Buyse gave his report in 1927, a commission headed by the chair of the Board of Instruction and Education, Professor Mehmet Emin (Erişigil[1]) was

[1] The information about the surname of Prof. Mehmet Emin was retrieved December 12, 2006 from http://yayim.meb.gov.tr/dergiler/sayi44/ovat.htm.

formed. The participants were the representatives from the Agricultural Bank (*Ziraat Bankası*) as well as *Is* Bank (*İş Bankası*), the Ministries of Commerce and Finance (Ticaret ve Maliye Bakanlıkları), the Istanbul Chamber of Commerce (Istanbul Ticaret Odası), the Izmir Commercial School (*Izmir Ticaret Okulu*), the Directorate of Higher Education (*Yüksek Öğretim Müdürlüğü*) and others. The first issue of the commission was the establishment of commercial schools, whereby middle and higher commercial schools were opened. As Dewey had earlier suggested, the Ministry of Education had charged the Department of Primary Education with the obligation of establishing vocational and technical instruction. In 1927 after Buyse's report, the Directorate of Higher Education instead of the Department of Primary Education was charged with this responsibility, changing its name to the General Directorate of Higher and Vocational Instruction (Yüksek ve Mesleki Öğretim Genel Müdürlüğü). During the same year, on May 26, 1927, with law number 1052, all vocational and technical schools came under the control of the Ministry of Education, the permission of the Ministry being necessary for the establishment of any vocational or technical school. According to Ergün, this law was like a second Unification of Education Act (*Tevhid-i Tedrisat Kanunu*). In light of Buyse's report, the following decisions were made (Ergün, 1997, 2.8.2. "Eğitim İnkılâpları Döneminde Getirilen Yabancı Eğitim Uzmanları"):

- The establishment of a Chemical and Industrial School in Izmir with 2 preparatory sections, 4 sections for expert workers, and 2 sections for technicians
- The Establishment of a Labor University and Girls Institute in Ankara
- The administration of vocational technical schools by a supervisory commission
- The reorganization of the curricula of these schools and the preparation of new textbooks

- The invitation of experts from Europe
- The organization of evening commercial schools

It seems that the report of Buyse was very influential. During his speech in the Grand National Assembly, Mustafa Necati stated that "We have resigned our destiny about vocational education to this great Professor's custody. It is the responsibility of the Ministry of Education to exactly follow the program that he determined.[1]" Nevertheless, Buyse's report was not totally followed. Even though Buyse stated that it was not necessary to send students to Europe, first the teacher candidates for the Labor University as well as others were sent abroad between 1927 and 1938, totaling 133 students Moreover, the Ankara Labor University project of Buyse was never actualized in spite of the decision of the Ministry of Education for the establishment of a five-year Labor University with a cadre consisting totally of foreign experts as well as the establishment of a polytechnical school by 1930. On the other hand, as was stated in Buyse's report, foreign experts were invited from Europe. Rüştü (Uzel), the director the General Directorate of Higher and Vocational Instruction, met with some specialists in his first visit to Europe and invited some of them as instructors. These specialists were Mr. and Mrs. Rutalet, Ms. Baccord and Prof. Oldenburg (Ergün, 1997, 2.8.2. "Eğitim İnkılâpları Döneminde Getirilen Yabancı Eğitim Uzmanları").

[1] The English form was translated directly from the text of Ergün …. "*Meslek mektepleri hakkında mukadderatımızı bu profesörün yedeminine tevdi ettik. Çizdiği programı aynen tatbik etmek Maarif Vekâletinin vazifesidir.*"

The Report on Istanbul University (*Istanbul Üniversitesi Hakkında Rapor*) by Albert Malche

In order to reform the *Darülfünûn* in 1931, the Government invited Albert Malche, a pedagogue and one of the professors of Gelf University in Switzerland. Albert Malche came to Istanbul on January 16, 1932 (Ergün, 1997, 3.2.1. "From '*Darülfünûn*' to 'University'") and after his study on the Darülfünun, he prepared the report entitled The Report on Istanbul University (*Istanbul Üniversitesi Hakkında Rapor*). The report of Malche includes the following sections:

1. *Anketin mahiyeti* (The nature of the questionnaire), explaining the development of a questionnaire for the investigation of the *Darülfünûn*.
2. *Istanbul Darülfünûn hali hazırının tetkik ve tahlili* (Examination and analysis of the current situation of the Istanbul *Darülfünûn*).
3. *İcrası icap eden ıslahat* (Necessary reforms to be carried out), includes the suggestions of Malche on how the reform of the *Darülfünûn* could be achieved.

As is stated in the first section, Malche developed a questionnaire for his study (Malche, 1939, p.1). For objectivity, Albert Malche used multiple sources of information on the *Darülfünûn*. These are (Ibid. p. 1, 2),

- Observations in the faculties, clinics, laboratories, seminars, libraries and the Turcology Institute attached to the Faculty of Arts, The Electro-Mechanic Institute attached to the Faculty of Science, and The School of Dentistry and Apothecary attached to the Faculty of Medicine
- Interviews with the Rector (*Emin*), Faculty Deans (*Fakülte Reisi*), chair professors, fellow or auxiliary professors, retired professors with divergent ideas, assistants, representatives of the parliament, intellectuals, and knowledgeable people
- Observations in classes, conferences, seminars, laboratories, clinics, and polyclinics
- Investigations in the Şişli Children's Hospital, Cerrahpaşa, Haseki and Gureba Hospitals, and The Bakırköy Mental

Hospital and vocational high schools such as the Hilaliahmer Nursing School, the Teacher Training School, the Commercial School, and the School of Civil Service, all having connections with the *Darülfünûn*

- Observation of private lycées such as Galatasaray, Istanbul, Pertevniyal and Fayziati Lycées as well as Robert College

After preparing the questionnaire, Malche left Turkey in March 1932. Before leaving, he gave the questionnaire to the rectorate for the gathering of the necessary information. Upon his return in April, 1932, Malche read the answers and realized the need to interview the male and female students of the *Darülfünûn* from every faculty. For him, preparing a report without seeing the students of the *Darülfünûn* could not be acceptable. That is why Malche spent time to interview these students, except the ones from the Faculty of Medicine, since Malche had had a chance to interview these students during his first visit (Ibid. p. 2).

Since the ambassador to Bern informed Malche that he had to finish his studies by June 1, 1932, Malche's investigations were limited to four months. According to Malche, even though the scope and the variety of information gained were commendable, his four- month study on the *Darülfünûn* could not be stated to be complete. Therefore, Malche states that the points of focus in his report were the most debated issues. These issues can be designated under three headings: The Organization of the *Darülfünûn*, the Instruction Given in the *Darülfünûn*, and the Influences and Services of the *Darülfünûn*.

I. The Organization of the *Darülfünûn*

After the examination of the questionnaire, the interviews, observations and visits, Malche proposed changes related to the following topics:

1. The Importance of the *Darülfünûn* and the Difficulties of its Responsibility, Legal Position, and Autonomy
2. The Importance and the Role of the Rectorate during the Reform
3. Statistics: the Annual Budget, Statistics of Student, the Academic and Administrative Personnel of the *Darülfünûn*
4. The Method for the Appointment of Academic Staff
5. Professor Allocations per Faculty
6. Student Life
7. Preparation of Students for Future Professions
8. The Organization and the Efficiency of the Library
9. Buildings
10. The Organization of the Faculties

1. The Importance of the *Darülfünûn* and the Difficulties of its Responsibility

For Malche, the new Republic had completed its development with respect to the military, domestic affairs and treasury, and should now complete its organization with respect to culture. The Istanbul *Darülfünûn* had to be the center of reason and culture. However, Malche states that the Istanbul *Darülfünûn* was in a more difficult situation than similar institutions in Europe. The first difficulty was about the educational backgrounds of its students. Professors stated that since the students were still of the generation of war, they had a childhood filled with anxiety and negative events, and sometimes they were under the influence of insufficient high school education. Moreover, the report states that students coming from rural areas faced economic difficulties in continuing with their education.

A second difficulty, according to Malche, was the frequent changes and reform projects, which instigated heated academic debates. Time which could have been spent for the solution of problems was devoted to these arguments. Another difficulty Malche states is about the lack of Turkish publications, especially since

only a few students could use foreign resources. Despite these difficulties, Malche appreciates the great effort and working hours of the *Darülfünûn*.

As was stated in the report, the law of January 15, 1922 granted the *Darülfünûn* academic and self determining autonomy. According to Malche, this law of autonomy was the most logical for an institution of higher education. The law of April 21, 1924 approved the administrative autonomy of *Darülfünûn*. The regulations of 1925 completed these two laws. Malche states that the *Darülfünûn* depended entirely on these laws and seemed to favor them. However, the above mentioned legal conditions did not guarantee entire freedom. The Government, the Grand National Assembly, the Ministry of Education, the Board of Instruction and Education, and the General Directorate of Higher and Technical Education interfered with its administration in several instances, at least with respect to the budget approval and verification.

According to Malche, although it was important for the *Darülfünûn* to have scientific freedom, it was also important for the government to have responsibility in the selection of the administrative and academic personnel. He noted that in any country, political appointments were not desirable. On the other hand, appointments by a power group in the *Darülfünûn* would be even more dangerous. Malche claimed that during this reform period, a program agreed on both by the *Darülfünûn* and the government could be established.

Autonomy, according to Malche, must not lead to alienation and isolation. Academic autonomy had to be supported. The Ministry of Education could appoint supervisors for the general and internal administration of the *Darülfünûn*. However, this situation should not prevent the *Darülfünûn* from having its own budget and

managing this budget under the control of the government, as well as having the authority of accepting donations and wills.

2. The Importance and the Role of the Rectorate during the Reform

According to Albert Malche, the reform of the *Darülfünûn* should include the following steps:

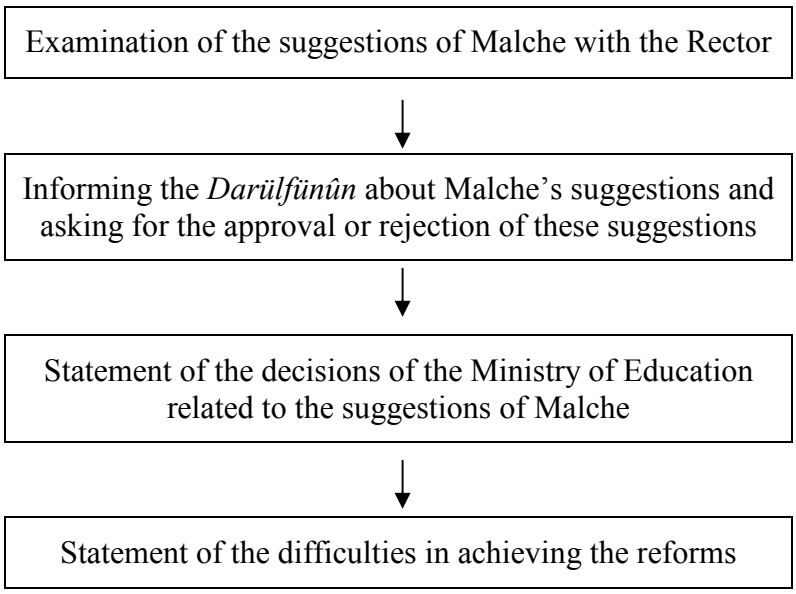

Figure 12: The steps for the reform process in the *Darülfünûn*

Since the Rector has an important responsibility during the reform, Malche thinks the necessity to define his role. The Rector was responsible for the administration of the *Darülfünûn*. The report states that unlike the presidents of the universities in the Unites States who are authoritative and permanent, and those in Switzerland who are just representatives of the academic staff, the Rector of the Istanbul *Darülfünûn* had heavy responsibilities. There was no definition of the authorities of the Rector, who was elected by the academic staff. Besides giving courses and fulfilling the responsibilities related to instruction and education, the Rector also managed the general administration of the *Darülfünûn*. This situation created problems.

According to Malche, a rector should not be responsible for everything. Especially during a reform period, the most important responsibility of the Rector should be related to daily academic and essential issues. There should be an executive secretary to the Rector for the administration of the different sections of the *Darülfünûn*, including the faculties, registration, examinations, degrees, diplomas, relationships with students, communication, writing of the projects, programs, circulars and reports, statistics, letters, the preparation of the budget, the management of the low-ranking clerks, construction, renovation, and transportations. This high ranking executive secretary should have had experience in government and should have the capacity to meet with foreign counterparts and professors.

During this reform period, Malche suggests that the *Darülfünûn* should be directed by the Minister of Education. This in no way means the curtailment of the authority of the Rector. Au contraire, because he will be the representative and the translator of the Ministry of Education with which he will be in close contact, the Rector will have more authority than usual on section directors, and will ensure their assistance. The professors will also take part in this contribution. All those involved will assist the Rector in forming a *Darülfünûn* needed for the elevation of the higher education of the Turkish nation.

Malche opposes the idea of the appointment of a commissioner by the government to supervise these reforms. According to Malche, "Higher education can only develop when there is a belief that it is responsible for itself[1]." Furthermore, a new conception and structure may emerge through the good willed effort of a rector elected by his colleagues and approved by the government and the President of the

[1] The English form was directly translated from the text of Malche (1939, p. 24) on April 11, 2007. The original Turkish form is, "*Yüksek tahsil ancak kendi kendinden mes'ul olduğu kanaatine malik olduğu takdirde inkişaf edebilir*".

Republic. Finally, the report states that if the interested parties loose their enthasuasm, no reform can be long-lasting.

3. Statistics: the Annual Budget, Statistics of Student, the Academic and Administrative Personnel of the *Darülfünûn*

The Annual Budget: Between 1923 and 1931, the budget of the *Darülfünûn* was as follows.

Table 8: Three Sections (Salaries, Expenses, Allocation to Foreign Experts) from the Budget of the *Darülfünûn* between 1923 and 1931

Year	Salaries (TL)	Salaries (Sterling[1])	Expenses (TL)	Expenses (Sterling)	Allocation to the Foreign Experts (TL)	Allocation to the Foreign Experts (Sterling)
1923	82,325	73,178	185,428	164,825	-	-
1924	164,774	146,466	285,000	253,333	-	-
1925	423,945	376,840	270,000	240,000	30,000	26,667
1926	435,285	386,920	411,549	365,821	76,000	67,556
1927	441,776	392,690	354,569	315,172	78,000	69,333
1928	479,929	426,604	358,000	318,222	78,000	69,333
1929	487,786	433,588	393,556	349,828	78,000	69,333
1930	501,166	445,481	310,176	275,712	78,000	69,333
1931	609,289	541,590	240,191	213,503	65,000	57,878

*This table is adapted and translated from Malche A., 1939, p.5

The salaries of professors, according to Malche, were slightly higher than those of secondary education teachers, and were generally low although there was some increment over the years. On the other hand, the salaries of foreign experts showed a decrease due to economic conditions. Malche expressed his hope that increments would be felt more concretely, when economic conditions improved.

The allocations for foreign experts were supported by the Faculty of Medicine. *Darülfünûn*'s retirement subsidies also lowered its possible support for administrative and scientific output. Additionally, the report indicates the 1932

[1] Between 1923 and 1946, the Turkish Lira flactuated based on the Sterling. After 1929, 1 Sterling was approximately equal to 1.125 Kurush (Arat, 2003, p.36).

budget of the *Darülfünûn* as 908,474 Turkish Liras (807,532 Sterling) and regards this budget as adequate.

The Academic and Administrative Personnel of the *Darülfünûn*: the report uses the data of the Ministry of Education to show the distribution of academic personnel in the faculties. Table 3 demonstrates the numbers of professors, instructors, assistant directors and assistants in the faculties.

Table 9: The Distribution of Academic Personnel in the Faculties

Faculties	Professors (*Müderris*)	Instructors (*Muallim*)	Assistant Directors	Assistants
Medicine	(1 vacant) 28	10	18	(2 vacant) 38
Arts	14	4	(3 vacant) 2	6
Theology	12	-	1	-
Sciences	(1 vacant) 17	2	9	(1 vacant) 8
Law	17	6	(5 vacant) 1	(1 vacant) 1
Pharmacology and Dentistry	-	22	5	19
Total	(2 vacant) 88	44	(8 vacant) 36	(4 vacant) 72

*This table is adapted and translated from Malche A., 1939, p. 6

According to the table, there is a total number of 240 academicians (with vacancies there are 254), and 133 of them are professors and instructors. According to Malche, this number is high. They receive low salaries and do not have an important influence on the *Darülfünûn*. Malche suggests a decrease in the number of the staff and an increase in its effectiveness, with a raise the salaries.

Moreover, the report shows the distribution of civil servants (*memur*) in the *Darülfünûn*. Table 4 shows the numbers of civil servants in various divisions of the *Darülfünûn*:

Table 10: The Distribution of Civil Servants in the *Darülfünûn*

	Office of the Rector	7	22
	Department of Accounting	5	
	Internal civil servants	4	
	Library	6	
Civil Servants in the Faculties			
	Medicine	19	46
	Law	5	
	Sciences	10	
	Arts	6	
	Theology	1	
	Dentistry-Pharmacology	5	
	Various types of janitors	287	
	Total	355	

*This table is adapted and translated from Malche A., 1939, p. 7

Malche considers the number of civil servants large, and suggests reductions and higher salaries for effectiveness.

Student Statistics: the figures that were given to Malche by the faculties show that in 1932 there were more than 2,500 students in the *Darülfünûn*. This number is amazing according to Malche because he saw fewer students in the *Darülfünûn*. According to the figures, the distribution of students to the faculties was as follows:

Table 11: Number of Students in the *Darülfünûn* in 1932

Faculty	Explanation	Number of Students
Medicine	For one year average 35, for the five year period of education 165 Including the soldiers	515
Law	For the first year: 760, the second year: 259, the third year: 129	1048
Literature	150 male, 132 female	282
Science	461 male, 105 female	566
Theology		3
Pharmacist-Dentist	1931 Statistics	55

*This table is adapted and translated from Malche A., 1939, p. 7

In general, the number of students decreases with each consecutive year. However, Malche observes that the numbers of students who graduate after passing the final exams were fewer. Instead, Malche suggests the elimination of students through exams in the first year, and the following years before the final examination for graduation. This would much more cost-effective.

4. The Method for the Appointment of the Academic Staff

According to Malche, the most criticized issue was about the appointment of the professors for the *Darülfünûn*. For the appointment of academic staff, professors in a given area made decisions for the appointments in their areas. The report states that this could lead to biased appointments. This would jeopardize the future of sciences of the institution. Malche suggests that the votes of related academicians should be asked to ensure the objectivity of the vote. The Ministry should be responsible for this important decision. Furthermore, the responsibility for dismissals is not clearly determined and therefore, this situation leads to discussions which will harm the *Darülfünûn*.

According to the 14th article of the regulations of the *Darülfünûn*, when there was an available position, the following steps were taken to appoint a professor:

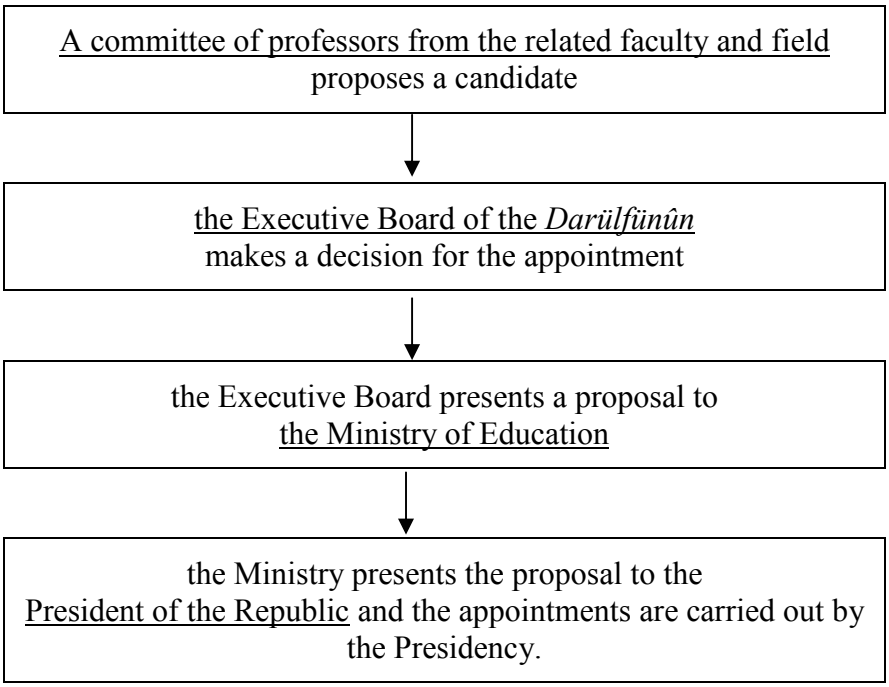

Figure 13: Steps for the Appointment of the Professors to the *Darülfünûn*

For Malche, these proposals which are received by the highest executive authority are not that reliable because of the fact that a survey or vote is not carried out. Besides, the fact that the candidates have to work as university lecturers for 15 years to become professors and have to be at least 30 years of age to lecture in the first place, means that they cannot be professors until the age of 45. Since this system does not encourage young academicians to improve themselves, it has been criticized and some changes are proposed by Malche.

First, Malche makes a proposal about ranking since, he thinks, there is confusion. The report states that in the existing system, university lecturer is named as *Chargé de Cours ve Mâitre* or *Professeur Adjoint* and the assistant of a professor as *Chargé de Cours* or *Professeur Adjoint*. According to him, it is convenient to name a professor as *Professeur Fitubire*, a university lecturer as *Professeur Encharge* and the assistant of a professor as *Professeur Adjoint.*

For each course whose lecturer has died or resigned, Malche suggests acting in the following manner. Except for the fixed chairs occupied by professors, in the case of an availability of a chair, the Faculty or *Darülfünûn* should apply to the Ministry of Education and ask if a new appointment or a change or a cancellation will take place. If the Ministry decides that there are plenty of chairs, the terms and the documents which are requested from the candidates should be written down in a register and 15 days should be given for applications. If there are available positions after applicants who are the Turkish citizens have submitted their documents, foreign candidates can be registered. The lists and the documents of the candidates should then be sent to the Faculty. Proffesors of the Faculty will, then, vote on the candidates after examining the documents and will inform the Rector about the vote as well as about their own opinions of the candidates. The Rector informs the Ministry. The ministry appoints a survey committee whose chair is the Rector and the Dean of the related faculty. Other members can be appointed from inside or outside of the *Darülfünûn*. The Survey committee invited a week earlier under the leadership of the Rector. Th dean presents information on the candidate with most votes, which then, is submitted to the Ministry with the record of the meeting and all the documents. After examining the votes of the candidates, the Ministry of Education presents the candidate(s) to the President of the Republic. Whether an assistant professor or not, each candidate who wants to be accepted to the *Darülfünûn* is subject to the competitive examination in accordance with the regulations about assistant professors. But those who have completed their Ph.D.'s and have established their fame with their work and conferences are exempted from this exam by the Ministry. Through these procedures, it will not be necessary for lecturers to reach the age 30, and for the professors to complete a teaching practice of

15 years. Thus, without the limit of age, young people who are effective will be professors at a younger age.

5. Professor Allocations per Faculty

The Ministry of Education complained about the efficiency of the cadres and the excess of academic personnel. For Malche, it was necessary to reduce the number of professors and to offer others better financial means. Since he was not able to stay longer, Malche stated that he did not personally know any of the professors among the academic personnel, therefore it would be wrong if he made a personal judgement about them. If the academic cadres were reduced and the unemployed professors were transferred to other schools or universities, depending on their experiences, this would be convenient. According to Malche, the issue of reducing the cadres should be extended over time. The best way to accomplish this is to determine by law the number of fixed chairs to be occupied by professors in each faculty, instead of an educational system which continuously divides into branches. In principle, each academic or each significant part of a larger academic department necessitates a fixed chair and a professor. Considering the opinions and votes of the *Darülfünûn*, an low should be passed in order to give authority to the Ministry of Education with regard to the addition of a second chair to each fixed chair to be undertaken by a professor or when necessary, by a lecturer. However, this extra chair, in the event of resignation, will be turned back to the number stated by low.

Faculty of Medicine (Tıp Fakültesi): 16 Permanent Chairs

1. Normal anatomy (*Anatomie Normale*)
2. Histology and embryology (*Histologie et embryologie*)
3. Physiology and Physiological Chemistry (*Physiologie et chimie physiologique*)

4. General pathology and pathological anatomy (*Pathologie générale et anatomie pathologique*)
5. Medical clinic and internal pathology (*Clinique médicale et pathalogie interne*)
6. Surgical clinic and external pathology (*Clinique chirurgicale et pathalogie externe*)
7. Gynecology and obstetrics (*Gynecologie et obstétrique*)
8. Diseases of children (*Maladie des enfants*)
9. Psychiatric clinic (*Clinique psychiâtrique*)
10. Dermatology and veneralogy (*Dermatologie et vénérologie*)
11. Ophthalmologic clinic (*Clinique opthalmologique*)
12. Oto-Rhino-Laryngological Clinic (*Clinique oto-rhino-laryngologique*)
13. Therapeutic and medical functions - method of treatments (*Thérapeutique et matière medicale - méthode de traitements*)
14. Hygiene and Bacteriology (*Hygiène et bactériologie*)
15. Radiology-diagnosis and treatments (*Radiologie-diagnostic et traitements*)
16. Legal Medicine, deontology (*Médicine légale, déontologie*)

Faculty of Science (Fen Fakültesi): 12 Permanent Chairs

1. Advanced Mathematics, algebra, geometry. Recitation (*Yüksek Riyaziyat, cebir, hendese. Temrin*)
2. Differential and complete calculation, rational mechanical exercises (*Calcul différentiel et intégral, mécanique rationelle exercises*)
3. Calculation of the probabilities-Superior analysis (*Calcul des probabilities-Analyse supérieure*)
4. Astronomy, elementary mathematics and physics - Meteorology (*Astronomie-élémentaire mathématique et physique-Météorologie*)
5. Physics- experimental and mathematical (*Fizik-tecrübî ve riyazî*)
6. Inorganic chemistry – Qualitative analysis (*Kimyayı gayriuzvî-Analyse qualitative*)
7. Organic Chemistry -quantitative analysis (*Kimyayı uzvî-Analyse quantitative*)

8. Mineralogy – Cristallographic view (*Mineraloji – Cristallographie optique*)
9. Geology, Paleontology and Natural Geography (*Jeoloji, Paleontoloji ve Coğrafyayı tabiî*)
10. Descriptive and Genetic Zoology (*Zoologie descriptive et génétique*)
11. Plants - Physiology and anatomy, genetic (*Nebatat – Physiologie et anatomie, génétique*)
12. Antropology – Human paleontology, morphology anthropometrics, eugenics (*Antropoloji - Paléontologie humaine, morphologie antropommétrie, eugénique*)

Faculty of Law (Hukuk Fakültesi): 12 Permenant Chairs

1. Introduction to legal sciences, general history of law (*Hukuk ilmine methal, hukukun umumi tarihi*)
2. The Roman law (*Roma hukuku*)
3. Public law and comparative principles of law (*Hukuku amme ve mukayeseli hukuku esasiye*)
4. Comparative Turkish and European civil codes (*Mukayeseli Türk ve Avrupa kanunu medenileri*)
5. Turkish civil rights and comperative civil rights, law of obligations (*Droit civil turc et droit civil comparé, droit des obligations*)
6. Commercial and maritime law (*Hukuku ticaret ve bahriye Droit commercial et maritime*)
7. Administrative law (*Hukuku idare*)
8. General and national law (*Hukuku umumiye ve hususiyei düvel*)
9. Criminal law and practice (*Hukuku ceza ve tatbikatı cezaiye*)
10. Procedural civil courts, and bankruptcy (*Hukuk muhakemeleri usulü Procédure civile-poursuite et faillite icra ve iflas*)
11. Economics – Science of Public Finance (*İktisat – Fenni umumii mâli*)
12. Forensic Medicine (*Tıbbı Adli*)

Faculty of Letters (Edebiyat Fakültesi): 12 Permenant Chairs

1. General languages - Hindu – Practice in European languages (*Umumi lisaniyat – Hindu – Avrupai lisanlarda tatbikatı*)

2. Turkish literature: comparison and interpretation of authors (*Türk edebiyatı: muharrirlerin teşrih ve tefsiri*)
3. French literature: comparison and interpretation of authors and literary history (*Fransız edebiyatı: muharrirlerin teşrih ve tefsiri ve edebiyat tarihi*)
4. Comparative literature from the Renaissance until today : text reading with explanations and the intellectual history manifested in these works (*Rönesanstan bugüne kadar mukayeseli edebiyat: metinlerin izahatla kıraati ve bu eserlerde tezahür eden fakir tarihi*)
5. The history of Philosophy. General Psychology (*Felsefe tarihi. Umumi psikoloji*)
6. Sociology, etiquette, education (*İçtimaiyat, ahlâk, terbiye*)
7. Logic, Theory of knowledge, Classification of sciences (Mantık, Théorie de la connaissance, Tasnifi fünun)
8. The history of ancient civilizations: The East, Greece, Rome (*Eski medeniyetler tarihi: Şark, Yunanistan, Roma*)
9. Turkish History (*Türkiye Tarihi*)
10. Modern times and the history of Turkish-European relations (*Ezminei cedide ve Türkiye ile Avrupa münasebatı tarihi*)
11. Persian and Arabic literature (*Acem ve Arap edebiyatı*)

6. Student Life

For Malche, the *Darülfünûn* is not only responsible for instruction, but also for education. Malche emphasizes that, during the interviews, students who had come from rural areas stated that they felt lonely, poor and even lost, when they came to the big city. Malche observes important initiatives in the *Darülfünûn* to help these students. These activities are the student clubs which offer inexpensive meals on the ground floor of the *Darülfünûn*, the responsibilities given to students in minority schools in teaching and in the administrative departments. Furthermore, Albert Malche suggests the following for the social development of students:

a. Establishment of an 'Organization for Materials' (*Teşkilat-ı Maddiye*) which will help students in finding houses, inexpensive food, part time jobs; providing a list of clinics and

policlinics; arranging a cooperative for purchases such as papares, goods and books and the provision of a student center.

b. Arranging a club to include the graduates of *Darülfünûn*.

c. Selection of one student each year and introducing that student to the Rector and allowing the students to sign the gold book of the *Darülfünûn*.

d. Awarding the publications of students

e. Arranging a *Darülfünûn* day during which the awards are given, and sportive activities, a conference or consert and parties.

f. Instead of six months and a week in one year, Malche recommends the fall semester to be from September 1 to December 31 and the spring semester to be from February 15 to May 31.

7. Preparation of Students for Future Professions

The report gives information on the education of the following professions:

a. Secondary School Teachers

b. Professions of Graduates of the Faculty of Law and Medicine (including the School of Apothecary and Dentistry)

c. Future Instructors of the *Darülfünûn*

a. Secondary School Teachers:

Higher Teacher Training School (*Yüksek Mallim Mektebi*) together with the Faculty of Letters and Sciences prepare students to be the future secondary school teachers. It was professedly accepted that the Faculty of Sciences gives only scientific knowledge whereas the Higher Teacher Training School provides vocational education. The Higher Teacher Training School also gives pedagogical knowledge together with the Faculty of Arts. Based on his interviews with senior students of the departments of mathematics and science teaching, Malche states that the Higher Teacher Training Schools are not able to give a practical education to prospective teachers and to prepare them for their professions. Therefore, Malche suggests a reform for these institutions to give more practical education.

As far as the Faculty of Letters, Malche criticizes the absence of linguistics and philology courses necessary to prepare language teachers as well as teachers of Turkish language teachers. Moreover, after an interview with a student writing his graduation thesis, Malche realizes that students are preparing their homework just by translation and they graduate without learning. Therefore, Malche concludes that change is required both in the level of knowledge and in the method of instruction.

b. Professions of the Graduates of the Faculty of Law and Medicine (including the School of Apothecary and Dentistry):

According to Malche, these faculties which educate students for the professions immediately manifest a deficiency and failure. Due to the importance of the proffesional practicies of the students of the Faculties of Medicine and Law, the steps need to be undertaken in their education, are clearly determined.

Furthermore, since the professors in these faculties are also working in practical fields, they are able to improve the level of instruction by means of their experiences. However, Malche states that there should be a balance between the practical and academic inputs of the instructors. Otherwise, the workload in practical life can be harmful for academic contributions or vice versa.

c. Future Instructors of the *Darülfünûn*:

Malche states that it is desirable to educate future professors who will replace the present professors of the *Darülfünûn*. Malche gives France and Germany as examples. In these countries, universities give great importance to educating individuals who will be future professors. These young scientists, after acquiring general knowledge in the university, go abroad for short-term periods in order to be equipped with certain scientific skills. This is the way the prolongation and improvement of scientific institutions are achieved in France and Germany.

As the report states, the faculty of the *Darülfünûn* prepares such professionals as secondary school teachers, chemists, and lawyers for practical life. However, the faculty thinks that the *Darülfünûn* is not ready to educate the future instructors of the *Darülfünûn* yet.

In the report, Malche makes suggestions on educating individuals who will teach at higher educational institutes. First, a student should spend a long time in the *Darülfünûn*; obtain a diploma from the *Darülfünûn* and work under a professor as an assistant. This should be followed by studying in foreign countries with some foreign professors from Berlin, Leipzigden, Paris, or Chicago, and returning to *Darülfünûn* For Malche, even though sending people abroad involves a reduction of available professionals in the *Darülfünûn,* to educate future professors adaquately is its primary responsibility.

8. The Organization and the Efficiency of the Library

Based on his observations, Albert Malche states that because the libraries close at 4 pm and the books are not circulated, students can read books in a very limited period when only in the libraries. This, according Malche, accounts for the insufficient personal activities of students. With some exceptions, the libraries, which are many in number, of the faculties, institutes and seminars are in the same condition. They do not have any periodicals. Malche states that during his visits, he found the library of the Faculty of Medicine to be very poor but found the library of the Faculty of Law very rich in resources. Thus, Malche suggests the following for the organization and the effectiveness of the libraries:

First, books should be allowed outside since some of the students do not have books at home. For this reason, Malche proposes using a card indexing system.

To apply this system in all libraries, the head of the Central Library should offer services to the libraries of the faculties and institutes to start their system. On what can be done about the loosing books, Malche gives Robert College, Galatasaray, Bahçekoy Higher School of Forestry as examples and states that there were only four books lost in Robert College within academic year. Malche also suggests taking two or three liras from students as a caution for any damages that can be inflicted on the books.

Other than these, it is suggested in the report that libraries should be in agreement about the books which are to be bought. In addition, the hours during which the libraries are open should be increased (they should be open until 6 p.m. and even one or two nights a week until 10 p.m.) and they should be provided with easier working facilities.

9. Buildings

Albert Malche saw the lists of the buildings in the brochure of the Ministry. He states that in general the buildings are very large and have wonderful scenery. The ceremony rooms, meeting and ceremony halls make a great impression. Malche also appreciates the setting of the *Darülfünûn*. On the other hand, Malche states that classrooms, being large in number, are not busy with students every hour of the day. Some of the laboratories, seminar rooms, and institutes are old and basic, but always large. After his visit to the abandoned buildings of the *Darülfünûn* in Beyazıt, Malche stated that these buildings could also be used after restoration.

10. The Organization of the Faculties

Malche gives the following suggestions which will not change the general mechanism of the *Darülfünûn*, but, make its managament more efficient.

a. Faculty of Medicine

Transportation of the Faculty of Medicine: Since the hospital functions in two different buildings situated on two different sides of the Bosporus, the students of the Faculty of Medicine have to do their two-years of studies in *Haydarpaşa* and their last three years in the hospital situated on the Istanbul side.Trainees sometimes have to spend the night somewhere when they move from one hospital to another. This means that they do not have the opportunity to observe many operations and births, when they complete their training period. According to Malche, *Haydarpaşa* Hospital is not able to respond to students' needs. Even if it cost 145,500 Turkish Liras (129,333 Sterling), Malche believes that the Faculty of Medicine should be completely transported to the Istanbul side.This way, instead of spending money all the time, money will be spent once and students will have a chance to attend a lot of practical operations in *Beyazıt*, *Gureba*, *Haseki*, *Cerrahpaşa* and *Şişli* Hospitals and *Bakırköy* clinics which they can easily reach, also they will have access to the library and the clinics.

Sequence of courses: According to Albert Malche, it is not necessary for first year students to attend clinics because these clinics have no benefit for the first year students who do not have any knowledge on anatomy and physiology. In contrast, the last term of students has to be one of practice with no additional theoretical courses.

Specimens: In laboratories, the specimens should be renewed; present pharmaceuticals should always be kept fresh and correct stickers should be put on them. They should be classified methodologically according to frequent usage.

Adjoining the School of Dentistry to the Faculty of Medicine: the Faculty of Medicine will make all the scientific and technical arrangements related to the

training of dentists in courses and laboratories when the School of Dentistry is integrated into its body. Its administrative head will be the Dean of the Faculty of Medicine. Instructors who are dentists of the School of Dentistry will attend meetings of the board of professors of the faculty; as a result, this will contribute to their relations.

b. Faculty of Law:

For the Faculty of Law, Malche suggests that a methodological orientation to issues is of utmost importance for this faculty. According to Malche, methodology the question of methodology should be discussed in academic seminars. It is also important for students to use sound methodologies in dealings with the bureaucracy, in examining journals, circulars, court decrees, legislative decision and their comparisons.

c. Faculty of Science:

Malche questions that there is no chair for biology in the new Faculty of Science. He claims that an association among the instructors of zoology, botany, chemistry, physics and physiology should be formed. An instructor of science should learn the relation between the above stated sciences.

Natural Geography: Due to its content, this field is related to geology and science. Malche recommends that this field should be attached to the Faculty of Science rather than the Faculty of Letters.

Anthropology: The School of Medicine offers courses in anthropology. This discipline, which throws light on humanity, the current issues of morphology, heredity and race, it is very important for the student of natural sciences. Thus, all students in the natural sciences, not just medical students, should take this course.

The Observatory: The student of astronomy should benefit from the observatory established in Kandilli. However, for Malche, the course given in the Observatory should be more practical.

Station of Zoology: The zoology education center, which has boats, is an important centre in which the students can examine sea animals as well as others and gain its use in their practicums.

Institute of Electro Mechanics: Malche suggests that the graduates of this institute and the school of engineering should be at the positions which are complementary rather than competitive. .

School of Pharmacy: This school should be integrated to the Faculty of Medicine so that the exchange of theory and practice becomes possible for both sides.

Laboratory Equipment: Malche suggests that expensive materials with infrequent usage should not be bought. In addition, materaisl and equipment should be shared in disciplines which have common usage of these tools and equipment.

d. Faculty of Letters:

The contribution of humanities to the culture of *Darülfünûn* is as important as that of sciences. Formerly, humanities education was supposed to be the exact opposite of scientific education. Malche states that the Faculty of Letters does not educate chemists or physicians but people who argue correctly, understand details intuitively and to help others to understand better, have a sense for the fine arts and train people who provide others with spiritual maturity. Malche thinks that the Faculty of Letters should be equipped with certain courses related to humanism.

e. Faculty of Theology:

Malche states that there are 13 instructors in the Faculty of Theology while there are only 3 students. Therefore, for only 3 students Malche thought it was not cost effective, with its rooms and administrative cadres. Malche suggests the adjointment of the Faculty of Theology to the Faculty of Letters as a Depertment of Theology or Philosophy of Islamic History.

f. Transporting the School of Political Sciences and Departments of the Higher School of Commerce:

For Malche, the Faculty of Political Science should be moved to Beyazit and several courses should be combined. This will ensure that students of the Faculty of Law, Political Science, Economics and Administrative Sciences can attend the same courses.

Malche does not agree with abolishing the Faculty of Political Science. The students of the Faculty of Political Science have a privilege because the Faculty educates numerous civil servants who will take part in the administration of Turkey. This situation is desirable and should not be changed.

Albert Malche mentions the dual services which have the same characteristics and aims. Giving these services separately would cost a great deal of money. Therefore he thinks that services which show an overlap shoud be combined.

II. The Instruction Given in the *Darülfünûn*

Malche focuses on the following topics and states his observations, views, and recommendations.

1. Teaching Methods
2. Foreign Language Education

3. Turkish Publications

1. Teaching Methods

For Malche, the courses of the *Darülfünûn* should not be only source of information. Therefore, students should not be left to dependent on class notes only. The student should himself make efforts for his own education. A student who has not done anything on his own can obtain a diploma, but it does not mean that he is familiar with the world of thought. Malche states that student should be "active, to be an entrepreneur, to find out things that he will attempt on his own and accomplish them."

2. Foreign Language Education

a. The instruction of the western languages in high schools

Based on the results of the surveys Malche carried out about instruction of foreign languages in high schools, he states that this instruction is inadequate and is even worse in schools outside of the metrapols.

For Malche, it is not expected that students who have completed their bachelor's degrees to speak the languages they have studied, but it is required for them to read in that language without any difficulty. In the report, it is indicated that everywhere during higher education, at least one foreign language and if possible two are taught. For Malche, this is much more significant for countries such as Turkey, Bulgaria, Yugoslavia and Hungary, whose languages are not used by other countries and the field of science.

Malche talks about the lack of methodology in Turkey while teaching foreign languages. During his observations in the high schools, he observes that teachers use different methods. Sometimes a teacher uses a method which is not that

extreme but some of the teachers follow a totally different way than that of the instruction and those waste the time of the students. Malche states that he is an expert in teaching foreign languages, and gives the following suggestions:

> The time that has been allocated to instruction of foreign languages is enough. But from the first year, it is crucial to follow a fixed and recorded method of phonetics. Students should acquire by hearing the ability to pronounce. They should memorize between 150 and 200 most frequently used words, referring to practical things. It is not important that there are morphological difficulties because the aim of the course is speaking. Students should enjoy doing these activities. Enriched materials are necessary. Nothing can be translated, everything is to be demonstrated. Lists of the familiar words are to be formed spontaneously. The language learned is acquired through moving within the language in life experiences.[1]

As can be seen from the paragraph above, Malche gives importance to practice and experience with rich materials rather than memorization. For the following years, Malche recommends that

> The teacher, in the following years gradually uses the opportunities that arise coincidentally to interes students in morphological methods. But he does not refer to rules mentioned. Direct speech is still the principal method. However, stories, which follow each other are read and compositions planned with the teachers, are written.[2]

And lastly for the third and the fourth years, Malche suggests giving detail of methodology and conjugation of exceptional verbs without loosing track that themost

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[1] The English form was directly translated from the text of Malche (1939, p. 27) on May 11, 2007. The original Turkish form is, *Bu işe tahsis edilen zaman tamamen kâfidir. Fakat ilk seneden itibaren gayet muayyen ve mazbut bir fonetik usulü takibi icap eder. Talebeler duyma ve telafuz etme itibarile bir mümarese iktisap eylemelidirler. 150 ilâ 200 arasında daima kullanılır ve en ameli şeyleri irae eder kelime bellemelidir. Bu kelimelere ait sarf müşkülatın ehemmiyeti yok, zira muhavere dersin esasıdır. Çocukların bu işten zevk duymaları lâzımdır. Zengin bir malzeme icap eder. Hiçbir şey tercüme edilemez, her şey gösterilir. Bilinen kelimelerin fiş cetveli kendi kendine vücut bulur; öğrenilen lisan içinde hareket edilerek ve hayatile yaşanılarak bellenir.*

[2] The English form was directly translated from the text of Malche (1939, p. 27) on May 11, 2007. The original Turkish form is, "*Yavaş yavaş müteakip senelerde, hoca tesadüfün karşısına çıkardığı vesilelerle sarf usullerinden bahsederek talebelerin dikkat ve alakalarını tenmiye eder. Fakat kaide ve ahkâm serdedilmez. (Şifahen ve doğrudan doğruya) usulü esas teşkil etmekte berdevamdır. Mamafih birbirini takip eden hikâyeler okunur ve derste hoca ile hazırlanan imlalardan bir miktar yazılır.*"

important course is the practical usage of French. Some literary piecescan be memorized, sppeches made discussions carried out, and small lectures of few minutes can be performed.

b. Lecturers of Foreign Languages:

Malche has been informed that in the *Darülfünûn* foreign language courses are not at the desired level. He gives the example of the lecturers in Bulgaria. For Malche, the lecturer is a person who has a bachelor's or doctor's degree having been in a foreign *Darülfünûn* for several years to study the foreign language that he is going to teach. This person is present next to a professor who is a holder of a chair, if readings are necessary in his native language, he translates spontaneously, and about the authors whose works are included in the exam syllabus he gives information and explanations. In history of literature on a time or on a similar subject with the consent of the professor he gives lectures in his language.

Malche states that it will be advisable to have a French, German and English lecturer in the Faculty of Letters. For Malche, to save on the budget, foreign lecturers can be elected from those who came to Turkey to write a thesis on history, language or archaeology and who would like to work. Also, it is advisable that these lecturers speak a little Turkish. If necessary, a French lecturer can be hired on a permanent basis. Language courses should be for 8 hours a week at University level.

c. Language Examination at the end of the first year:

Malche suggests an examination in French, German or English at the end of the first year, as it is the case of all faculties of *Darülfünûn* in Bulgaria. If students cannot get 3 out of 6, then they have to repeat the courses in the second year. For them to stay in the *Darülfünûn* at the end of the second year, they have to get 3.

3. Turkish Publications:

For Malche, having a rich history in the fields of poetry, literature and philosophy of religion, Turkey should take care of these sources. Those which are written in the old alphabet will become unreadable for future generations. For this reason, they have to be translated. Furthermore, Malche mentions that the number of works produced have increased in numbers but nothing is systematized to protect these books.

Malche also advises that a Copyright and Translation Council which changed into the National Board of Instruction and Education should undertake an important role in the future. This commission, if it is necessary, having been strengthened by persons who have authority, and consulting with professors foreign scholars will keep a list of the publications which will be translated, as well as a list of the publications which will be written in Turkish by the people who have knowledge in their fields. Malche also notes that the government's support is needed on this issue.

III. The Influences and Services of the *Darülfünûn*

For Malche, the renewal of the *Darülfünûn* within itself is not satisfactory. According to Malche, *Darülfünûn* should be a centre of learning for the entire country. To increase its effectiveness, in his report, Malche states the following suggestions:

1. Competency Courses for Secondary School Teachers
2. *Darülfünûn* Courses for the General Public
3. Vacation Courses, Archaeological Excursions, and Conferences
4. Turkish Journal of the *Darülfünûn*
5. Academy of the National Sciences, Literature and Arts

1. Competency Courses for Secondary School Teachers

Malche thinks that it will be more convenient for these courses which are given at the present to be organized regularly. Thus, some high school teachers will learn about the new methodologies and will be able to improve and plan their instruction. Both science and humanities teachers of secondary schools will study in the Istanbul *Darülfünûn* as a group, and if possible during their vacations. These teachers will attend seminars and study in the laboratories under the supervision of academic personnel of the *Darülfünûn*. Teachers will come back every five or six years on a rotating basis to attend these courses. These in-service training courses will last a week. The topics of these courses will be obtaining new knowledge in the field, implementation of new methodologies, and being present in some demonstration classes by master teachers in high schools. Moreover, Malche suggests holding functional conferences to show the methods used by principals and supervisors of secondary schools, and inviting instructors who are successful in teaching by paying their travel expenses and accommodation costs.

2. *Darülfünûn* Courses for the General Public

Malche suggests organizing conferences in order to inform the public about new advancements. In these conferences, instructors of the *Darülfünûn* and even foreign scholars will introduce about 12 points of interestto the students and the general public through conferences. No fees will be charged and visual aids such as projectors, drawings and graphics will be used in the presentations. The organization of the conferences will be left to the rectorate and to the general secretary of the *Darülfünûn*. Furthermore, Malche suggests that seats can be reserved for journalists

in these conferences and they can be asked to mention the conference in their publications.

3. Vacation Courses, Archaeological Excursions, and Conferences

Malche states that in Italy, Greece, and Egypt, vacation courses, archaeological excursions, and conferences enlighten the public. Malche thinks that this can also be achieved in Turkey. Foreign tourists can learn about the archaeology, history, and arts of Turkey from the instructors of the *Darülfünûn*. Lecturers can also be given on boats while the tourists are on excursions. Malche recommends advertising these in Germany, England, France, Switzerland and other countries. For Malche, arranging conferences on academic and scientific issues not only for students but also for tourists can be beneficial.

4. Journal of the Turkish *Darülfünûn*

For Malche, the number of journals is not sufficient. Malche suggests publishing a Magazine of the Turkish *Darülfünûn* by the government. The sections of this journal should include a general culture, sciences and implementations, literature, the arts, history, moral sciences, sociology, and economy. This magazine should be suitable to every level of society. If 10 or 30 pages summary of all of the articles is made at the end of the issue, it is possible to make this journal a member of foreign libraries. Furthermore, separation of humanities and sciences according to the interests of the reader may also be useful.

5. Academy of the National Sciences, Letters and Arts

For Malche, the honorary degrees strengthen the ties between different cultures as well as showing recognition for unusual contributions to societies. However, this issue will be dealt with later, when doctorate degrees are given by the *Darülfünûn.*

On the other hand, a national academy of science, letters, letters and fine arts must be established. This academy will include the departments of medicine, science, literature, general law, sociology, economics, and fine arts. A regulation can be prepared to determine the required characteristics of the candidates. This must have specific criteria such as working effectively in the *Darülfünûn* for a while, making original publications.

As a result of all of his studies, Malche comes to a conclusion which is briefly stated below;

> The *Darülfünûn* of Istanbul is a vast organization which functions inefficiently. Therefore, the structure and the nature of the issue to be solved is that: To simplify the mechanisms, to determine its work schedule, to enable those who make the machine work have the most perfect means of implementation, and to prevent overlapping strengths and weaknesses.[1]

For Malche, the situation is not inevitable and desperate but is serious. Turkey has had greater achievements before. Here, Malche gives the examples of the Ankara Music Teacher Training School, İsmet *Paşa* Institute, and Bahçekoy Higher School of Forestry.

Just after Albert Malche gave his report, Dr. Reşit (Galip) was appointed as the Minister of Education on September 19, 1932 following Esat Sagay. In light of the report of Malche, Mustafa Kemal and the Ministry of Education gave a proposal to the Grand National Assembly on July 31, 1933. With this proposal, it was decided to close the old *Darülfünûn* and to establish the new Istanbul University by the Ministry of Education. The Ministry immediately prepared the principles and the

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[1] The English version was translated by the author of the thesis on November 19, 2006. The original Turkish version is, "*İstanbul Darülfünunu, zayıf bir randıman vermek üzere işliyen vâsi bir teşekküldür. Binaenaleyh, halledilecek meselenin şekil ve mahiyeti budur: Makineyi sadeleştirmek, mesaisini teksif etmek, bu makineyi işletenlere en mükemmel usulleri tatbik imkanlarını da vermek suretile müteaddit kuvvet zıyalarının önüne geçmek!* (p. 21)"

certificate of organization of the Istanbul University, opened by a law in August 1933. As a result of this law (Wilson and Başgöz, 1968, pp. 182-183),

- Some of the instructors of the *Darülfünûn* were left outside, some were made to retire, and some were transferred to other professions.
- The same year professors who were either Jewish or leftist or those who were politically incorrect were exiled from Germany and come to establish the departments of the several faculties of the new Istanbul University.
- Young academicians having completed their education in Europe came to teach in the University.
- The Institute of the History of the Turkish Revolution was established in the University and every student was obliged to take a certificate from this institute in order to graduate.
- In order to direct students to study the important issues, related to national economy and the Institute of Social Sciences, Chemistry, Geography were established.

The American Board Report - Kemerrer's Report (1933)

In 1933 and 1934, the Minister of Economics, Celâl Bayar, invited the American Board, whose members were Walker D. Hines, Brehon Somervell, O.F. Gardner, Edwin Walter Kemmerer, C. R. Whitlesey, W. L. Wright, Jr, Bongt Wadsted, Goldthwaite H. Dorr, H. Alexandra Smith, and Vaso Trivanovith to carry out economic examinations on a large scale in Turkey (American Board, 1939, p. V). After the examinations and observations, the Board prepared a report for Turkey, sometimes called *the Kemmerer Report*, one section of which was about education

(Ergün, 1997). “The Educational Issues” section starts with a discussion of their observations and makes suggestions about education in general.

The report briefly emphasizes the educational improvements in the history of the Turks. This process is delineated in the report as follows. Before the second constitution of 1908, the quality and practicality of education was in adequate, and the insufficiency of teacher training was insufficient. The report points to the fact that the instruction of the Qur’an, and the Persian and Arabic languages was stressed heavily in the *medreses*. The Ministry of Education, (*Maarif Nezareti*) established in 1857, did not make any attempts to improve public education. Furthermore, sending children to schools was expensive for the lower-classes. These problems led to low literacy rates. The education of women was not emphasized. This situation changed after the second constitution of 1908; in 1910, a high school was established for girls. Actually, from 1908 to the proclamation of the Republic, progress was made in the field of education. Especially within ten years after the proclamation of the Republic, Turkey established one of the greatest gratuitous educational systems of the world. During this establishment, five crucial steps were taken. First, all educational institutions came under the supervision of the newly established Ministry of Education (*Maarif Vekâleti,* 1920) by the Law of Unification of Education (*Tevhid-i Tedrisat Kanunu,* 1924). The second step was to make education compulsory in locations that had sufficient resources. The other steps were related to a stronger emphasis on the education of women, raising literacy rates by a new alphabet, and the preparation of the new textbooks. The report also uses the statistical data taken from the General Directorate of Statistics (*İstatistik Umum Müdürlüğü*). The following table gives the total number of schools of primary and secondary education, teacher training and trade, as well as higher education institutions, giving

the numbers of teachers and students in these schools between the years 1923 and 1932. The table shows the totals for all levels of education.

Table 12: The Numbers of Schools, their Students and Teachers between 1923 and 1932

		Numbers			Indicators[1]		
		1923-24	1928-29	1931-32	1923-24	1928-29	1931-32
School		5,062	6,754	6,893	100	133	136
Student	Boy	280,908	350,508	374,343	100	124	133
	Girl	64,614	165,173	200,725	100	255	310
	Total	358,548	517,286	575,068	100	144	160
Teacher		12,437	18,273	19,842	100	146	159

*This table is adapted and translated from the American Board Report, 1939, p. 6.

After the above explanations on educational improvement, the following paragraphs will analyze the suggestions of the American Board on education.

According to the American Board, the issue of education is closely related to economic development. The report states that in order to increase productivity, obtaining the maximum output in relation to the amount of work input is thought to be the most important issue. This has to be done by assuring the implementation of modern methods and techniques in order to develop the necessary mechanical skills, work techniques and knowledge of science by opening various science sections in the schools. For the American Board, education does not merely aim to form a literate class or many scientists, intellectuals, and cultured people. “The educational system should educate the mind and the body so that the material needs of life are met, it should also teach the usage of time and the means for the highest level of

[1] The indicators use 100 for all the initial values (a) in the table to state the final values (b) with simpler values so that the reader can understand the increase and decrease in rates better. The formula used to get these simpler values of b when a is stated in terms of 100 is: $\frac{b \times 100}{a}$.

development possible.[1]" According to the Board, to provide education for all, there should be a balance between all the provinces. This can be achieved by forming funds from the budget of the Ministry of Education.

The report draws attention to the great increase in literacy rates (from 8.6% to 21% between 1927 and 1934). However, since three fourth of the nation is illiterate, efforts in this area should continue. According to the American Board, the educational system must enable the effective utilization of money and effort. Therefore, as Dewey recommended in his report (1924), the American Board suggests the preparation of a long-lasting program after the examination of the needs of the country. Furthermore, the Board criticizes the inadequacy of statistical data.

Moreover, the report points out that more emphasis should be put on commercial and technical education, which is not yet developed. The report points to the fact that productivity in agriculture is not at the desired level. Instead of educating a small group of specialist farmers, educating two thirds of the Turkish population should be considered first. Furthermore, the report suggests the implementation of a forestry program within the educational system in order to prevent the loss of forest products. In addition, the American Board focuses on the inadequacy of the practical fields of science such as geology, water engineering, and meteorology. For the American Board, educated manpower in these fields should be increased in order to raise developmental activity, to improve the transportation and communication services, to utilize the richness of mines and water, and to increase the usage of energy. The report also mentions the lack of knowledge on external and

[1] The English form was directly translated from the report of American Board (1939, p. 1) on February 15, 2007. The original Turkish form is, "…*Maarif: insanın dimağ ve adalâtını, hayatın maddi ihtiyaçlarını kâfi derecede temin edebilecek, aynı zamanda da muktedir olduğu en yüksek inkişaf derecesine erişmek için vakit ve vasıta bulabilecek bir surette terbiye etmelidir*."

internal trade. In addition, the report focuses on four areas for the economic development of Turkey. These are;

1. Agriculture (Ziraat)
2. Science and Engineering (Fen ve Mühendislik)
3. Effective Workers and Administrators of Industry (Mahir sanayi amele ve idarecileri)
4. Commerce (Ticaret)

As economic progress is made in these areas, more specialists will be required. The Board states that the Ministry of Education should get assistance from other Ministries in order to educate skilled workers for the above stated areas.

Furthermore, the report specifically focuses on the following topics:

I. Primary Education (*İlk Tahsil*)
II. Secondary Education (*Orta Tahsil*)
III. Teachers and Teacher Training Schools (*Muallimler ve Muallim Mektepleri*)
IV. Higher Education and the University (*Yüksek Tahsil ve Üniversite*)
V. Students Sent Abroad (*Harice Gönderilen Talebe*)
VI. Technical and Commercial Schools (*San'at ve Ticaret Mektepleri*)
VII. Public Schools (*Halk Mektepleri*)

I. Primary Education

The report gives the following tables, taken from the General Directorate of Statistics (*İstatistik Umum Müdürlüğü*), in order to show the quantitative advances in primary schools between 1923 and 1932, and in village primary schools between 1928 - 1932.

Table 13: The Numbers of Primary Schools, their Students and Teachers between 1923 and 1932

		Numbers			Indicators		
		1923-24	1928-29	1931-32	1923-24	1928-29	1931-32
School		4,894	6,599	6,713	100	134	137
Student	Boy	273,107	323,260	355,921	100	118	130
	Girl	62,954	154,309	187,690	100	245	298
	Total	341,941	477,569	523,611	100	139	153
Teacher		10,238	15,718	16,973	100	153	165

*This table is adapted and translated from the American Board Report, 1939, p. 4.

Table 14: The Numbers of Village Primary Schools, their Students and Teachers between 1928 and 1932

		Numbers		Indicators	
		1928-29	1931-32	1928-29	1931-32
School		4,688	5,308	100	113
Student	Boy	186,848	181,711	100	97
	Girl	55,041	88,735	100	161
	Total	241,889	270,446	100	111
Teacher		12,275	13,828	100	112

*This table is adapted and translated from the American Board Report, 1939, p. 6.

Although the tables show remarkable accomplishments in the area of primary education, the American Board observes that the aim of the Turkish Republic, equality of opportunity (the Law of Unification of Education, 1924), has not been achieved. While the duration of primary education is three years in the villages, it is five years in the cities. According to the Board, three years of primary education is not enough for children to acquire reading habits; and what is learned in three years can easily be forgotten in the next five years. The report suggests that the three-year village primary schools should be increased to five years as soon as possible. More importantly, the report states that less than 33% of registered students complete these three years in the villages. The following table gives the attendance rates of students from 1929 to 1932 in the village primary schools.

Table 15: The Attendance Rates of Students in the Village Primary Schools from 1929 to 1932.

Years	Grades	Student Numbers	Attrition Rates (%)
1929-30	1st	129,479	
1930-31	2nd	60,788	53.1
1931-32	3rd	42,081	14.4
			Total: 67.5

*This table is adapted and translated from the American Board Report, 1939, p. 8.

As a precaution, the Board suggests that the teachers take attendance and inform the supervisors and authorities in the villages about the results. Parents who are responsible for attrition should be imposed a fine. Supervisors should inform the provincial authorities if there are villages or towns which do not implement these precautions. As another precaution, the Board recommends villagers to be invited to schools to watch student shows, plays, and their recitation of poems. If the topics selected are related to agriculture, health, and civic education, these activities can also serve for the education of the public.

The attendance problem was also seen in urban schools. During the 1927-28 academic year, 64,197 students were registered. However, only 22,548 (35.1%) continued until the fifth grade, enabling 17,500 (27.3%) students to graduate. These figures show that expenditures for primary education were not used efficiently. Therefore, instead of the establishment of new schools, the Board suggests attaining maximum advantages from existing primary schools. The report also fosters the establishment of magnet schools in central villages so that students from the neighboring villages can stay five week days in these schools, spending their weekends with their families. The report puts forth three advantages of magnet schools. First, in these schools, students will spend more time to acquire habits like speaking, thinking, reading, and studying. Secondly, the instructional materials and

housing opportunities available to the students in a single magnet school will be better than those offered separately each village school with limited resources. Thus, these schools can be more economical. Thirdly, with two or more teachers, the quality of instruction can be better and these teachers can develop intellectually by interacting with their colleagues.

According to the Board, equal education for all parts of the country is correctly impossible. For education to be more productive, most of the subjects in the village primary schools should be related to village life. Children in these schools should discuss issues like agriculture and chicken farming. The Board suggests taking advantage of the supervisors sent by the government not as representatives, but as guides and assistants. The report advises teachers to follow the recommendations of these knowledgeable supervisors on the implementation of modern teaching methods.

The report also mentions the role of teachers in the village primary schools. These teachers should not only teach scholastic knowledge. They should be sources of practical knowledge and thus effective individuals in village life. Teachers should be careful about the hygiene of the students and try to have them explain the problems related to hygiene at home. Actually, both in the city and village schools, teachers should give importance to hygienic principles since the sanitary conditions in Turkey are not at a high level at the time. Therefore, the chance of reaching 500.000 students to give basic health information should be used effectively. Furthermore, teachers should be responsible for the education of the public in the villages. According to the Board, to deal with these heavy responsibilities, teachers have to do the following. First, they should pay attention to students with special aptitudes, and inform the central office. Secondly, teachers should help the

agricultural development of the country by enabling communication between the villagers and the related officers. Finally, teachers should read the contents of the brochures sent from the Ministries of Agriculture, Health, and Education.

Lastly, the report focuses on the arts and crafts courses of the children. According to the Board, producing handicrafts with simple equipment is not so beneficial for Turkey. Instead, in order to train future experts, the primary school curriculum should include handicrafts which will facilitate the improvement of home economics. By producing handicrafts, children can understand the importance and the pleasure of handicraftsmanship.

II. Secondary Education

The report gives the following table taken from the General Directorate of Statistics (*İstatistik Umum Müdürlüğü*), in order to show the quantitative advances in secondary schools, between 1923 and 1932.

Table 16: The Numbers of Secondary Schools, their Students and Teachers between 1923 and 1932

		Numbers			Indicators		
		1923-24	1928-29	1931-32	1923-24	1928-29	1931-32
School		64	78	80	100	121	125
Student	Boy	7,976	16,996	22,805	100	213	286
	Girl	2,076	6,229	7,511	100	300	362
	Total	10,052	23,295	30,316	100	231	301
Teacher		720	815	963	100	113	133

*This table is adapted and translated from the American Board Report, 1939, p. 5.

At the time, secondary education in Turkey consisted of two parts, a three year junior high school followed by three years of lycée education. While there were both working and final curricula for junior high schools, there was only a preparatory working curriculum for the lycées. Therefore, the report discusses the Board's comments on the high school curricula. The Board states that the existing curricula

of these schools are similar to the ones in Europe. Courses are mostly theoretical and there is very little practical instruction for those who will not continue to higher education.

The Board observes attendance problems in secondary schools as well. In 1929, 32.6 % of the students in junior high schools and 50.4 % in the lycées could graduate. The board thinks that the new changes in the curricula can be a solution. In order to make the curriculum more practical, with courses like accounting and commerce as well as secretarial courses are recommended in the report. As another solution for low attendance rates, the report suggests using criteria for the selection of students to secondary education. These criteria should not only be scholastic but also moral.

III. Teachers and Teacher Training Schools

The Board states that the Minister of Education managed to educate many teachers to meet the needs of the country. The following table taken from the General Directorate of Statistics (*İstatistik Umum Müdürlüğü*) shows the quantitative increases in teacher training between 1923 and 1932.

Table 17: The Numbers of Teacher Training Schools, their Students and Teachers between 1923 and 1932

		Numbers			Indicators		
		1923-24	1928-29	1931-32	1923-24	1928-29	1931-32
School		20	25	24	100	125	120
Student	Boy	1,745	3,307	2,948	100	189	168
	Girl	783	2,442	2,345	100	311	299
	Total	2,528	5,749	5,293	100	227	209
Teacher		325	417	320	100	128	98

*This table is adapted and translated from the American Board Report, 1939, p. 5.

The Board states that not only the quantity but also the quality of teacher education is an important issue. For this reason, the Board suggests training different teachers for

different subject matter areas, and emphasizes the need to educate enough teachers for the trade and commerce schools. Furthermore, the report focuses on two reasons which affect the quality of teachers and teacher training. The first factor is related to the lack of equipment and materials due to financial problems. It is stated that village schools have difficulty in providing even the materials and tools for reading and writing. The report suggests that financial resources should be allocated at the earliest convenience to meet these needs.

Another factor is related to the morale of the teachers. The report focuses on the teachers sent to villages. The low morale of the teachers is due to their loneliness because they have little collegial interaction since they are the only teachers in the villages. The magnet schools are recommended on this account as well, since there would be several teachers in these schools and they could interact. According to the Board, since the Village Teacher Training Schools (*Köy Öğretmen Okulları*) were closed down in 1932, immediate precautions have to be taken to educate village school teachers.

The report also makes four suggestions to boost the morales of the teachers. The first suggestion is related to the publication of a journal for village teachers and educators, which will include the experiences of teachers and, articles by high-ranking officers from the Ministry. By means of this journal, teachers can be informed about the educational policies of the government. According to the Board, this journal should be free for teachers, since the teacher salaries are very low. The second suggestion is the establishment of summer camps for teachers. In these camps, teachers can get together during two or three weeks and share their difficulties, and learn from each other's experiences. The third suggestion is to solve the housing problems of teachers. The report suggests providing free housing for

village primary school teachers. Lastly, the report suggests the establishment of clubs and associations in order to form friendly relationships among teachers.

IV. Higher Education and the University

According to the American Board, higher education institutions educate the supervisors of the economy who control the resources of the country to develop means of transportationand to aid the growth of the industry. These individuals also train individualswhose technical abilities are employed in the industrial sector, transportation, etc. The following table taken from the General Directorate of Statistics (*İstatistik Umum Müdürlüğü*) shows the quantitative advances in higher education institutes between 1923 and 1932.

Table 18: Numbers of Higher Education Institutes, their Students and Teachers between 1923 and 1932

		Numbers			Indicators		
		1923-24	1928-29	1931-32	1923-24	1928-29	1931-32
School		9	12	12	100	133	133
Student	Boy	2,629	1,934	4,137	100	73	157
	Girl	285	665	716	100	233	251
	Total	2,914	4,204	4,853	100	144	166
Teacher		307	515	526	100	167	171

*This table is adapted and translated from the American Board Report, 1939, p. 6.

Despite the increases shown in the table, the report criticizes the low graduation rates of students. As an example, only 27 out of 56 students were graduated from the School of Higher Engineering (*Yüksek Mühendis Mektebi*) attached to the Ministry of Public Works (*Nâfıa Vekâleti)*. The report states that this number is not enough to meet the needs of Turkey.

The report also focuses on the insufficient amount of work practiced in higher education, and gives the United States as an example. In the United States, students work in the field and attend classes interchangeably for several months. In

Turkey, students could also work with experts in Sümer Bank, the mining companies and other related institutions.

According to the Board, the University should educate geologists, chemists, and meteorologists instead of inviting them from foreign countries. Furthermore, giving meteorology and astronomy courses at the University are suggested since meteorology services would help the development of a modern economy, especially air transportation.

V. Students Sent Abroad

The report states that students are sent to different countries in Europe and to the United States to study in the various areas of the sciences and arts. The Board finds it very beneficial to send students abroad and there is information about the achievements of students during their education in foreign countries.

The law dated April 10, 1929, includes detailed information about the method of selecting students to be sent abroad. According to this law, students are selected through a competitive examination. Students are then supervised by inspectors sent abroad by the Ministry of Education.In this system, various provinces determine the number of students to be sent abroad, but the selection is done by the Ministry of Education. In 1933, 228 students were sent abroad; 56 of them to study educational issues; 39 engineering; 20 commerce; 24 freelance occupations, and 33 industrial issues.

The Board recommends two changes in this system. First, both the students and the subject areas should be carefully chosen in order to ensure the best usage of the country's human and financial resources. The students should be graduates of a higher education institute and have one or two years of experience in their fields.

This experience can be helpful for combining theory and practice.Also, the Board suggests that in order to prevent the spending of extra time for language learning, the students sent abroad should know the language of the country. The Board also focuses on the restriction of the courses to be taken in foreign countries by the Ministry of Education. The report suggests that students selected and sent for specified areas should be freer in selecting their courses. This situation leads students to search for other resources to go abroad. The Board recommends the selection of more specific fields. For example, during the 1932-1933 academic year, 7 students were sent to Germany and France for agricultural education. However, it would have been better if the students were sent to Ceylon, to learn tea planting. Thus, Rize could have become the center of tea industry, decreasing the need for the importation of tea. According to the Board, another place could have been Denmark, to learn how to process milk products and the methods of putting them in the market. Secondly, the report suggests benefiting more from the students sent abroad when they return to their country. In Turkey, the Board points out, individuals with engineering degrees from foreign countries are appointed as clerks on their return. Since practical experience and knowledge are important for Turkey, the report recommends more efficient use of those engineers with practical knowledge.

To achieve the aims stated above, the Board suggests the establishment of a commission, composed of the representatives of related ministries, for the selection of the students to be sent, for the supervision of these students, and for their appointment upon their return.

VI. Schools of Trade and Commerce

According to the Board, schools of trade and commerce play a very crucial role in the economic development of a country. The following table taken from the General Directorate of Statistics (*İstatistik Umum Müdürlüğü*) shows the quantitative advances in vocational education between 1923 and 1932.

Table 19: The Numbers of Schools of Trade and Commerce, their Students and Teachers between 1923 and 1932

		Numbers			Indicators		
		1923-24	1928-29	1931-32	1923-24	1928-29	1931-32
School		44	20	40	100	45	91
Student	Boy	3,427	1900	3,412	100	55	99
	Girl	592	471	743	100	79	125
	Total	4,019	2,371	4,155	100	58	103
Teacher		258	298	423	100	115	163

*This table is adapted and translated from the American Board Report, 1939, p. 5.

The report focuses on schools of trade and commerce. Each will be taken separately. The report states that between 1927 and 1932, five new trade schools were established; 926 new students were registered and the number of graduates increased from 172 to 192, with 144 on the average. In 1933, there were 16 trade schools for girls and boys with 2462 students. The Board recommends an increase in the number of trade schools, the development of the skills of the students, and the use of machines for more qualified and efficient work.

The report focuses on the importance of developing constructional operations. This field is between the second and the fourth in importance among the four areas (agriculture, science and engineering, effective workers and administrators of industry) to be developed in Turkey. According to the Board, new factories can be established for constructional operations; that is why trade schools should educate the necessary skilled workers who will work in these factories. The Board also

suggests the establishment of a trade school in Eskişehir, to teach the methods and techniques of meerschaum winning. The graduates of the Fine Arts Academy could be the teachers of the schools in Eskişehir. Instead of sending meerschaum abroad for processing, this school could help in refining it in the country.

Since there were financial difficulties in the Bursa Trade School (*Bursa San'at Okulu*) and in other trade schools, the Board encourages cooperation between the chamber of commerce and Sümer Bank. As a result of such cooperation, trade schools can be established in factories with more than 250 workers, which will not only contribute to the budget of the Ministry of Education but also help the development of skilled workers. As Dewey suggested in 1925, the Board emphasizes the importance of technical courses given by the electrical power plants and other instuitions of public service.

About the schools of commerce, the report states that since 1927 there has been no increase in the number of schools, and the increase in the number of students has been just 19 %. At the beginning of 1933, there were five schools of commerce with 636 students. The Board suggests increasing these numbers, since the development of these schools can contribute to economic development. The report states that Turkey needs individuals with skills and knowledge on transporting crops and fruits to different parts of the country where there seems to be a great wastage of the crops. The report further suggests that young generations should be educated on the methods of supply and demand.

Due to financial problems, the Board encourages the efficient use of existing school buildings. The Board recommends that these buildings be used sixteen hours a day instead of eight hours, and be open to accommodate more evening courses. Lastly, in order to decrease the costs of the buildings, the Board

encourages cooperation between the Chamber of Commerce (*Ticaret Odası*) and the General Directorate of Technical Education (*Teknik Eğitim Umum Müdürlüğü*).

VII. Public Schools

The report states that after the alphabet reform of 1928, Nation Schools (*Millet Mektepleri*) were opened with the initiatives of Mustafa Kemal Atatürk, to teach reading and writing to the public. Despite their contributions to public literacy, the number of Nation Schools and the number of students benefiting from these schools decreased after 1928. However, two thirds of the public are still illiterate. The report proposes the continuation of these efforts. The following table taken from the General Directorate of Statistics (*İstatistik Umum Müdürlüğü*) shows the quantitative data for the Nation Schools between 1928 and 1933.

Table 20: The Numbers of Nation Schools, their Students and Teachers between 1928 and 1933

		Numbers			Indicators		
		1928-29	1930-31	1932-33	1928-29	1930-31	1932-33
School		20,489	9,602	5,107	100	47	25
Student	Boy	626,304	250,121	121,482	100	40	19
	Girl	419,196	102,781	36,154	100	24	9
	Total	1,045,500	352,902	157,636	100	34	15
Teacher		16,922	8,940	4,082	100	53	24

*This table is adapted and translated from the American Board Report, 1939, p. 6

The following table from the report also gives the numbers of graduates from the Nation Schools between 1928 and 1933, data being taken from the General Directorate of Statistics.

Table 21: Numbers of Nation School Graduates between 1928 and 1933

		Numbers			Indicators		
		1928-29	1930-31	1932-33	1928-29	1930-31	1932-33
Student	Boy	397,476	144,446	75,793	100	36	20
	Girl	199,534	43,865	15,142	100	22	8
	Total	597,010	188,311	90,935	100	31	15

*This table is adapted and translated from American Board Report, 1939, p. 7

The report states that there are difficulties involved in the teaching of reading and writing. First, since there are many ignorant people, it is important to instill the need to read. The second problem is related to the inadequancy of the vocabulary of the villagers. This situation has not been considered in the preparation of text books. Learning reading and writing is not just technical, but it requires the acquisition of many new words and expressions. The Board is aware of the accomplishments of the Istanbul People's House (*İstanbul Halk Evi*) and Wall Newspaper (*Duvar Gazetesi*) in public literacy. Other than these efforts, the report also focuses on the efforts of three establishments: the Military, People's Houses, and the libraries and reading rooms.

The Board finds the efforts of the military very beneficial and suggests further improvements. For two-thirds of the young male population who had not attended primary education, the military provided literacy education during their military service. The Board also recommends the teaching of mechanical arts during military service.

Furthermore, the Board is pleased with the services provided by the People's Houses because they not only educate students, but create solidarity among them. The report states that the People's Houses in the country totals eighty, resulting in at least one for every province. In these Public Houses there were courses like commerce, languages and civil education. There were also sections to improve the

economic and cultural conditions of the villages. This was successfully done in Ankara People's House, which had a limited budget. According to the Board, a narrowing of the services of the People's Houses due to financial problems should not be allowed.

In addition, the report focuses on the services of libraries and reading rooms. The report states that since the proclamation of the Republic, the number of 51 libraries with 280,000 books has increased to 91 libraries with 580,000 books. Furthermore, 1726 reading rooms have been opened in the villages and towns. The Ministry of Education and the center of the provinces sent the copy of every book they had, along with newspapers and journals, to these reading rooms.

Türkiye'de İlk Tahsil Hakkında Rapor (Report on Primary Education in Turkey) by Beryl Parker

The last foreign expert report during the period of Atatürk was written by Dr. Beryl Parker. Ms. Parker, who worked in the School of Ankara Educational Society (*Ankara Maarif Cemiyeti Okulu*), was charged by the Ministry of Education in 1934 with examining the schools in Turkey. After conducting observations in the schools, interviewing with the teachers and supervisors, and reading John Dewey's report on Turkish Education, Parker wrote her report entitled *Türkiye'de İlk Tahsil Hakkında Rapor* (Report on Primary Education in Turkey). According to Parker, due to insufficient objective data, her report is a collection of impressions which may not be very reliable.

Parker's report aims to determine the needs of primary education in Turkey and to suggest solutions. Therefore, the report rarely focuses on the positive

improvements related to primary education in Turkey. According to Parker, there are mainly two issues about primary education in Turkey. The first is the quantitative issue related to numbers while the second one is the qualitative issue related to the innovations in education. For Parker, Turkey has accomplished a lot in terms of quantity, but she observes deficiencies in terms of the quality of primary education. For this reason, in her report, Parker makes suggestions to increase the quality of the schools. Although Parker's report is mostly about qualitative issues, it also mentions quantitative issues and the relationship between quantitative and qualitative improvements. In the report, these issues were explained and discussed under the following themes:

I. Education and National Development
II. Establishment of the National Education Laboratories (*Milli Terbiye Laborauarları*)
III. Location, Buildings, and Equipment
IV. Students
V. The Curriculum
VI. Teachers, Supervisors, and Administrators
VII. Village Schools
VIII. Agents Working with Schools

The criticisms and suggestions of Dr. Beryl Parker on each theme will be explained in the following paragraphs.

I. Primary Education and National Development

According to the examinations and the analyses of the Ministry of Economics, economic factors determine the number of schools in Turkey. This result shows the two-way relationship between education and economy. When the level of education of the public is increased, economic means can be improved, and vice versa. For this reason, Parker suggests that "Schools should use the opportunities available in the

most economical and productive way, and as a result, generate for the society an educated group with practical abilities and vision, to work in various fields which will guarantee economic and social profits to the society.[1]"

According to Parker, in addition to facilitating the economic development of the nation, primary schools have to meet the needs of the public in areas such as hygiene, civil education, the usage of scientific methods in education and cultural enrichment.

II. Establishment of the National Education Laboratories (*Milli Terbiye Laboratuarları*)

Parker recommends the development of National Education Laboratories (*Milli Terbiye Laboratuarları*) in six central locations of Turkey. This necessitates a counselor director with knowledge and experience in every field of education, such as administrative processes in education, publication of educational reports, educational reforms in other countries, methods of observation, investigation and participation, and effective usage of the native language. As a second stage, Parker states that a plan should be prepared by the Ministry of Education to be piloted in six central locations. To complete a six-year project, each successive year, one province should be selected from the west, northwest, southwest, east, northeast, and the southeast of the country. Parker recommends the selection of the first province from the western cities which have all kinds of educational institutions. Parker has a plan which can be implemented in one province and later in the other selected provinces. The first four items of this plan are preparatory, whereas the last four are practical. The plan includes the following steps:

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[1] *Mektepler ellerindeki imkânları en iktisadi ve en semereli bir surette kullanmalı ve neticede, cemiyete iktisadî, içtimaî faideler temin edecek olan muhtelif sahalarda çalışmak üzere amelî kabiliyet ve görüşe malik, yetişmiş bir grup meydana getirmelidir.* (p. 4)

1. The analysis of the strengths and weaknesses of the state schools (*Mahalli mekteplerde kuvvetli ve zayıf olan tarafların tahlili*)
2. The selection of particular fields of work according to their levels of difficulty and priority (*Muayyen iş sahalarının güçlük ve haiz oldukları ehemmiyete göre bir silsile dahilinde intihap edilmeleri*)
3. The examination of the field in order to attain knowledge about the methods and the principles to be applied (*Tatbik olunacak metotlar ve esaslar hakkında malûmat edinmek için sahanın tetkik edilmesi*)
4. The preparation of the instructional materials, and the teaching of practical methods (*Tedris vesaitinin hazırlanması ve ameli usullerin öğretilmesi*)
5. The Introduction of these methods to schools (*Faaliyetin mekteplerde başlaması*)
6. Observations on possible improvements and the removal of difficulties (*Terakki sahasında yapılacak müşahedeler ve müşkülatın izale edilmesi*)
7. The report on improvements and the evaluation of the results (*Terakkiye dair verilen rapor ve neticelerin kıymetlendirilmeleri*)
8. The amendment of the above stated plan as a result of detailed observations and operating principles (*Tecrübe ve esasların daha mufassal olarak tetkik edilmeleri bakımından mezkûr planın tadil edilmesi*)

III. Location, Buildings, and Equipment

According to Parker, except for some schools, the location of the schools is not taken into consideration in terms of play areas, proximity to living quarters, appearance, and establishment. Disregard for such criteria of location has been reported by supervisors so that the errors related to location would not be repeated.

Parker also focuses on the problems related to play areas and the equipment necessary for play. She recommends allocating a space per child and arranging students into groups for play. In addition, Parker recommends encouraging local authorities to build and provide free equipment for play.

Parker observes that in many schools, there are coops for the care of domestic animals. Parker suggests specifying the schools with coops and determining of the roles of the students in caring for the animals. She also suggests that how plants are used in classroom activities should be determined. Furthermore, the schools which successfully use the plants and animals in classroom activities could become models for other schools.

Parker also states her observations and suggestions about the new and old school buildings. New buildings seem beautiful and are located in appropriate places. These buildings have enough light, heating, and air circulation. Parker criticizes the very high ceilings which could create problems in heating. She also criticizes the big windows through which excessive light enters the classrooms, which could be harmful for the eyes of the students. According to Parker, high windows, as in Europe, is a historical mistake and has no function except for blocking the beautiful scenery. Another point which Parker focuses on is the insufficient usage of empty spaces. In some schools, she observes rooms for each clerk even though there is no library or school museum. Parker recommends that a group of teachers and supervisors should contribute ideas on the construction of new buildings. Thus, construction could be more economical and more appropriate for the implementation of modern teaching methods. According to Parker, it is not necessary to construct more beautiful and expensive school buildings. Just a few of such school buildings are enough as models.

Another point which Parker makes about school buildings is related to the heating, air circulation and lighting of the buildings. Parker observes that in only a few schools is there is sufficient heating. Insufficient heating, according to Parker, decreases the effectiveness of teachers and students. Parker observes that air

circulation is ensured by opening the windows during breaks, but in some classes, teachers are not aware of air pollution. Parker states that curtains are required to control the light since students are inappropriately seated in terms of light. Parker observes problems in lighting due to small windows and crowded classrooms, and suggests colored walls and desks to prevent the reflection of light. She recommends yellow for darker rooms and green for rooms which receive excessive light.

For Parker, even though most of the old buildings are not fit to be used, by means of a careful plan and modifications, these buildings could be made to meet modern educational needs. Parker also suggests fire drills for old buildings, which pose the risk of fire. Parker observes that these buildings are out of repair, older students could handle minor repairs, and parents could be more involved in restoring the old school buildings.

IV. Students

As stated in the report, one-third of school-aged children in Turkey were in school in 1933. This, according to Parker, is a great accomplishment for the ten-year history of the Turkish Republic. The report shows that while in 1923 the number of students registered to the primary school was 341,941, in 1933, the number increased to 537,843. This is a 60 % rate of increase. However, when compared to 24 other countries from Sweden to Iran, Turkey was placed in the last quartile in terms of school attendance. The other countries in the last quartile were; Romania, Mexico, Turkey, Egypt, and Iran. The report states that in the other 19 countries, school attendance rates at primary level were between 70 – 100 %. In more advanced countries, nearly all healthy children were registered. Therefore, Parker suggests that

for the next ten years, Turkey should continue its attempts and have three fourths of the school aged children to attend school.

Parker also focuses on the sanitary problems of the students. Parker appreciates the national dynamism of Turkish children who attend to school although they have health problems. Parker observes that most children have health problems and some have serious illnesses. The reasons, she suggests, could be non-hygienic environments and malnutrition. Check-ups by teachers do not seem to help diagnose the physical illnesses of the students. Moreover, Parker states that there are no school doctors and no clinics for students.

The interest of the students is another topic which Parker emphasizes in her report. Parker observes that in schools, students seemed more interested if they were actively involved in learning. In Turkey, students were not allowed to present their knowledge of their environment through painting and discussions. Parker states that, generally, teachers do not show their abilities in their usage of student knowledge, and in enabling students to make observations and investigations related to their environments.

Finally, Parker focuses on the grouping of students. She observes that teachers classify students as poor (*yavaş*), average (*orta*), and very good (*pek iyi*). Homogeneous groupings, according to Parker, could have negative effects on students. Parker claims that in this manner teachers are labeling students in terms of intelligence. Parker states that in progressive schools, heterogeneous groups are formed, respecting individual differences. In these groups, students are responsible for sharing their different levels of contribution.

V. The Curriculum

1. Subject Areas of the Curriculum

The report finds the plan of the curriculum to be good, but suggests some modifications for improvement. First, in order to make the implementation of modern methods easier, Parker recommends the arrangement of the subject areas under six headings: Turkish (*Türkçe*), social sciences (*içtimaî tetkikler*), science (*fen*), mathematics (*riyaziye*), fine arts (*güzel san'atler*), and hygiene (*sıhhat*). Secondly, the report states that rigid limitations in the curriculum can cause problems especially for teachers who are not well-educated. According to the report, the courses which require reform are reading, physical education, music, and health. On the other hand, Parker states that there has been an improvement in the courses of life sciences, geography, history, and mathematics.

2. Teaching Methods

Beryl Parker observes that the principles of practical education are not understood well in Turkey. After her interviews with teachers and supervisors, Parker states that theories of modern education are widely known by educators, albeit at a superficial level. That is why, she states, the correct implementation of modern methods cannot be expected from the teachers alone.

Parker explains the deficiencies of Turkish primary schools in terms of the principles of modern scientific methodologies. She states that the first aim of modern methods is to educate the public so that they develop the knowledge and the social skills required by democratic societies.

The report states that in Turkey, the social activities of students are inadequate, which makes participation in discussions difficult. Furthermore, the report suggests that civic education should be applied, rather than being oral and

formal. Secondly, the aim of modern education is to improve the scientific perspective. However, in Turkish schools, instead of using scientific methods of instruction like analysis, experimentation and reasoning, students are busy with developing basic skills by repeating their teachers and following a few course books. Thirdly, learning should be student-centered, but in Turkey, teacher-centered learning is observed in most schools. Fourthly, education is related to the life of the individual, while in Turkey, relations between what is learned at school and the other parts of life are not well established.

3. Instructional Materials

For Parker, the most important instructional materials are books. She recommends the modification of books in relation to improvements in the curriculum. Parker also suggests an increase in the number of books. In addition, Parker states that a list should be prepared for the research and translation of books for children from foreign countries. Notebooks are also important instructional materials. Parker finds it positive that students take notes in their own notebooks. She recommends that students should be free to choose the styles of their notebooks. Other than these, domestic and inexpensive materials should be used for students' crafts. According to the observations of Parker, village schools are better than urban schools in producing valuable crafts with inexpensive materials.

4. The Schedule

The report states that the schedule is very restricted and there are many short breaks interrupting classes. Parker suggests a more flexible schedule. Parker states that the arrangement of the subject under the heading 'Subject Areas of the Curriculum' will help the amelioaration of the schedule. Parker recommends a group of teachers and

supervisors to prepare model schedules. This is especially needed for the village schools which have combined classes (*birleştirilmiş sınıflar*).

5. Grading, Examinations, and Reports

According to Parker, grading at the primary level is not appropriate, except as a means of giving information. Furthermore, oral exams are inappropriate for primary school children. Oral exams, Parker states, do not measure the abilities of children well. Parker evaluates the style of the student report cards as good enough, and she recommends that these report cards should include information about the social and voluntary activities of the children.

6. Social Activities

Parker finds it pleasing to see that during Monday afternoons, in every school, time is spent for meetings, the library, reading newspapers, excursions, works of charity, and student committees. However, it is not enough to just have these social activities. All these activities should be functional as well. Parker claims that it is beneficial for teachers to relate these activities with the subjects in their courses.

7. The School Atmosphere

During the breaks, a calm, pleasant, and friendly atmosphere is observed in the schools. Students play without any supervision. Parker recommends increasing the break periods, as well as the teacher supervision of the student activities. Another point which Parker discusses is the formality of the school atmosphere. She observes that teacher-student relationships are formal. She recommends that students' work could be hung up on the walls of the classrooms and the corridors. Parker also suggests changing the black uniform with a more colorful one which she thinks would be more suitable for primary school children.

VI. Teachers, Supervisors, and Administrators

1. Classroom Teachers (*Sınıf Öğretmenleri*)

According to Parker, teachers fulfill their responsibilities effectively in Turkey. The teachers are aware of the inappropriateness of the facilities to the new curriculum. For this reason, teachers need help from their supervisors. Parker observes that the quality of students is pretty good despite the difficulties of the teachers. Parker suggests a systematic education for teachers in order to increase teacher motivation and to enable them to make innovations in the teaching profession.

According to Parker, the effectiveness of teachers decreases due to problems caused by low salaries, difficult conditions of village life, illnesses, and their responsibilities towards their families. Making a choice between single and married teachers is unnecessary. Married teachers who have organized lives, can work effectively. Teachers who have children can have more mature views on the education of children. Parker also thinks that couples working in the same school can be more energetic and motivated. On the other hand, teachers who are single can also increase the quality of education with their humanity and objective reasoning.

2. Substitute Teachers (*Vekil Muallimler*) and Vacancies caused by Military Service

Parker suggests replacing substitute teachers immediately when enough teachers are educated. According to Parker, lowering the salaries of substitute teachers does not seem to be a possibility when there is an insufficient number of teachers. When substitutes function in good-faith, they need support.

In order not to loose teachers due to their military service, interns of the teacher training institutes could be substitutes for them or the military service requirement could be carried out during the summer holidays.

3. Chief Instructors (*Başöğretmenler*)

Parker states that there is no clear definition about the administrative responsibilities of principals. Chief instructors carry out three activities: commenting on the curricula, using modern teaching methods, and giving exemplary lessons, all of which seem to help teachers. Due to undefined administrative responsibilities, chief instructors do not seem to use time efficiently. It seems beneficial to take preacutions such as enabling chief instructors of schools of 200-250 students perform academic responsibilities. The administrative duties of schief instructors can be decreased by getting help from other teachers. To raise the educational level of the schools, the principlas must be helped in making their settings a cooperative place of education. For the future, Parker thinks that the Gazi Institute will have positive effects on the education of supervisors which will halp the teachers and chief instructors.

4. Supervision

Parker states that there are only a few supervisors of high quality in terms of education, experience, ideology, and technical skills. Among the others, there are supervisors who only want to improve themselves as well as those who have little interest in their work. The reason is that only a few supervisors are educated in their areas. According to Parker, since there will be major changes in education, all supervisors need education in their fields.

5. Pre-service training

Parker states that Teacher Training Schools are the basis of primary education. If teachers do not receive an appropriate education, they cannot gain the skills required to educate children. Furthermore, it will not be possible to benefit from modern buildings and organizations unless teachers are trained in the principles and methods of modern education. About the training of prospective teachers, the report makes critiques and suggestions under the following headings:

a. The Administrative Side of Teacher Training: Parker does not agree with the administration of the Teacher Training Schools by the Department of Secondary Education of the Ministry of Education (*Maarif Vekâleti Orta Tedrisat Dairesi*). Parker claims that Teacher Training Schools for primary education should be attached to the Department of Primary Education. A separate department for teacher education should be formed in the Ministry. It should be responsible for training teachers for various levels education as well as offering pedagogical formation courses, and training chief instructors and supervisors.

b. Standards for the Teacher Training Schools: For Parker, not having enough teachers in terms of numbers isnolonger the case. Now, in order to educate more effective teachers, it is necessary to decrease the number of students in the Teacher Training Schools. Parker states that it is not possible to expect Teacher Training School candidates to be high school graduates. Teacher training schools, which are at the secondary level, have to be separated from other lycées. Thus, Teacher Training Schools could admit fewer students and it would be possible to follow a more modern program in these schools, the implementation of methodologies, which would later be used for students could be possible. According to Parker, if observations and implementations could be made in the classrooms,

prospective teachers would gain more experience about the preparation of their instructional plans and classroom management by observing other teachers.

c. Practice Teaching: Parker recommends that every Teacher Training School should be attached to a primary school in which the prospective teacher can gain experience. Since understanding the lives of children requires observation of their natural behaviors as well as their behaviors in the classroom, practice schools should include a nursery or a kindergarten. To be effective, practice teaching should last at least one month. Shorter periods of time, with one class observation at each interval, are insufficient to develop the abilities of prospective teachers. Furthermore, one week of the practice should be done in the villages. Lastly, practices should be completed before the last term of school so that the students can have the time to have discussions about their experiences.

d. Higher Education Institutes for Teacher Training: The report states that it is good to have higher education institutes for teacher training. Furthermore, experienced teachers, principals, teachers in Teacher Training Institutes are sent abroad for experience by national scholarships or stipends, which the report condones. According to Parker, those who will have higher education should be experienced teachers or supervisors who would profit from higher education. No novice teachers automatically have higher education before acquiring experience in schools. Therefore, teaschers with higher education will later help in the improvement of schools. Furthermore, these people will also work with experts in the fields of philosophy, psychology, sociology, and general health. Through this mehod, the improvement of educational research will also be possible.

6. In-service training

In the report, Publications for supervisors, school principals and teachers are amphasized for the in-service training teachers. For Parker, theoretical and applied courses arranged by leaders capable of preparing the content, managing the discussions, making presentations on the subjects, can be helpful for the introduction and the continuous application of new methodologies. Except for the ones in the summer, all in-service training courses should be arranged on Monday and Thursday afternoons. These courses should be arranged for two or four hours a week. The report suggests the following courses for supervisors, principals, and teachers:

a. Summer courses which will be given by various experts: While the other courses are local, the range of summer courses will be wider, and therefore, these courses will be more expensive. Expenses should be covered by permanent beneficiaries and the Ministry of Education. These courses should be in the form of conferences for large groups, concerts, plays, micro-teaching activities, and visits to exhibitions, schools factories, and museums for small groups. Conferences will be held by expert supervisors, foreign experts, or professors of the University, Institute, and the Teacher Training School.

b. Meetings at each school arranged by the principal and the chief instructor: For these meetings, which are presently arranged in most of schools, Parker suggests a program including discussions of subjects related to the central annual development plan. Schools having only one teacher should be informed of the meeting reports written in the other schools.

c. Regional meetings with supervisors: For these meetings presently arranged in most schools, Parker suggests the prioritization of subjects and these meetings should be held at National Education Laboratory centers.

d. Meetings with experts at city primary schools: For Parker, during the meetings at primary schools in cities, courses by the experts can be provided on the issues related to the central annual plan for all or for groups.

e. Courses offered at the Istanbul University and the Gazi Institute by professors:

History and philosophy of education (*Terbiye tarihi ve felsefesi*)
Introduction to sociology (*İçtimaiyata başlangıç*)
Psychology of the child (*Çocuk ruhiyatı*)
Psychology of learning (*Öğrenme ruhiyatı*)
General hygiene (*Sıhhati umumiye*)
Comparative education (*Nisbî terbiye*)
Reform on Turkish schools (*Türk mektebinde inkılâp*)
Seminar in education (*Terbiyede seminer*)
Seminar on administration and supervision (*Nezaret ve teftişte seminer)*

f. Additional Courses at the Teacher Training School: For experienced teachers who graduate from a Teacher Training School, a list of higher level courses can be prepared.

g. Group Meetings administered by teachers

VII. Village Schools

The report states that human resources of every country exist in villages. That is why developing the abilities of the children in the villages is very important. However, there are difficulties for providing education in the villages. First, individuals may not want to return to villages after they complete their education. This would be detrimental to the economical balance of the country.

Secondly, present conditions will not allow building new schools in every village. For this reason, Parker suggests building boarding schools in villages so that

the students in the surrounding villages can attend these schools. Boarding schools at villages are also suggested as a solution for children who walk long distances to school. Parker also recommends the effective use of school buildings. She recommends alternate use of the building in the morning and in the afternoon. This way, elder students can also continue to work and study at the same time. Three classes having one teacher and five classes with two or three teachers are effective in terms of their programs and organizations. Since their curricula are flexible enough, the quality of education in the villages and the relation between village life and what is taught in the school depends mostly on the intelligence and the experience of the teachers. Teachers in the village schools, as Parker states, are very successful for the implementation of the methodologies, but still there is room for improvement. She gives Mexico as an example in which one expert group works with teachers in the villages for some time, and then, they go to another village.

Teaching methods used in the village schools are not so different from those in the urban schools, but Parker states that the number of teachers is not enough to provide all children with practical education. That is why Parker gives the village schools in the United States as an example. In these schools, students also study together with a doctor, agriculturalist and forester. She suggests that village schools in Turkey should also benefit from the opportunities of the villages. Furthermore, Parker gives the village schools in Germany as another example. In Germany, teachers are also the farmers living in the school building.

Since villages are very important for a country, Parker suggests the selection of some village schools, under a supervisor from the National Education Laboratory Center, as a practicum for the examinations and practices of teachers.

VIII. Agents Working with Schools

The report mentions two institutions; namely, *Himayei Etfal* (Society for the Protection of Children) and *Hilâliahmer* (Red Crescent) which provide food, clothing, and school equipment for children. Teachers, students, and parents are actively involved in the activities of these institutions. Parker recommends that students should prepare handmade materials as their contributions to the school, instead of providing donations. Thus, their contributions will be more personal. In addition, Parker realizes that while helping the poor children, damaging these children's psychological states should be avoided.

IX. Educational Exhibitions

According to Parker, mobile school exhibitions and the library are very beneficial. She suggests using the experiences gained in the first year of such an effort, while sending similar exhibitions to various locations in the country. Parker also finds the activities of central school museum beneficial. In this museum, materials presented in perennial exhibitions and the exhibitions arranged in national holidays interest the public. For Parker, when progress is made in the methods and activities of the schools, the quality of these materials will improve. Furthermore, Parker suggests using the museums and activities for purposes other than exhibitions such as the publication of papers by teachers.

CHAPTER V

ANALYSIS OF THE EDUCATIONAL PHILOSOPHY AND THE SCIENCE CURRICULA OF PRIMARY EDUCATION (1919–1938)

This chapter includes the analysis of the science curricula of primary education during the period of Atatürk (1919–1938). First, the focus will be on the educational philosophy of the period stemming from the political background and educational policies which were discussed in the previous chapter. Second, every curriculum will be analyzed deductively with categories which were pre-determined by the survey of the literature and Yıldıran's model (see Figure 2 in Chapter I). These categories include the general aim of the curriculum proper, its organization in terms of instructional methodology, general layout, content and objectives, its teaching methods and the techniques suggested or enforced, and its evaluation.

The Educational Philosophy Underlying the 1924, 1926, and 1936 Primary School Science Curricula

The preparation of the 1924, 1926 and 1936 curricula of primary schools was an issue discussed during the Scientific Council Meetings. This issue was on the agenda of the First Scientific Council Meeting of July 15, 1923, as Article 14: Changes in Primary Education Curriculum; in the decisions of the Second Scientific Council Meeting of April 13, 1924 as Article 6: The development of the primary school curricula; and as Article 7: Establishment of a Board of Instruction and Education which will deal with issues related to instruction and education of the Third Scientific Council Meeting of December 27, 1925.

These curricula were based on the views of Mustafa Kemal, his ministers of education and the reports of the foreign experts. Mustafa Kemal's view of education as having not only theoretical but also practical components, as his statement of 1922, "Even in secondary education, instruction has to abide by the principle that it must be applied and practical[1]" indicates, is parallel to Dewey's philosophy of pragmatic education. It is noteworthy that this statement and other such statements of Atatürk were made before Dewey was invited to Turkey during the ministry of İsmail Safa Özler (November 6, 1922- March 7, 1924), arriving on July 19, 1924 (Ata, 2001, p. 194). The congruence was probably the reason for choosing Dewey as the first foreign expert to be invited. A brief summary of Dewey's pragmatic philosophy of education will be useful here.

The origin of pragmatism stems from Charles Sanders Peirce, who was one of the founders of the modern symbolic logic of relations. Not a prolific writer, Peirce applied the principles of pragmatism, based on Kant's philosophy of the practical and the pragmatic, to a limited set of relations between rational cognition and rational purpose. According to Kant, the practical belonged to the domain of moral laws which were regarded as a priori. The pragmatic, on the other hand "applies to the rules of art and technique which are based on experience and are applicable to experience.", (Dewey, 1925, p. 3). In his essay of 1878, entitled "How to Make Our Ideas Clear", Peirce said that nothing that does not result from experiment bears any direct influence to conduct (in Dewey, 1925, p. 4). William James extended the ideas of Peirce. In his book *The Meaning of Truth* (1908) James

[1] See Chapter III for the quotes and their originals in Turkish.

said the practical is "the distinctively concrete, the individual, the particular and effective as opposed to the abstract, general and inert..." (p. 91)[1].

In 1884, Dewey accepted the position of an instructor at the University of Michigan, where he stayed until 1894. While at Michigan, Dewey's ideas about psychology and its relationship to other domains of life changed due to William James' publication of *Principles of Psychology* in 1890. Between 1894 and 1904, Dewey took the position of professor of philosophy and chairman of the Department of Philosophy, Psychology, and Education at the University of Chicago. Influenced greatly by William James' pragmatic philosophy, Dewey gathered around him other scholars, who together published *Studies in Logical Theory* in 1903. This work was called the Chicago School of philosophy by William James. During these years, Dewey formulated his ideas on progressive education and established the Laboratory School at the University of Chicago, serving more than 100 children in 1904, ranging from ages four to fifteen (McDermott, 1973, pp. xvii-xix). He conducted the 'Progressive Education Project' in the Laboratory School of the University of Chicago (Gazo, 1996). In 1904, Dewey accepted the position of professor of philosophy at Columbia University. When Dewey came to Turkey between July 19,1924 and September 10, 1924, he was teaching at the Teachers College of Colombia University, in which he worked from 1904 until his retirement in 1930 (McDermott, 1973, pp. xvii-xix).

Dewey emphasizes the influence of William James not only on his own thought system, but also in terms of its effect on American philosophy. Dewey's definition of pragmatism in 1931, in his book *Philosophy and Civilization* is:

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[1] The page number belongs to the 2004 edition of the book (see References).

> Pragmatism… presents itself as an extension of historical empiricism, but with the fundamental difference, that it does not insist upon consequent phenomena; not upon the precedents but upon the possibilities of action. And this change in point of view is almost revolutionary in its consequences. An empiricism which is content with repeating facts already has no place for possibility and liberty. It cannot find room for general conceptions or ideas, at least no more than to consider them as summaries or records. But when we take the point of view of pragmatism we see that general ideas have a very different role to play than that of reporting and registering past experiences. They are the bases for future observations and experiences…
>
> Pragmatism thus has a metaphysical implication. The doctrine of the values of consequences leads us to take the future into consideration. And this taking into consideration of the future takes us to the conception of a universe whose evolution is not finished, of a universe which is still, in James' term, "in the making," "in the process of becoming," of a universe up to a certain point still plastic.
>
> …..
>
> Instrumentalism is an attempt to establish a precise logical theory of concepts, of judgments and inferences in their various forms, by considering primarily how thought functions in an experimental determination of future consequences (Dewey in McDermott (Ed.), 1973, pp. 50-51).

The Progressivism of John Dewey, based on his pragmatic philosophy influenced by William James, is summarized at the end of the chapter, "Education as Conservative and Progressive" in his book *Democracy and Education* (1916). He states,

> Education may be conceived either retrospectively or prospectively. That is to say it may be treated as process of accommodating the future to the past, or as a utilization of the past for a resource in a developing future… Emphasis upon the value of the early experiences of immature beings is most important, especially because of the tendency to regard them as of little account. But these experiences do not consist of externally presented material, but of interaction of native activities with the environment which progressively modifies both the activities and the environment (p. 93).

In these sentences, Dewey defines education in two ways; the first is the accommodation of the future to the past and the second is using the past as a means

to develop the future. Then, he explains the impossibility of the first definition because of the progressive change in activities and the environment as a result of the interaction between these two. About Progressivism, twenty-two years later, in his book *Experience and Education* (1938), Dewey wrote,

> I have used frequently in what precedes the words "progressive" and "new" education. I do not wish to close, however, without recording my firm belief that the fundamental is not of new versus old education nor of progressive against traditional education but a question of what anything whatever must be to be worthy of the name education. I am not, I hope and believe, in favor of any ends or any methods simply because the name progressive may be applied to them. The basic question concerns the nature of education with no qualifying adjectives prefixed (p.115).

This paragraph shows that Dewey was using the word progressive due to its compatibility with the nature of education.

Until this point, we tried to give a brief explanation of John Dewey's philosophy. Now, we will focus on the application of Dewey's philosophy to education. First, Dewey defines education as "a process of renewal of the meanings of experience through a process of transmission, partly incidental to the ordinary companionship or intercourse of adults and youth, partly deliberately instituted to affect social continuity", (1916, p. 375). As related to his philosophy, for Dewey, education is based on experience. His view is also clear in *Experience and Education* (1938) as "… the principle that education in order to accomplish its ends both for the individual learner and for society must be based on experience – which is always the actual life - experience of some individual" (p. 113). In the chapter "Experience and Thinking" in his book *Democracy and Education*, Dewey defines experience as

> The nature of experience can be understood only by noting that it includes an active and a passive element peculiarly combined. On the active hand, experience is trying – a meaning which is made explicit in the connected term experiment. On the passive, it is

> undergoing. When we experience something we act upon it, we do something with it; then we suffer or undergo the consequences. We do something to the thing and then it does something to us in turn: such is the peculiar combination. The connection of these two phases of experience measures the fruitfulness or value of the experience, (1916, p. 163).

Therefore, according to Dewey (1916),

> To learn from experience is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying; an experiment with the world to find out what it is like; the undergoing becomes instruction – discovery of the connection of things, (p. 164).

In this paragraph, Dewey defines the nature of experience as not only an active but also a passive process, the combination between trying (active part) and undergoing (passive part). According to Dewey, "Mere activity does not constitute experience." (Dewey, 1916, p.163). Experience involves change; but this change can be significant only when it is consciously connected to undergoing its consequences, "when the change made by action is reflected back into a change made in us, ..." (Ibid. p. 163). Dewey gives an example,

> It is not experience when a child merely sticks his finger into a flame; it is experience when the movement is connected with the pain which he undergoes in consequence. Henceforth the sticking of the finger into flame means a burn. Being burned is a mere physical change, like the burning of a stick of wood, if it is not perceived as a consequence of some other action (Ibid. p. 163).

Thus, Dewey states,

> Two conclusions important for education follow. (1) experience is primarily an active-passive affair; it is not primarily cognitive. But (2) the measure of the value of an experience lies in the perception of relationships or continuities to it which leads up. It includes cognition in the degree in which it is cumulative or amounts to something, or has meaning. In schools, those under instruction are too customarily looked upon as acquiring knowledge as theoretical spectators, minds which appropriate knowledge by direct energy of

> intellect. The very word pupil has almost come to mean one who is engaged not in having fruitful experiences but in absorbing knowledge directly. Something which is called mind or consciousness is severed from the physical organs of activity. The former is then thought to be purely intellectual and cognitive; the latter to be an irrelevant and intruding physical factor. The intimate union of activity and undergoing its consequences which leads to recognition of meaning is broken; instead we have two fragments: mere bodily action on one side, and meaning directly grasped by "spiritual" activity on the other (Ibid, p. 164).

Another view of John Dewey related to education is that the center of education should be the child. This revolutionary view is expressed in his book *The School and Society* (1900), where he criticizes the old education in terms of "its passivity of attitude, its mechanical massing of children, its uniformity of curriculum and method."(p. 34). According to Dewey, these points can be summed up by stating that "the center of gravity is outside the child. It is in the teacher, the textbook, anywhere and everywhere you please except in the immediate instincts and activities of the child himself." (Ibid. p. 34) Then, Dewey recommends the following:

> … Now the change which is coming into our education is the shifting of the center of gravity. It is a change, a revolution, not unlike that introduced by Copernicus when the astronomical center shifted from the earth to the sun. In this case the child becomes the sun about which the appliances of education revolve; he is the center about which they are organized (Ibid. p. 34)

Two years later, Dewey focuses on the same points in his book *The Child and the Curriculum* (1902). He states,

> The child is the starting point, the center, and the end. His development, his growth, is the ideal. It alone furnishes the standard. To the growth of the child all studies are subservient; they are instruments valued as they serve the needs of growth. Personality, character, is more than subject matter. Not knowledge or information, but self realization is the goal (p. 13)

The experience of learning, according to Dewey, starts at home. He describes the development stimulating home environment as:

> We find the child learning through the social converse and constitution of the family. There are certain points of interest and value to him in the conversation carried on: statements are made, inquires arise, topics are discussed, and the child continually learns. He states his experiences, his misconceptions… Again the child participates in the household occupations, and thereby gets habits of industry, order, and regard for the rights and ideas of others, and the fundamental habit of subordinating his activities to the general interest of the household. Participation in these household tasks becomes an opportunity for gaining knowledge. The ideal home would naturally have a workshop where the child could work out his constructive instincts. It would have miniature laboratory in which his inquires could be directed. The life of the child would extend out of doors to the garden, surrounding fields, and forests. He would have his excursions, his walks and talks, in which the larger world out of doors would open to him (1900, pp. 34-35).

Like the school, the optimum home environment allows for experience through an intimate interaction with the environment, where the child is actively able to direct his inquiries.

In the schools, for Dewey, the educator is responsible for designing his lessons and environments in which the students will learn the subject matter and content with experiments suitable to their needs and capacities. As Dewey expressed in his book *Experience and Education* (1938),

> …He [the educator] must survey the capacities and needs of the particular set of individuals with whom he is dealing and must at the same time arrange the conditions which provide the subject-matter or content for experiences that satisfy these needs and develop these capacities. …The planning must be flexible enough to permit free play for individuality of experience. (pp. 64-65)

Thus, behind the 1924 curriculum are primarily the views of Atatürk, and John Dewey's philosophy of education. Evidently, Atatürk saw this philosophy as instrumental in bridging the gap between national goals, local needs and the creation

of the new citizen. The general national goal was the creation of the new Turkish citizen of the Republic, economically productive and equipped with the knowledge and skills required by contemporary civilization.

In order to fulfill this goal, education had to be not only theoretical but also practical. The quotations below show the perspective of Mustafa Kemal and the ministers of education on the topic.

> It is important that instruction and education, at all levels of education, should be practical in the same way for our boys and girls. The children of our country, at every level of education, must be equipped to be active, effective, and successful in economic life.
> (Mustafa Kemal Atatürk, 1924)
>
> ... Pragmatic education which encourages productivity[1]
> (Rıza Nur, 1920)
>
> The crisis of schools and education is not due to religious reasons as the conservatives suppose; never. There is only one reason for this crisis; children whom we educate are incapable of earning their living. They are not prepared for life. They are devoid of the theoretical and practical knowledge of earning their bread from their fields, counters and stores.
> (Hamdullah Suphi Tanrıöver, 1922).
>
> Turkish schools must undergo a general conversion of speedily passing from the theoretical to the practical.
> (Hamdullah Suphi Tanrıöver, 1922)
>
> The school arises from a need and teaches the means to satisfy that need out of which it is borne under the most perfect conditions…. We should replace our lifeless and otherworldly education which leads our children to brutality, dejection, cowardice, and to a supplicant position in life, with contemporary and practical education that will raise a generation of workers full of life and who have their own crafts and skills in their hands.
> (Hamdullah Suphi Tanrıöver, 1922)
>
> .... To have the new generation go through all of the levels of education and to provide for them knowledge which will make them successful in economic life;
> (İsmail Safa Özler, 1923)

[1] If the statement is preceded by three dots, it is an item in a list quoted from Mustafa Kemal or the ministers.

> …Making education applied and practical.
> (Vasıf Çınar, 1924)
>
> We want the school to bring children into contact with nature, matter, and events, orienting them to activities of observation, reasoning and creativity in joy and freedom
> (Mustafa Necati Uğural, 1926)

As is observed, these views are parallel to John Dewey's pragmatic philosophy of education. In the educational system of Turkey, Dewey observes the threat that "subjects are arbitrarily isolated from one another, and thus become unreal to the pupils,…", (Dewey, 1939, p.290) and suggests a practical education for Turkey (Ibid. p. 290).

The second issue is that education had to meet local needs by using local opportunities. Since Turkey's economy depended primarily upon agriculture during Atatürk's period, most local needs and opportunities were agricultural, as is emphasized in John Dewey's report of 1924. According to Professor Ömer Celal Sarc (1983), 44.2 % of the Gross National Product (GNP) was due to agriculture in 1924. Moreover, according to the 1927 population census, 78.2 % of the population was engaged in agriculture (1983, p.3). Thus, behind the science curriculum was the philosophy that since more than three fourth's of the population earned their living through agriculture, it had to be emphasized not only theoretically but also practically. If students did not continue with higher levels of schooling, the aim was to provide them with knowledge and skills to be productive farmers, especially if they were from rural areas. On the issue, Dewey states, "Moreover the development of the national prosperity of Turkey depends so closely upon the improvement of agricultural processes…", (Dewey, 1939, p. 287). This view of Dewey is explicit in his suggestion that "a commission be sent to Denmark to study especially agricultural education and adult education…", (Ibid. pp. 304-305).

The importance of agriculture and its inclusion in education was also the concern of the Izmir Economic Congress of February 17, 1923. Under the section "Educational Issues in Agriculture", 9 articles are related to the importance of agricultural education (see Chapter III). Later, in 1925 Kuhne and in 1927 Buyse again emphasized local needs and opportunities in their reports related to what kind of vocational schools had to be opened where (see Chapter III). The principle in both reports was that there had to be congruence between the local needs and the different types of vocational and technical schools that needed to be established to meet these in particular settings.

Under the following sections, the 1924, 1926 and 1936 science curricula of primary education, based on pragmatism and prepared to meet the local needs of the new Turkish Republic, will be separately analyzed.

The 1924 Curriculum of Primary Schools - Exploring Nature, Agriculture, Hygiene (1924 İlk Mekteplerin Müfredat Programı - Tabiat Tetkiki, Ziraat, Hıfzıssıhha)

General Aims of the Primary School Science Curriculum

The general aims of the 1924 science curriculum are stated in the introduction section of "Exploring Nature, Agriculture, Hygiene". The general aim of the curriculum is to make students "investigate directly the food, clothing and shelter in the natural environment as well as the animals, plants and other products within their life-cycles, which are of general interest for our life[1]." (p. 1). As can be observed,

[1] The Turkish of the statement as it occurs in the curriculum document is, "*...çocuğun tabi muhitinde bulunan ve gıdamız, elbisemiz, meskenimiz ve umumi hayatımızda alakadar olan hayvanlar, nebatlar ve sair mahsulleri bütün hayati safhalarıyla birlikte canlı olarak tetkik ettirmektir.*" (p.1).

Dewey's pragmatic education, where the child learns through direct experience, is very obviously part of the curriculum.

Organization

Instructional Theory

The 1924 science curriculum of primary education is based on experiential learning, enabling students to use "real life" as a laboratory for learning. Students make observations and are involved in experiments and activities. The general introduction of the curriculum states, "The investigations in courses related to the observation of nature, must be definitely based on direct investigations of nature[1]" (p.1). The general instructional theory is related to the progressive education of Dewey.

The General Layout

After giving a general explanation about the curriculum, the content was given for each grade. Even though the curriculum has an outline for the teachers to follow, it is not compulsory to follow the order given in the curriculum. Whenever an opportunity is available for students to make observations and investigations, the order can be changed.

> The materials shown in the curriculum of the program are to give an idea about the subjects which are to be examined. Otherwise, it is not crucial to follow the materials of the program according to

[1] The English form was translated directly from the text of curriculum on February 3, 2007. The original Turkish form is, "*Tabiatı tetkik derslerinde yapılacak tetkikler mutlaka doğrudan doğruya tabiatı tetkik esasına istinat etmelidir*" (p. 1).

> the order that is shown below. Children are to make examinations about these issues whenever there is an opportunity (p. 1).[1]

Content[2]

The course of the science curriculum entitled "Non-living Things" (*Eşya*) in 1913 was replaced by the course entitled "Exploring Nature, Agriculture, Hygiene" in 1924. In accordance with the new name, the science curriculum included subjects related to plants, animals, and agriculture.

I. Content for First and Second Grades

During the first and the second grades, the "Exploring Nature, Agriculture, Hygiene" course was for 3 hours a week. The content areas of the curriculum were the living things which we see in our environment like seasonal flowers, trees, vegetables, cereals, domestic and wild animals, insects, birds, animals and plants that live in water, studies of food, clothing and shelter, extraordinary and natural events (p. 1-2). The second level topics related to the above stated content were the life cycles and habits of living things, life-promoting and destructive processes to living things, how to raise plants and protect animals, their relation to each other and to people, the usefulness of these living organisms and their economic values. Moreover, since there were no geography courses in the first and second grades, the science course

[1] The English form was translated directly from the text of curriculum on February 3, 2007. The original Turkish form is, "*Programın müfredatında gösterilen mevad, tetkik ettirilecek mevzular hakkında umumi bir fikir vermek içindir. Yoksa program mevadının aşağıda gösterilen sıra tertibi ile takibi zaruri değildir. Fırsat ve imkân bulundukça bu mevzular üzerine çocuklara tetkikler yaptırılacaktır."* (p. 1).

[2] Objectives and content are not separated in the curriculum. Thus, in the content section, general headings will be given, while in the objectives section, a more detailed analysis of the content will be made according to the student and teacher activities as well as the topics.

involved the investigation of local settings through expeditions, and the observation of natural occurrences and extraordinary events.

II. Content for the Third Grade

For the third grade, the Exploring Nature, Agriculture, Hygiene course was for 2 hours a week. The investigations and experiments done in the first and the second grades related to nature around the school locality continued. Moreover, investigations on local crafts, natural events, objects in the school and home environments, construction of domiciles, illumination, and heating were done.

III. Content for the Fourth Grade

In the fourth grade, Exploring Nature, Agriculture, Hygiene course was for 2 hours a week. Investigations and experiments from previous years continued, simple agricultural experiments were implemented. Our body was another content area in fourth grade: the topics of movement of bones and muscles, physical exercise, good and bad posture, the hygiene of bones; nutrition, the mouth, throat and teeth, their health, the function of teeth, digestion and rules related to good habits; respiration, the lungs, the rules related to healthy respiration and suggestions; blood vessels, the heart, circulation, pulse, dirty and clean blood, rules related to healthy circulation and suggestions; the way we feel, the five senses, the nervous system, its function, suggestions related to a healthy nervous system. The content was summarized, without technical information. In addition, sanitation rules, microbes, measles, tuberculosis, typhoid fever, cholera, dysentery, malaria, and how to protect our bodies from diseases, water, clean and dirty water were the topics presented.

IV. Content for the Fifth Grade

For the fifth grade, Exploring Nature, Agriculture, Hygiene course was for 2 hours a week. The topics of the previous years as well as small agricultural experiments continued. Measuring movement, observations and small experiments related to speed, investigations and small experiments related to lenses and binoculars, small experiments about electricity and its function, lightening, and the lightening rod were the content areas of fifth grade science.

As can be seen, the content is varied with topics which are related to the immediate environment of the child and those areas which are of concern in their lives. All topics have applicability for their setting.

Objectives[1]

As is evident, the objectives are not written in the way they are stated in recent curricula. This is very natural because the educational objectives movement started by Tyler in the 1930's, and the development of the *Taxonomy of Educational Objectives: Cognitive Domain* (1956) had not yet been developed. Yet these objectives show an unexpected level of sophistication. Some of them are expressed implicitly as what the student ought to do, with such words as "examination". Other objectives are written in terms of what the teacher must do in relation to the content, while still others are just important topics with no behavior specified.

The notations of

SA: Students Activity
TA: Teacher Activity
TOP: Topical

[1] The objectives are stated in the form in which they exist in the original document.

at the end of each objective states which of these three expressions that particular objective has.

I. Objectives for the First and Second Grade

Subject: Seasonal Flowers

1. Examination of flowers which are encountered as home plants, in flower pots, gardens, the countryside and the fields (the buttercup, mallow, poppy, daisy, rose, hyacinth, lilacs, geranium, and tulip) - SA
2. The student will be helped to examine interesting aspects of seasonal flowers - SA
3. The students will cultivate seasonal flowers in the garden - SA
4. Suggestions will be given as precautions to be taken to protect seasonal flowers - TA
5. The relations between flowers and insects; how do flowers live? What are their uses? - TOP

Subject: Trees

1. Examination of fruit (the cherry, pear, plum, and apple trees) and non-fruit trees (the willow, chenar, poplar trees and white wisteria) in the district of the school during various seasons - SA
2. Benefiting from trees - TOP
3. Productive and destructive acts related trees - TOP
4. Economic values of trees - TOP
5. Responsibilities toward trees - TOP

Subject: Vegetables

1. Examination and cultivation of vegetables which are in the vicinity of the school (cabbage, leek, bean, broad bean, aubergine and zucchini) - SA

Subject: Cereals

1. Examination and importance of grains in the vicinity of the school - SA
2. How to sow, reap and grind grains; what is produced from grains? – TOP

Subject: Domestic and Wild Animals

1. Direct and live examination of various animals which live in the vicinity of the school; their habits, lives, food, nests, defenses, benefits and harm, economical values, and their relations to people (cats, dogs, horses, cows, chicken, goose, turkey, duck, mole, hedgehog, fox and marten) - SA

Subject: Insects

1. Examination of insects, which are encountered during various seasons in the vicinity of the school, their habits, lives, metamorphoses, nests, eggs, benefits and harm, economical values and relationships to people (the grasshopper, fly, mosquito, ant, bee, caterpillar, butterfly, flea, bedbug, moth and silkworm) - SA

Subject: Birds

1. Examination of birds which are encountered in the vicinity in various seasons, habits, lives, nests, eggs, benefits and harm, economical values, and relationships with people (the stork, swallow, sparrow, woodpecker, crow, and pigeon) - SA

Subject: Water Animals and Plants

1. Examination of animals and plants that live in the sea, lakes and rivers depending on the vicinity of the school, lives, habits, benefits and harm, how they are obtained, economical values (fish, frog, crab, seaweed and rush) - SA

Subject: Our Food, Clothes and Dwellings

1. Suggestions will be given on hygiene and habits of food, clothes and dwellings during examinations - TA

Subject: Extraordinary Events

1. In the nature study courses and during excursions students will be helped to attend natural events, and extraordinary occurrences in the vicinity of the school - SA
2. Examination of the effects of extraordinary events in the vicinity - SA
3. Examination of how the needs of the neighborhood related to habitat, food and clothing are supplied; from where and by what means materials, crops and goods that are needed are transported - SA

Subject: Natural Events

1. Examination of natural events: night, day, winter, summer, spring, autumn, stars, rain and snow – SA

II. Objectives for the Third Grade

Students will continue with the investigations and simple agricultural experiments as in the previous grades related to the flowers, vegetables, crops, domestic animals, insects, birds and others which live and grow in the district of the school. Besides these, students will attain the following objectives:

Subject: Local Arts

1. Examination of the local arts: (such as copper smithery, sericulture, carpet weaving, tanning, pottery, and textile, depending on the particular region) - SA

Subject: Natural Events

1. Investigation of the natural events: night, day, seasons, and their differences. Air and water, rain, wind, snow, ice, thunderbolt, lightening, fog, frost and dew - SA

Subject: School and House Goods

1. Examination of school and house goods: (Such as chalk, pen, pencil, paper, ink, cup, decanter, fork, and spoon) - SA
2. Investigation of house construction - SA

Subject: Lightening and Heating

1. Investigation of illumination and heating - SA

III. Objectives for the Fourth Grade

The continuation of objectives in the previous grades about animals, plants and simple agricultural experiments, students will attain the following objectives:

Subject: Information on the Human Body

1. How do we move? Benefits and the importance of bones and muscles, movement and exercise. The effects of good and bad posture on the bones. Hygiene of bones. - TOP
2. How do we get nourished? - TOP
3. Suggestions and principles related to the hygiene of the mouth and the throat, teeth, hygiene of teeth, their function, the digestion system and nourishment.- TA

4. How do we breathe?-TOP
5. Suggestions and principles related to lungs, diaphragm, inhalation and expiration- TA
6. Suggestions and principles related to blood vessels, the heart, circulation, palpitation, pulse, pulmonary and systemic circulation, dirty and clean blood, rules related to healthy circulation. How do we perceive? - TA
7. Suggestions and principles related to the way we feel, the five senses, the nervous system, its function, suggestions related to a healthy nervous system. - TA
8. Suggestions and principles on hygiene: Microbes, water, clean and polluted water. Ways of protection from infectious diseases such as measles, small pox, tuberculosis, typhus, cholera, dysentery and malaria. - TA

IV. Objectives for the Fifth Grade

Besides continuing with the earlier topics related to animals, plants and natural

events, students will attain the following objectives:

Subject: Basic scientific information and investigation of the following topics related to water, velocity and electricity, and optics.

1. How do water jetties work? - TOP
2. How does water enter high buildings? - TOP
3. How does the water press work? - TOP
4. How do boats float? - TOP
5. How can we benefit from kites, balloons, airplanes, barometer, pumps, weight measures and levers? - TOP
6. Steam power and its simple application- TOP, SA
7. How does the steamboat move? - TOP
8. How does the locomotive work? – TOP
9. Measuring movement - TOP
10. Investigation and observation of issues related to velocity - SA
11. Examination and experiment on eyeglasses, magnifiers and binoculars - SA
12. Simple experiments related to electricity and electrical appliances - SA
13. Lightening, thunderbolt and the lightning rod – TOP

Teaching Methods and Techniques

The science curriculum Exploring Nature, Agriculture, Hygiene focuses on two teaching methods for the accomplishment of objectives: direct observation and investigation as well as experimentation.

1. Direct Observation and Investigation

The science curriculum relies on direct observation and examination of nature. Students must experience the cultivation of plants in their school gardens. If this is not possible, they have to have the opportunity of direct observation in other natural environments through excursions. The direct examination of living things is also taken into consideration. In the general introduction of the curriculum, it is stated that,

> In courses on the study of nature, investigations must be based on the principle of direct observation of nature. Flowers, fruits and other agricultural products under investigation must be, when possible, cultivated in the school garden or in pots. Or in order to make investigations, the student must be taken to places where these are cultivated. Every season, the student must be helped to pay attention to different phases in the lives of plants, animals and natural events. During different seasons, the students must be helped to investigate plants, animals and natural events in the streets, fields, gardens and orchards that children encounter outside of school (p.1).[1]

During the observations, students have the responsibility of making simple drawings, diagrams and taking short notes. Students are encouraged to collect plants, grains,

[1] The English form was translated directly from the text of curriculum on February 3, 2007. The original Turkish form is, "*Tabiatı tetkik derslerinde yapılacak tetkikler mutlaka doğrudan doğruya tabiatı tetkik esasına istinat etmelidir. Tetkik ettirilecek çiçekler, meyveler, ve sair zirai mahsuller mümkün olduğu mertebe mektebin bahçesinde veya saksılarda yetiştirilir. Veya talebe, bunların yetiştirildiği yere götürülerek orada tetkik ettirilir. Her mevsimde nebatların, hayvanların hayatlarına ve tabii hadiselerine ait muhtelif safhalara ayrı ayrı dikkat ettirmek lazımdır.Muhtelif mevsimlerde talebeye yaptırılacak gezintiler esnasında mektebin haricinde, sokaklarda, kırlarda, bahçelerde ve tarlalarda tesadüf edilen nebatlar, hayvanlar ve tabii hadiseler hakkında çocuklara seviyelerine göre tetkikler yaptırılır."* (p.1).

and animals and to preserve them in the school museum. The text of the 1924 curriculum states

> In the observation of nature courses, children must be helped to determine the results of the examination of animals and plants by simple pictures, diagrams, and notes. Children must be helped to make collections of plants and agricultural products, animals and various fruits which are examined, and those that are appropriate must be preserved in the school museum, (p. 1). [1]

2. Experimentation

As the quotes show, learning depends on observation and experimentation related to plants, crops, animals, and natural events. The curriculum states that "Agricultural knowledge must be based on these applied investigations.[2]" Thus all grades in elementary school are based on the direct experience of nature by children at various levels of development.

Evaluation

There is no information about the evaluation process for the 'Exploring Nature, Agriculture, Hygiene' course of the '1924 Curriculum of Primary Schools'.

As can be observed, the 1924 science curriculum is very sophisticated in terms of its content, rudimentary in terms of its translation of content into objectives,

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[1] The English form was directly translated from the text of curriculum on February 3, 2007. The Turkish of the statement as it occurs in the curriculum document is, "*Tabiat-ı tetkik dersinde hayvanlar ve nebatlara ait, tetkiklerin neticeleri çocuklara her sınıfta basit resim ve krokilerle ve kısa notlarla tespit ettirilmelidir. Tetkik ettirilen muhtelif nebatlar ve mahsullerle hayvanlar ve sair meyvadan çocuklara koleksiyonlar yaptırılmalı ve bunların münasip olanları mektebin müzesinde hıfzedilmelidir."* (p. 1)

[2] The Turkish of the statement as it occurs in the curriculum document is, "*Ziraat malumatı bu tetkik neticesinde ameli olarak telkin olunmalıdır."* (p. 1).

clear about its teaching methods, and at a non-existing level in terms of its evaluation.

The 1926 Primary School Curriculum – Courses of Nature and Non-Living Things (*1926 İlk Mekteplerin Müfredat Programı - Tabiat ve Eşya Dersleri*)

General Aims of the Primary School Science Curriculum

While in the 1924 science curriculum, the course entitled "Exploring Nature, Agriculture and Hygiene" was given as a single course, it is divided into two separate courses in the 1926 science curriculum, as a "Course on Nature" and a "Course on Non-living Things". The reason for this division is stated as,

> While the Nature Exploration[1] course based mostly on the direct observation of nature will prepare youngsters for courses in natural science by providing them with skills of observation and investigation, the course on 'Non-Living Things', which acclimates them to investigation by experimentation, prepares them for courses in physics and chemistry which they will follow in the future.[2]

In other words, students are prepared for the coming years through the improvement of their skills of observation and investigation in the "Course on Nature", and hands on experiences in the "Courses on Non Living Things". The general aims of both of these science courses are as follows:

> …the first goal of the courses on "Nature Exploration" and "Non-Living Things" is to give to primary school youth in fourth and

[1] The course in the text entitled 'Course on Nature' is expressed as the 'Nature Exploration Course' in some places in the text of the 1926 curriculum

[2] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Çünkü daha ziyade tabiatın doğrudan doğruya müşahedesine müstevid tetkiklere istinat eden "Tabiat Tetkiki" dersleri gençleri müşahede ve tetkik usulü ile teçhiz suretiyle onları ilmi tabiyeye ihzar edeceği gibi "Eşya Dersleri" de onları tecrübeyle tetkik usulüne istinâs ettirmek suretiyle ileride tetabuk edecekleri, fizik ve kimya derslerine ihraz eyler."*

> fifth grades, which are the second level of elementary schools, information on nature and life as well as daily implementations that they encounter so that they can more or less produce the goods and tools in the professions they will follow[1].

Besides this aim, the 1926 science curriculum also intends "to prepare students going on to higher education, for the courses of natural science, physics and chemistry that they will in the future follow.[2]"

The 1926 science curriculum contains a separate part for the aims of each of the science courses of the curriculum. The aims of the "Courses on Nature" are stated in the following list:[3]

1. To make children investigate directly the food, clothing and shelter in the natural environment as well as the animals, plants and other products within their life-cycles, which are of general interest for our lives
2. To explain simply, at the comprehension level of the child, the mutual influence of man on nature and of living things on each other
3. To inform children about the organs of the human body and their functions as simply as possible and to teach them some principles of hygiene

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[1] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, *"...ilk mektebin ikinci devresi olan dördüncü ve beşinci sınıflardaki "Tabiat Tetkiki" ve "Eşya" derslerinin birinci hedefi ilk mektepte okuyan gençlere tabiat ve hayat hakkında ve hayatta her gün tatbikatını gördükleri, takip edecekleri mesleklerde az çok kendilerinin de istimal edeceği eşya ve alet hakkında esaslı malumat vermek..."*

[2] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, *"yüksek tahsil takip edecek talebeyi ileride tetabuk edecekleri ilmi tabiiye ve fizik ve kimya derslerine ihzar eylemektir."* (p. 5)

[3] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is,

1. *Çocuğa, tabiî muhitinde bulunan ve gıdamız, elbisemiz ve meskenimiz ve umumî hayatımızla alâkadar olan hayvanları, nebatları ve sair mahsulleri bütün hayti safhalarıyla birlikte canlı olarak tetkik ettirmektir.*
2. *İnsanın tabiat üzerine ve tabiatın insan üzerine ve mevcûdât-ı uzuvîyenin yekdiğerine yaptıkları mütekabil tesirlerden çocuğun anlayabileceklerini kendisine gayet basit bir suretde izah etmek.*
3. *İnsanın vücudundaki azalar ve bunların vazifeleri hakkında çocuklara gayet basit malûmat vermek ve bazı hıfzı sıhhat kaideleri öğretmek*
4. *Çocuklara tabiat muhabbeti telkin ederek çiçekleri, ağaçları ve faydalı hayvanları himayeye alıştırmak.*
5. *Çocuklara gayet basit ziraî malûmat vermek.*

4. To instill in children the fondness of nature and the protection of flowers, trees, and useful animals.
5. To give children simple information about agriculture.

Furthermore, the 1926 science curriculum states the aims of the "Course on Non-living Things" separately as a single paragraph,

> To give to students the essential and scientific information about the goods and material tools that they encounter and use in their daily lives that constitute the most important equipment and machinery of civilization and to get students acquainted with the principles on which these tools and equipments are based.[1]

John Dewey's pragmatic philosophy can be observed in the general aims of the 1926 science curriculum. First, the selection of the course materials is from real life (such as food, clothing and shelter in their natural environment, goods and materials that they encounter and use in their daily lives). Secondly, the aim is to give children useful information about their daily lives, in such areas as tools, machinery and equipment they encounter, and agriculture, with which especially rural children had to be acquainted. Thirdly, the aim is to train productive individuals for society by teaching simply the daily implementations of nature in life.

Organization

Instructional Methodology

Parallel to the 1924 science curriculum, the dominant instructional theory of the 1926 science curriculum is experientialism. As is clear in the general aims of the

[1] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Talebeye, her gün gördüğü, kullandığı eşya ile medeniyetin maddi cihazlarını teşkil eden alet ve makinelerin en mühimleri hakkında esaslı ve ilmî malumat vermek ve bu alet ve cihazların istinat ettiği ilmi prensipleri kendilerine tanıttırmak.*"

curriculum, students are engaged in observations and experiments with living and non-living things which they encounter in their daily lives. While explaining the points of emphasis in instruction, the 1926 science curriculum states,

> Attention must be paid to [the point] that instruction must revolve around an axis which is closely attached to life. The content of the curriculum is divided according to the perspectives taken. The teacher, however, can change the content according to time and place, provided that they stick to its essentials.[1]

As observed here, the real life connections, an important feature of the experientialist philosophy, are more important than what the content is.

General Layout

The general layout is divided into two main sections. The first section of the 1926 science curriculum the "Course on Nature" has the following outline:

1. Aims of the 'Course on Nature' given as a list
2. Points of emphasis given as a list, related to the methods of instruction and the use of instructional materials.
3. Content for fourth grade
4. Content for fifth grade

The second course entitled the "Course on Non-living Things", has the following outline:

1. General explanations on dividing the courses into two as well as the aims of both courses

[1] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Tedrisatın bir mihver etrafında devrederek hayata sıkı bir suretle raptedilmesine itina olunacaktır. Programdaki mevzular nokta-i nazara göre ayrılmıştır. Yalnız bunların sırasını muallimler, esasa sadık kalmak şartıyla, zaman ve mekan icabına göre tebdil eyleyebilirler.*"

2. The general aim of the "Course on Non-living" Things as a single paragraph
3. Points of emphasis given as a list, related to the methods of instruction and the use of instructional materials.
4. Content for the fifth grade

Content

I. Content for Fourth Grade

For fourth grade, there was no "Course on Non-living Things". Instead, the 'Course on Nature' was for 2 hours a week. The content areas of the curriculum were trees, cereals, domestic and wild animals, insects, birds, animals and plants that live in water. The second level topics related to the above stated content were the life cycles and habits of living things, life-promoting and harmful processes to living things, how to raise plants and protect animals, their relation to each other and to people, the usefulness of these living organisms and their economic values.

II. Content for Fifth Grade

For fifth grade, each of the two courses, that is "Course on Nature" and "Course on Non-Living Things" was for 2 hours a week. The content areas of the curriculum were soil, farming, rocks and minerals, coal minerals, trees, domestic and wild animals, hunting, birds, raptors, fish, vegetables and fruits, information on the human body, the three states of matter; forces of nature, the most important matter in the state of gas: the atmosphere, the most important matter in liquid state: water, simple machines, benefiting from forces of nature.

Objectives

Like the objectives of the 1924 science curriculum, the objectives of the 1926 science curriculum are in the form of Student Activity (SA), Teacher Activity (TA) and, just listing the topics (TOP).

I. The Objectives for Fourth Grade

A. Course on Nature

Subject: Trees

1. Examination of fruit and non-fruit trees in the vicinity of the school during various seasons - SA
2. Benefiting from trees – TOP

Subject: Cereals

1. Importance of grains - TOP
2. How to sow grains – TOP
3. Reaping, harvesting, the mill – TOP

Subject: Domestic and Wild Animals

1. Habits, lives, food, nests, reproduction, defenses, benefits and harms of animals – TOP

Subject: Insects

1. Examination of insects, which are encountered during various seasons in the vicinity of the school (the grasshopper, fly, mosquito, ant, bee, caterpillar, butterfly, flea, bedbug, moth and silkworm) - SA

Subject: Birds

1. Examination of birds which are encountered in the vicinity in various seasons; their habits, lives, nests, eggs, benefits and harm, economical values, and relationships with people (the stork, swallow, sparrow, woodpecker, crow, and pigeon) – SA

Subject: Water Animals and Plants

1. Examination of animals and plants that live in the sea, lakes and rivers in the vicinity of the school; their lives, habits, benefits and harm, how

they are obtained, economical values (fish, frog, crab, seaweed and rush) - SA

II. Objectives for Fifth Grade

A. Courses on Nature

Subject: Soil

1. Comparison between the soil of the plantation, garden and meadows and the soil of barren lands - SA
2. How to make hardpan, pot, clay, brick and tile - SA

Subject: Farming

1. Winter and summer agriculture - TOP
2. Comparison of agriculture with the plow, plough, and the tractor - SA
3. Fertilizer. Grains - TOP
4. The Sickle and the scythe - TOP
5. The Reaper - TOP
6. The grains of wheat, barley and rye - TOP
7. The harvest and thresher machines - TOP
8. Other crops such as peas, broad beans and corn - TOP
9. According to the district, information about tobacco, opium poppy, cotton, sesame, flax and hemp - TA

Subject: Rocks and Minerals

1. Distinguishing limestone, marble, grit, Malta stone, granite, plaster, slate and flint and their qualities - SA
2. Introducing minerals that are available within the district such as pyrite, silver lead, tin, copper, nickel, zinc, aluminum, silver and gold and teaching their primary qualities - TA

Subject: Coal Minerals

1. Lignite, hard coal, coal gas, coke, anthracite and granite (for the production of pencils) and coal minerals - TOP
2. The life of workers - TOP
3. The elevator, pick and the hammer - TOP
4. The exportation of minerals - TOP
5. Petroleum and gas - TOP

Subject: Trees

1. Fruit and non-fruit trees that are grown in the vicinity - TOP
2. Benefiting from trees: Lumber marketing - TOP
3. The student will learn the types and qualities of different kinds of wood such as the pine, oak, birch, chestnut and the linden - SA

Subject: Domestic and Wild Animals

1. Recognition of wild animals such as the wolf, fox, lion, tiger, and the elephant will be introduced through photographs in this class - SA

Subject: Hunting

1. Hunting of the duck, goose, quail, rabbit, antelope, and the deer - TOP
2. Hunting with dogs. Killing harmful animals - TOP
3. Protecting beneficial animals - TOP

Subject: Birds

1. Birds' sounds such as the nightingale, goldfinch, snowbird, eagle, and the canary - TOP
2. The advantages of birds - TOP
3. Not harming birds - TOP
4. Birds that do harm to farmers: the crow, magpie, and the sparrow – TOP

Subject: Raptors

1. Predator birds: the hawk, sparrow hawk, falcon, and the eagle (through photographs) - TOP

Subject: Fish

1. Fishing in the sea and the river - TOP
2. Introduction to local fish - TA
3. To dry, salt and conserve fish - TOP

Subject: Vegetable and Fruit

1. To dry, conserve, and to make jam and syrup (according to seasons) - TOP

Subject: Information on the Human Body

1. How do we breathe - TOP

2. Trachea, lungs, diaphragm - TOP
3. Respiration: suggestions and principles on health related to breathing. - TA

B. Courses on Non-living Things

Subject: The Three States of Matter

1. Matter around us: solid, liquid and gas states - TOP
2. Matter can change their states: Three states of water - TOP

Subject: Forces of Nature

1. Gravity: The falling of objects. The weight of objects, their conditions of balance and their center of gravity - TOP
2. Heat: The biggest source of heat is the sun - TOP
3. The effects of heat: Matter expands by heat - TOP
4. Heat changes the state of matter: Solid matter becomes liquid and then turns into gas - TOP
5. The effects of heat on plants and animals. If there is inadequate heat, there is no life on earth - TOP
6. Light: The biggest source of light is: The Sun - TOP
7. The effect of sunlight on life. Plants cannot grow without light; light and the colors - TOP
8. Mirrors, magnifiers and eye glasses - TOP
9. The effect of light on our lives - TOP
10. The results of light deprivation: On the eyes and body - TOP
11. Light is crucial for our health. Light kills certain microbes - TOP
12. Electricity: Electrical incidents that occur as a result of rubbing objects such as amber, resin and glass - TOP
13. Thunder and lightning. The effects of the thunderbolt. The lightning rod - TOP

Subject: The Most Important Matter in the State of Gas: The Atmosphere

1. How do we explain the existence of the atmosphere? It envelopes the earth - TOP
2. The thickness of the atmosphere around the earth - TOP
3. Atmospheric pressure - TOP
4. How to inflate a ball - TOP
5. How do balloons fly - TOP

6. The kites and the airplanes - TOP
7. The atmospheric pressure is low on the high mountains - TOP
8. How do we measure the atmospheric pressure - TOP
9. What is a barometer - TOP
10. If it is possible, the Toricelli tube will be conducted - SA
11. What is a metal barometer - TOP
12. What is a metal barometer used for - TOP
13. Temperature of the atmosphere - TOP
14. The effect of temperature on the atmosphere - TOP
15. The winds and the storms - TOP
16. The effect of temperature on our lives - TOP
17. How to measure the temperature - TOP
18. The principles of temperature - TOP
19. How to use the thermometer - TOP
20. Medical thermometer - TOP
21. The effect of the atmosphere on our lives - TOP
22. The composition of the atmosphere - TOP
23. Respiration. The respiration of plants - TOP
24. Pure and clean air - TOP
25. The harms of dirty and impure air - TOP
26. The atmosphere and sound - TOP
27. The speed of sound through the atmosphere – TOP

Subject: The Most Important Matter in the State of Liquid: Water

1. Water pressure - TOP
2. Why do objects swim in the water and why do they sink - TOP
3. Why does not the armored and steel ship sink - TOP
4. Submarines - TOP
5. How do animals and humans swim - TOP
6. Water equilibrium - TOP
7. Water current - TOP
8. Waterfalls and fountains - TOP
9. Sea water, fresh water, raw water and potable water - TOP
10. The qualities of potable water - TOP

11. Undrinkable and dangerous water: serious diseases caused by water: typhoid fever and cholera - TOP

Subject: Simple Machines

1. Levers, types and applications - TOP
2. Mechanism of pulleys and chains (with a simple crane) - TOP
3. The mechanism of circular saw: change of direction of force; rotating a horizontal force into vertical force - TOP
4. Belt and chain mechanisms of machines - TOP
5. Examination of the bicycle chain, sewing machine, meat grinders and similar simple machines which can be found anywhere - SA

Subject: Benefiting From the Forces of Nature

1. Benefiting from the wind and water: Wind and water mills. Sailing boats. Steam engines, steamships and trains. Gas engines and motors. Cars and tractors - TOP
2. Examination of a steam engine and the motor of an automobile - SA
3. Benefiting from electricity: The electric battery. Electric current and positive and negative electricity. The magnet. Electric bells. Electric dynamos: the telephone and the telegraph - TOP
4. Benefiting from light: Cameras and movies – TOP

Since the 1926 science curriculum was written before the Educational Objectives Movement, it does not state the expected student behavior consistently. Most of the objectives are topically stated. In a few cases, the teacher activity is related to the topical statement (such as “suggestions and principles on health related to breathing”)

Teaching Methods and Techniques

The 1926 science curriculum, Courses on Nature and Non-living Things, mainly used two teaching methods: Direct observation and investigation, and experimentation.

I. Direct Observation and Investigation

According to the 1926 science curriculum, there are different ways of making observations. First, teachers assign observations related to the topics which are to be covered in the following weeks. Students make individual observations when they come into contact with animals or plants or they make observations on related topics in groups. They write their observations in their notebooks. The teacher listens to these notes in the classroom, and corrects errors or provides the missing links. For other methods of observation and investigation, the 1926 science curriculum proposes the usage of the following teaching techniques:

1. Demonstration
2. Field trips and tours
3. Exhibits
4. Construction of simple pictures and diagrams

We will clarify the usage of the above stated teaching techniques with the help of quotes from the 1926 science curriculum.

1. Demonstration

The 1926 science curriculum proposes that the teacher bring the objects of investigation to the classroom. This is the technique of demonstration. For example, the curriculum states that "inner parts of the chicken and fish can be demonstrated[1]". The demonstration technique includes both dead samples as well as posters related to the topics under discussion. This is stated in the curriculum as:

> Samples of Dead Organisms: If some organism cannot be used for demonstration, samples prepared in a variety of ways can be

[1] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Hayvanların azâ-yi dâhiliyelerini göstermek için balık veya tavuk gibi hayvanlar basit surette teşrih edilebilir.*"

> shown. Instead of verbally explaining the topic, it is better to demonstrate it with a sample. But it must be remembered that the dead organism cannot be a substitute for the living organism.[1]
>
> Posters: The teacher of the science investigation courses must utilize posters that are available in the school. But the acceptable materials must not be the starting point of instruction; first observations must be carried out in nature, only then must posters be used for review. If there are no posters related, the teacher can draw with colored chalks as best as possible. Plant and animal atlases can be used for giving an idea about animals and plants which cannot be shown [observed directly].[2]

2. Field trips and tours

Furthermore, the curriculum suggests field trips for the students by which they can observe and investigate the materials in their natural environments. It is also clearly stated in the Course of Non-Living Things that "factories, agricultural and industrial schools, repair yards, garages which are found in the vicinity of the school, can be visited when there is an opportunity.[3]"

3. Exhibits

The 1926 science curriculum also proposes organizing exhibits in school museums as a technique of observation.

> Students can make collections of various plants, crops and insects which have been studied. For instance, dried leaves, seeds, wood samples, skins of various plants, animal teeth and skeletons and

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[1] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, *"Ölü Numuneler: Bir şeyin canlısını elde edemeyince muhtelif suretlerle ihzar edilmiş numuneleri gösterilir. Mevzuyu lakırdı ile anlatmağa uğraşmaktansa hazırlanmış numuneyi göstermek iyidir. Fakat ölü numunenin canlı hayvanın yerine kaim olamayacağı unutulmamalıdır."*

[2] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, *"Levhalar: Muallim tabiat tetkiki derlerinin mektepte mevcud tavhalardan dahi istifade etmelidir. Fakat aynen kabil-i araî olan mevadın tedrisinde levha medbe-i hareket olmamalı; evvela tabiatta tetkik yapıldıktan sonra ancak temrin makamında levha istimâl edilmelidir. Eğer tetkik edilen mevzuya dair mektepde levha yoksa muallim elden geldiği kadar renkli tebeşirlerle resim yapar. Nebat ve hayvanat atlasları da aynen iraesi kabil olmayan hayvanlar ve nebatlar hakkında bir fikir verebilmek için istimal edilmelidir."*

[3] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, *"Müsait zamanlarda civarlardaki fabrikalar, ziraat ve sanayi mektepleri, tamirhaneler, garajlar ziyaret edilmelidir."*

various bird feathers, can be collected. Those which are appropriate should be preserved in the school museum[1].

4. Construction of Simple Pictures and Diagrams.

Another technique the curriculum recommends is the construction of simple pictures and diagrams by students. For the implementation of this technique, students are expected to "summarize the results of observations about animals and plants in short sentences and to state them in their notebooks with simple pictures and sketches.[2]"

II. Experimentation

The method of experimentation is suggested in the curriculum repeatedly. The curriculum states that "in any case, the courses should be based on experience and observations[3]", and "experiments when possible should be carried out.[4]" According to the curriculum, experiments should also be hands-on; students should be actively involved in carrying out the experiments. This is stated in the curriculum as "It is not enough for the teachers to carry out the experiments; students themselves must carry out the experiments.[5]"

The 1926 science curriculum gives a detailed description of teaching methods. Thus, it serves as a guide to teachers.

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[1] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, *"Tetkik ettirilen muhtelif nebatlar ve mahsullerle haşerelerden talebeye koleksiyonlar yaptırılmalıdır. Mesela muhtelif nebatların kurutulmuş yaprakları, tohumları, tahta numuneleri, namî kabukları, hayvan dişleri ve iskelet aksamı muhtelif kuş tüyleri ve saire toplattırılır. Bunların münasipleri mektep müzesinde hıfz edilmelidir."*

[2] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Talebe hayvan ve nebatlara ait tetkiklerin neticelerini kısa cümlelerle hülasa eylemeli ve basit resim ve krokilerle defterlerine tesbit etmelidir.*"

[3] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Dersler behemehal tecrübeye ve müşahedeye müstenit olmalıdır.*"

[4] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Yapılması mümkün olan tecrübeler mutlaka yapılmalıdır.*"

[5] The English form was translated directly from the text of curriculum on March 7, 2007. The original Turkish form is, "*Tecrübelerin yalnız muallim tarafından yapılması kâfî değildir, imkan derecesinde bizzat talebenin de yapması lazımdır.*"

Evaluation

Like the 1924 science curriculum, in the 1926 science curriculum there is no information about the evaluation procedures. How the curriculum is evaluated, or how the grades are assigned, for student performance levels, is not stated.

According to the analyses of different parts of the 1926 science curriculum, there seems to be an improvement in the statements of the general aims of the curriculum which mainly focuses on the practical needs of life. In addition, the explanation of the teaching methods is more detailed. In terms of its organization, likely the 1924 science curriculum, the curriculum is based on the experiential theory, but unlikely has a different organization of its sophisticated content as natural sciences and non-lining things. On the other hand, there seems to be no improvement in terms of the statement of objectives and the evaluation.

The 1936 Primary School Curriculum – Natural Science (*1936 İlk Mekteplerin Müfredat Programı - Tabiat Dersleri*)

General Aims of the Primary School Science Curriculum

While the 1926 science curriculum was divided into two sections as "Course on Nature" and "Course on Non-living Things", the 1936 science curriculum is combined into a single course entitled "Natural Science" (*Tabiat Bilgisi*). The reason for the merge is stated as follows[1]:

[1] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is,

a. To be a continuation of the first group, thus to assure a system of compatibility between two levels.

b. In order to be in accordance with the science courses in junior high school, this course is combined as [the course on] "Natural Science".

This combination was suggested in the report of a foreign expert from the United States, Dr. Beryl Parker, in 1934. For Parker, combining related courses is useful in terms of efficient usage of time and scheduling of the program. The aims of the Natural Science curriculum are given as follows[1]:

1. To have the children observe and investigate directly the food, clothing and shelter in the environment as well as the animals, plants, underground sources and other products which are of general interest for our lives
2. To give brief and concise information to children about the role and function of the human body, meanwhile giving more extended information on diseases, their causes and about the prevention of diseases
3. To have the children examine how humans profit from nature and natural forces; to develop interest in students related to

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a. İlk devredeki topluluğun bir nevi devamı olmak ve böylelikle iki devre arasında bir sistem uygunluğu temin etmek,

b. Ortaokul programlarındaki Fen Bilgisi derslerinin tertibine uydurulmak maksatlarile "Tabiat Bilgisi" adı altında birleştirilmiştir.

[1] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is,

1. Çocuğa, muhitinde bulunan ve genel yaşamımızla ilgili olan hayvanları, nebatları madenleri, eşyayı ve tabii hadiseleri müşahede ve tetkik ettirmek;

2. Vücudümüzdeki uzuvlarla bunların yaşamımızdaki rolleri ve vazifeleri, birbirlerile olan organik münasebetleri üzerine, az fakat öz malûmat kazandırmak ve bu arada bilhassa hastalıklar ve sebeplerile bunlardan korunma çarelerine genişçe bir yer ayırmak;

3. Tabiatten ve tabiat kuvvetlerinden insanların nasıl faydalandığını tetkik ettirmek; talebenin, her gün kullandığı veya karşılaştığı eşya ile, medeniyetin maddi cihazlarını teşkil eden makinelerin en önemlileri üzerine dikkat ve alâkasını çekmek;

4. İnsanın tabiat üzerine ve tabiatın insan üzerine olan tesirlerine çocukların dikkatini çekmek ve bu tesirlerden anlayabileceklerini kendilerine sezdirmek ve kavratmak;

5. Çocuklara tabiatı sevdirmek ve tanıtmak suretile, yurdu güzelleştiren ve zenginleştiren ağaçları, çiçekleri ve faydalı hayvanları korumağa ve çoğaltmaya alıştırmak;

6. Yurdun tabii servet ve kuvvet kaynaklarını teşkil eden eşya ve hadiseleri yurt ve ev ekonomisi bakımından tetkik ettirmek;

7. Çocuklara doğrudan doğruya müşahede ve denemeler yaptırarak, ileride karşılaşacakları eşya ve hadiselerin tetkiki ve bunlar üzerine düşünerek hükümlere varmak melekesini kazandırmak.

the most important tools and machines of civilization that they encounter in their daily lives

4. To have the children focus on the effects of nature on man and of man on nature and to have them develop concepts and insights on the efforts that they can comprehend
5. By familiarizing children with nature and by having them love nature, to acclimate them to the protection of trees, flowers, and useful animals which enrich the country
6. To have [students] investigate the goods and events which constitute the natural resources and forces of the country from the perspective of national and home economics
7. To have the children make direct observations and experiments so that they can gain the conceptual capacity to make investigations and inferences on the things and events that they will encounter in the future.

Like the 1924 and 1926 science curricula, the general aims of the 1936 science curriculum reflect John Dewey's pragmatic philosophy. The investigation of the living and non-living things in natural environments is again the concern of science curriculum in 1936. The application to life situations of what is learned so that beneficial outcomes for the nation and the family can be guaranteed seems important for the 1936 science curriculum. The hope is that students will use the skills acquired to investigate events and things as well as to interpret them in the future. Unlike the 1924 and 1926 curricula, the relationship between the subjects and the national and home economics are stated explicitly in the aims of this curriculum. The relationship between education and economic development is also emphasized in the 1934 report of Parker, another foreign expert from the United States.

Organization

Instructional Methodology

As in the 1924 and 1926 science curricula, the experimentalist methodology forms the basis of the 1936 science curriculum. As can be seen in the general aims of the curriculum, students are engaged in learning about human life and the lives of other living things as well as in getting acquainted with non-living things which have a relation to human life. The experimentalist theory is also emphasized while giving explanations on the 1936 "Natural Science" course in the beginning section of the curriculum. Accordingly, "Nature can only come into value depending on the degree of its relation to us. Therefore, this course combines things and events into groups according to their relation to humans"[1].

General Layout

The general layout of the 1936 "Natural Science" curriculum is as follows[2]:

1. List of Explanations on combining the courses of "Course on Nature" and "Courses on Non-Living Things" in the 1926 science curriculum under the name of "Natural Sciences" in the 1936 science curriculum.
2. Aims of the "Natural Science" course, given as a list
3. List of Directives , related to the teaching methods and techniques

[1] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Tabiat ancak bizimle olan yakın ve uzak münasebetleri bakımından değer kazanabileceğine göre bu derste tabiatta olan eşya ve hadiseler insanla olan rabıtalarına göre gruplar halinde toplanır."*

[2] As the items 1, 2, 5, and 6 are stated in pages.... respectively, these will not be repeated. Since items 3 and 4 are related to the teaching methods and techniques, they will be incorporated into Teaching Methods and Techniques section of the analysis.

4. List of Instructional Techniques and Materials, related to teaching methods and the places in which the students can make observations and investigations.
5. Content for the fourth grade
6. Content for the fifth grade

Content

I. Content for the Fourth Grade

For the fourth grade, the "Natural Science" course is for 3 hours a week. The content areas of the curriculum are: Nutrition: making bread, animal nutrients, vegetables, digestion, diseases stemming from food, healthy nutrition requirements; dressing: clothes and their origins, summer and winter clothes, healthy and clean dressing, benefits and use of sewing machine, our house: materials for house construction, selection of house, heating our house, lightening our house; breathing: respiration, air circulation, lungs, lung diseases; blood circulation in the body: heart, circulation types, circulation and respiration, blood and the body defense, diseases and the other organs in the circulatory system.

II. Content for the Fifth Grade

For the fifth grade, the "Natural Science" course was for 3 hours a week. The content areas of the curriculum are: movement: organs for movement, mechanisms of motion, diseases; the senses: brain and nerves, health requirements, visual sense, auditory senses, scent, touch and taste senses; Natural forces and people: gravitational force and its effects, temperature, air, water, electricity and their influences.

Objectives

Like the objectives of the 1924 and the 1926 science curricula, the objectives of the 1936 science curriculum are in the form of Student Activity (SA), Teacher Activity (TA), and the list of topics (TOP). The objectives of the 1936 science curriculum for the fourth and the fifth grades are as follows:

I. Objectives for the Fourth Grade

Subject: Nutrition

1. How to produce a piece of bread- TOP
   a. Comparison between fertile and infertile soil related to farms, fields, gardens, and meadows - TA
   b. Comparison between plow, plough and the tractor and their functions in farming – fertilizer – seed and seeding – the hook, the scythe and its machine, harvesting, blending, snaffle and thresher and how blends are produced - TA
   c. Wheat: Examination of the ear and the kernel of wheat in the field and the classroom. Comparisons between the wheat and other grains. Wheat in the regional and national economy – SA and TA
   d. The mill: Examination of a local mill– How does the mill work? – Functions of the toothed-wheel – Using natural forces for the mill, types of mills – How is wheat grinded - TOP
   e. Grits: flour, bran, starch – What can be made out of flour – Flours that are produced from other materials – Kneading the flour to produce bread – Ferment - TOP
   f. Bakery: Visiting the Bakery – How is bread baked - TOP
2. Nutrients from animals - TOP
   a. Animals that give us nutrients: Sheep, goat, cattle, calf, fowl, fish (this topic should be emphasized as a separate unit in coastal cities where fishing and sponge diving have great importance) Game animals and others - TOP
   b. How do we feed these animals – Their value in the regional and national economy - TOP
   c. Meat, milk, yoghurt, butter, fish, bird and game meat, egg, caviar - TOP
   d. Examination of the meat grinder - SA

3. Vegetable nutrients – TOP
    a. Vegetables: In what states do we eat vegetables? (Raw, cooked) – Dry and fresh vegetables - TOP
    b. Fruits: In what states do we eat fruits? (Raw, cooked) – Dry and fresh fruits, vegetable oils, canned fruit, jam, syrup, pickle - TOP
    c. Examination of coffee grinder – SA
4. Minerals -TOP
    a. Salt: Salt production in our country - TOP
    b. Water: Characteristics of drinking water, diseases due to water intake - TOP
5. How do we digest food? - TOP
    a. The mouth and the throat, teeth, the protection of teeth and the use of the toothbrush - TOP
    b. The esophagus, stomach, intestines and glands that help digestion- TOP
    c. How does food get into the blood stream? - TOP
    d. Measuring the body temperature – medical thermometer- TOP
5. Diseases: Digestion organs and microbes which enter our body through food intake and diseases resulting from this process, prevention of these diseases. First measures to be taken in the case of poisoning from the food and copper utensils - TOP
6. Healthy nutrition requirements: Brief information about calories and vitamins - TA

Subject: Clothing

1. Why do we get dressed - TOP
2. Clothes and origins of clothing - TOP
    a. Animals as sources of clothing: wool, silk, leather and stout leather. (Clothes derived from these) - TOP
    b. Plants as sources of clothing: Cotton, linen, artificial silk (Clothes derived from these) - TOP
    c. Materials produced from metals (Buttons) - TOP
3. Characteristics of summer and winter clothes (color, thickness, quantity) - TOP
4. Healthy clothing requirements, keeping clothes clean - TOP
5. Benefits and the usage of sewing machines – TOP

Subject: Our Home

1. Materials used for building houses: mud, brick, lumber, stone and concrete (depending on what is found in the environment) - TOP
2. With what materials is the house constructed - TOP
    a. Foundation – Walls: Stone, shells, sand, limestone, marble, gypsum, cement, examination and comparison of these materials and where they are used - TOP
    b. Wooden parts of the house: Lumber, how we utilize the trees that exist in our environment. Processing trees from forests (lumberjacking) – Preserving forests – Our forests and their economic values. Carpentry, visiting a carpentry workshop – SA
    c. The metal parts of the house: Which metals do we use and benefit from? And under what conditions – Locksmith, blacksmith, tinsmith, glassmaker. - TOP
    d. The roof: How are tiles produced? Examination of a tile yard. (If possible, producing tile, brick and limestone in the school) - SA
    e. Pulley, reel, simple winches - TOP
3. Sections of the House: basement, woodshed and coal shed, cellar, kitchen, sitting room, rooms and halls, stairs (elevator if it is found in the vicinity), the toilets, bathrooms, attics (examination of one or two house plans).Conditions for good usage of space in the house. - SA
4. The plumbing of the house. - TOP
5. Hygienic conditions of building a house. - TOP
6. The garden of the house: Vegetable and flower gardens, fruit-trees (Demonstration of beautiful gardens, and the selection of such gardens by children). Planting the school garden. Fountains. – TA and SA

Subject: How do we heat our house?

1. The major source of heat: The sun. - TOP
2. Means of Heating: The oven, brazier, stove (types that are found in the vicinity), central heating. - TOP
3. Examination of heating systems, comparisons in terms of hygiene, economics, and utility. -SA
4. Fuel: Wood, coal, pitcoal, petroleum, gas, and how they are produced. - TOP
5. Hygienic and economical conditions for heating. - TOP

Subject: How do we lighten our house? - TOP

1. The major sources of light: The sun, the effects and benefits of sun light in our lives - TOP

2. Sources of light: Tinder, candle, kerosene lamps, oil lamps, lanterns and radium lamps, carbide lamps, gas lamps, and electrical lamps. - TOP
3. Health requirements of lighting (Day and night) - TOP

Subject: Respiration

1. How do we respire? Tracheas, lungs, diaphragm. - TOP
2. The air: Proof of the presence of air. Effects of air on life – Composition of air – Clean and fresh air; disadvantages of polluted air in dirty and closed places - TOP
3. Circulation of air through the lungs - TOP
4. Measures taken for drowning - TOP
5. Lung diseases and microbes, and their prevention - TOP

Subject: Blood circulation in the body

1. The heart and heart beats, the pulse - TOP
2. Pulmonary and systemic circulation, blood vessels that circulate blood in the body to heart, veins, and arteries, and carry blood away from the heart to the body (arteries). Dirty and clean blood - TOP
3. Relationship between circulation and respiration -SA
4. The role of blood in the defense system of the body - TOP
5. First aid measures for cuts, burns, bee stings, poisoning, and rabies - TOP
6. Diseases and microbes transmitted through blood and preventive measures - TOP
7. Excretion System: kidneys: urine, the skin: perspiration – keeping the skin clean, dermatological diseases, hygiene of nails and hair - TOP

II. Objectives for Fifth Grade

Subject: Locomotion

1. Bones, muscles, joints and the spine - TOP
2. Mechanisms of motion, levers, levers in our body – The bicycle. - TOP
3. The importance of movement and exercise, the advantages and disadvantages of good and poor posture - TOP
4. First aid for fractures, dislocations, and injuries - TOP
5. First aid that will be taken into consideration for cases such as breaks, dislocations and injuries - TOP

Subject: The Senses

1. Brain and nerves, related hygienic conditions - TOP
2. Vision - TOP
    a. Comparison of the eye and the camera - TOP
    b. Protection of the eye - TOP
    c. Basic information on lenses, binoculars and movies - TA
    d. Analysis and composition of light through the prism and Newtonian wheel. – The rainbow - TOP
3. The auditory sense - TOP
    a. How do we hear? The ear - TOP
    b. Air and sound: Diffusion of sound in the air and its velocity. The gramophone. Basic information on the radio - TOP
    c. Protection of ear - TOP
4. Touching and tasting, scent - TOP

Subject: Natural forces and us

1. Gravity and its effects: Falling, plumb bob – measurement, center of gravity, equilibrium – scales, accuracy of scales. Correct measurement with scales and its verification – Volume and density of an object - TOP
2. Temperature and its effects: Temperature of an object, measurements with thermometers – Expansion and elongation of a heated object and application of these – the wind, its advantages (the mill and sail) – Storm and its disadvantages, changing of the state of an object through heat, examination of the transformation of water and extending the scope of these events – steam engine, gas motors and basic information on their usage –TA and SA
3. The air and its effects: Fresh air, measuring pressure – mercury and aneroid barometer (usage of barometers), examination of air circulation, observatories, the kite and the airplane (the importance of airplanes in the defense of a country, protection from air attacks and gas) - SA
4. Water and its effects: The fog, cloud, rain, snow, dew, frost. Surface and subterranean waters, rivers, wells, water pumps (these will be illustrated by cross-sections) – Examination through experimentation of the floating and sinking of an object in water, ships and submarine – Balloons – TA and SA
5. Electricity and its effects: The magnet, compass and their advantages – Examination of the flash light battery, information on the generator and electric current, electric current distribution in the house, electric lamps, reading the electric meter, protection from electrical currents –

> examination of electrical bells, the bases of the telephone and telegraph (briefly), the advantages of the wireless telegraph and the telephone – basic information on lightning, thunder; thunderbolts and the lightning rod – SA

Objectives are not stated in terms of student behaviors in the 1936 curriculum as was the case for the 1924 and 1926 curricula. Rather, a topical analysis is made, sometimes alluding to teacher activities and student involvement.

Teaching Methods and Techniques

The 1936 'Natural Science' curriculum mainly uses two teaching methods: direct observation and investigation as well as experimentation. The curriculum states that the observations and experiments can both be done continuously or when needed. As examples of continuous observations, the 1936 science curriculum mentions "the examination of the development period of the plant from the seed to its fruition, weather observation, and metamorphosis of a tadpole constitute examples for continuous observations". The curriculum suggests the selection of topics of continuous observations at the beginning of the school term and the announcement of these topics to the students or student groups. For observations, when needed, what is done in the classroom and excursions are given as examples.

Before observations and experimentations, the curriculum recommends the teachers to give responsibilities to the students. The curriculum states that students can gather information for discussion in the classroom. This discussion can be feedback for the teachers. Teachers can complete the missing points. Furthermore, they may repeat the experiments which are not understood well. The curriculum also suggests various teaching techniques with instructional materials for the methods of

direct observation and investigation as well as experimentation. The following paragraphs will explain these in detail:

I. Direct Observation and Investigation

For observations of the natural environments of living organisms, the curriculum suggests the establishment of school practice gardens, school chicken coops, and school museums. The usage of these places is explained in the curriculum as follows:

> The school practice garden: There will be a school practice garden in every school where space is available and plants used in the course will be cultivated in this garden. The students will follow the process of the development of plants from grains or seeds; they will examine the growth rates of plants in sunny and shady places with and without fertilizers, in moist and dry soil; as well as useful and harmful animals.
>
> In schools where space is unavailable, observation of plants in pots or cans is recommended.[1]
>
> The school chicken coop: It is recommended that a coop be kept in every school, containing animals such as chicken, rooster, goose, turkey, duck, rabbit, and pigeon. This type of a coop is a valuable means of learning about the lives of animals and their care.[2]
>
> Aquariums: Aquariums provide an opportunity for direct and close observation of animals and plants that live in water, their development, life cycles and their relationships. This medium must be emphasized in the school setting.[3]

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[1] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Okul tatbikat bahçesi: Yeri müsait olan her okulda bir tatbikat bahçesi yapılacak ve bu derste tetkik edilecek nebatlar yetiştirilecektir. Bu bahçede çocuklar çekirdekten veya tohumdan bir nebatın yetişmesi vetirelerini takip edecekler; güneşli, güneşsiz yerlerde gübreli, gübresiz, sulak ve kurak topraklarda nebatların büyüme derecelerini; nebatlara faydalı ve zararlı hayvanları tetkik edeceklerdir.*

Bahçesi müsait olmayan okullarda, bu gibi müşahede ve denemeleri tenekeler veya saksılar içinde yapmak lazımdır"

[2] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Okul kümesi. Her okulda tavuk, horoz, kaz, hindi, ördek, tavşan, güvercin gibi hayvanları yetiştirmek üzere bir kümes bulunması tavsiye olunur. Bu kümesler, hayvanların yaşayışlarını, hayvan bakımını öğrenme cihetlerinden değerli bir ders vasıtasıdır."*

[3] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Akvaryumlar: Suda yaşıyan hayvanların ve nebatların neşvünemalarını ve yaşayış tarzlarını, birbirleri ile olan münasebetlerini doğrudan doğruya ve yakından tetkik fırsatların temin eden bu vasıtaya ilkokulda önemli bir yer verilecektir."*

> Terrariums: It is recommended that in every school, one or more terrariums must be present for the examination of the lives of animals such as lizard and frog.[1]
>
> Insectariums: Places where the observation of the metaphors of insects such as the silkworm and the butterfly are possible, will be present in the school gardens.[2]
>
> The school museum: The tools and equipment found in the museum are largely constructed cooperatively by the students to be used as beneficial means for the Natural Science course. However, tools such as the scales, thermometer, barometer, and models of organs and parts of the body, and lenses that are to be present in the museum must be purchased.[3]

In addition to observations in the school by using the above stated places and equipments, the 1936 science curriculum describes the following teaching techniques:

1. Excursions

As a way of making observations and investigations in the natural environments of living organisms, excursions are recommended in the 1936 science curriculum. These excursions are not just going somewhere and walking around. The curriculum explains how these excursions should be as follows:

> An extensive plan on the observations to be made must be prepared with the students before excursions. Short notes must be taken, sketches and diagrams must be drawn, and stones, insects, soil, and plants must be collected for the class museum during the

[1] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Teraryumlar: kertenkele, kurbağa gibi hayvanların yaşayışlarını tetkik için her okulda bir veya bir kaç teraryum bulunması tavsiyeye değer."*

[2] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Ensektaryum: Mümkün olan yerlerde ipek böceği, kelebek gibi hayvanların istihalelerini müşahedeye yarayan bu vasıtalardan da ilkokullarda istifade edilecektir."*

[3] The English form was translated directly from the text of curriculum by on April 17, 2007. The original Turkish form is, *"Okul müzesi: Burada bulunan ve Tabiat Bilgisi dersine yarayan vasıtalar daha ziyade talebenin kendi kendilerine elbirliğiyle yaptıkları aletler ve koleksiyonlardır. Ancak terazi, termometre barometre, vücut uzuvlarının mücessem numuneleri, pertavsız gibi satın alınması zaruri vasıtalara da yer verilecektir."*

> excursions. Observations made during the examinations will be discussed according to the intentions of these excursions.[1]

In other words, the curriculum focuses on the advantages of pre and post excursion activities.

2. Exhibits

The curriculum encourages the exhibition of materials, tools and equipment made by the students as well as of materials collected during excursions. Exhibits are not to be the random exposure of materials but rather the presentation of the most important steps of observation. For example, in understanding how shoes are made, it is not enough to show the pictures of leather, nails, threads etc. The aim is to have the students understand the stages of shoe-making. Therefore, a display of how leather is obtained from animals, how raw leather is processed, how molds are made, how nails are used to form the shoes, and the shoes will be much more useful.

3. Construction of simple pictures and diagrams

Another technique of observation is the construction of simple pictures and diagrams. For the implementation of this technique, the curriculum expects students to summarize the topic covered during the course in a notebook and to enrich this summary by making outlines, and drawing diagrams, graphics and pictures.

II. Experimentation

The curriculum emphasizes the usage of the school laboratories for experiments. It is recommended that the materials used for experiments be prepared by the students

[1] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Ekskürsiyonlara çıkılmadan önce yapılacak müşahedeler üzerine talebe ile birlikte etraflı bir plân hazırlamak şarttır. Bu gezintiler sırasında kısa notlar aldırılmalı, taslak ve krokiler çizdirilmeli, sınıf müzesine konmak veya koleksiyonlarda kullanılmak üzere taş, böcek, toprak, ot, v.s. toplatılmalıdır. Ekskürsiyonlarda yapılan müşahedeler okula dönüldükten sonra maksada uygun olarak işlenecektir."*

themselves. They should be of inexpensive materials such as boxes and used bottles, pieces of wood, and spool. If it is possible, the usage of free materials is suggested. However, there are objects that cannot be made by the students and thus must be purchased, such as scales, thermometers, barometers, magnifiers, and pulleys. In addition to these materials, having a school microscope is strongly suggested in the curriculum. This microscope will be used "…when giving information about diseases, discussing the composition of blood in the circulation and showing the compounds of polluted and clean water to the children[1]".

Like the 1926 science curriculum, the 1936 science curriculum seemed to serve as a guide for teachers in terms of its teaching methods; observation, investigation, and experimentation. The 1936 science curriculum aims for the effective usage of the methods. Therefore, it gives detailed explanations for the implementation of the methods, and detailed examples of instructional materials.

Evaluation

Like the 1924 and 1926 science curricula, the evaluation of students and the curriculum proper is not handled in the text of the 1936 "Natural Science" curriculum.

As far as the all parts of the 1936 science curriculum is concerned like the 1926 science curriculum, there seems to be an improvement in the statements of the general aims of the curriculum which mainly focuses on the practical needs of life

[1] The English form was translated directly from the text of curriculum on April 17, 2007. The original Turkish form is, *"Hastalılar üzerine malumat verirken mikropları, deveran bahsinde kanın terkibini, iyi ve fena suyun içindeki maddeleri…"*

and the explanation of the teaching methods. It is observed that these improvements were influenced by the recommendations of the foreign experts (see Chapter IV). In addition, similar to the 1926 science curriculum, there seems to be no improvement in terms of the statement of objectives and the evaluation.

CHAPTER VI

CONCLUSION

This final chapter summarizes the results of the analyses of the state ideology, politics, the educational policies and philosophy as well as the science curricula of Turkey during the period of Atatürk (1919-1938). Furthermore, the chapter makes recommendations for further studies.

Summary of the Results

The main concern of this thesis was the curricular reform which, according to MacDonald and Walker, is "one lens through which it is possible to view the process of change in education." (1976, p. 3). After reviewing the literature about the major curricular changes in different countries, four main reasons that necessitated educational reforms and curricular changes seemed to emerge. These were a paradigmatic political shift in the government and the arising man-power needs which could not be reached through the existing curricula; major global accomplishments that take place in other cultures where the curricula of the culture proper seem to fall behind; theoretical changes in the field of social and educational sciences; and new regional and local needs in educational outcomes.

In this thesis, the focus was on the case of Turkey during the period of Atatürk (1919-1938), when a major political revolution was experienced with the proclamation of the Republic (October 29, 1923). This period is important, as all other curricular reforms in Turkey are based on the structure and ideology established during this period. These structures and ideologies can still be clearly

observed 66 years after the end of Atatürk's period in the curricular change of 2004. The Ministry of National Education (*Milli Eğitim Bakanlığı, MEB*) states one of the four main reference frameworks that were taken into consideration when developing the new curricula as follows:

> The historical, cultural, social and moral reservoir of Turkey will be considered as the source of motivation behind the new curricula and the improvement and continuity of the Turkish Republic Project (*Türkiye Cumhuriyeti Projesi*) founded by Atatürk, as a first reference point for ensuring change.[1]

Clearly, understanding what lies behind the latest curricular changes in Turkey requires the analysis of curricular changes during the period of Atatürk (1919-1938).

This thesis attempts to answer two groups of research questions. One group is related to the main factors affecting the curricula of Turkey during the period of Atatürk (1919-1938). In order to answer this question, Yıldıran (2006)'s "Hierarchical Model of Factors Affecting Curricula" (see Figure 1 in Chapter I) was utilized. State ideology and the resulting politics of Atatürk's period determined the educational policies which affected the choice of educational philosophies. Furthermore, the selected philosophy influenced the curricula of this period. Under this category, the thesis asks four questions, each related to the first four parts of Yıldıran's model (2006). These are related to the state ideology, politics, educational policies and philosophies affecting the curricula of Atatürk's period.

Since Yıldıran's model (2006) starts with the state ideology, the first question was about the state ideology in Turkey during the period of Atatürk (1919-

[1] The English form was translated directly from the official web page of the Ministry of Education www.meb.gov.tr on May 3, 2007. The original Turkish form is, *Yeni öğretim programları ülkemizin tarihsel, kültürel, sosyal, ahlakî birikimini ve katılımını motivasyon kaynağı olarak görür ve Atatürk'ün kurduğu Türkiye Cumhuriyeti projesinin gelişerek devamlılığı ilkesini birinci referans noktası olarak ele alır.*

1938). As a result of the analysis in chapter IV, the state ideology of the specified period was seen to be mainly influenced by the six principles of Mustafa Kemal Atatürk: Republicanism, Nationalism, Populism, *Étatisme*, Laicism, and Reformism (*Revolutionizm*). "Education" was the crucial means for the creation of the citizens of the newly established modern Turkish Republic, who would be responsible for the protection of the six principles.

The second question was related to the political background leading to the educational policies of Turkey during the period of Atatürk (1919-1938). The political events of the period were the wars, reforms, the opening of institutions (such as the Assembly, Ministry of Education, Departments of the Ministry, Schools), the appointment of ministers, meetings (Scientific Council Meetings, teacher meetings, Izmir Economic Congress), and foreign expert reports.

The third question was related to the educational policies affecting the educational philosophies in Turkey during this period. The analyses in chapter IV shows that the educational policies of the specified period emerged as a result of the interaction between the ideology and implementations of Atatürk and his ministers of education, as well as the reports of the Scientific Council Meetings (*Heyet-î İlmiye Toplantıları*) and the foreign expert reports. The figure below shows the interaction:

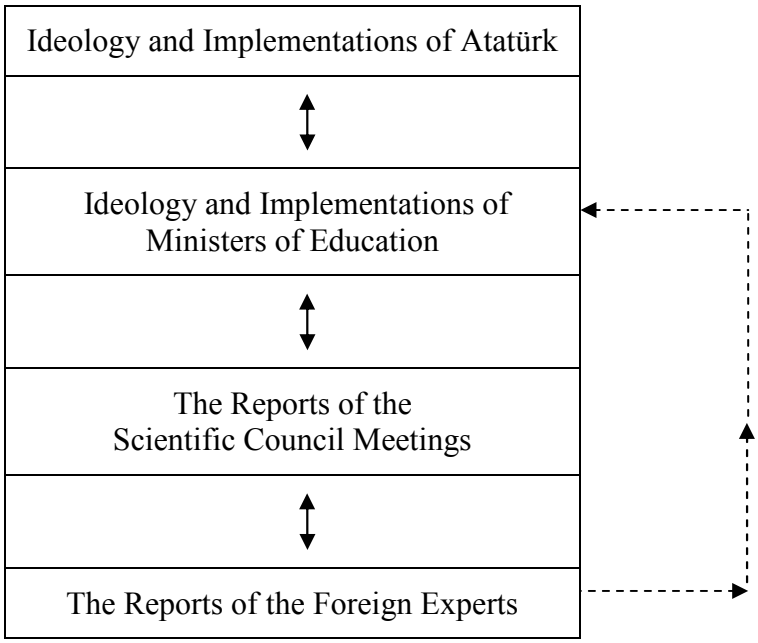


Figure 14: The Interactions Leading to the Educational Policies during Atatürk's Period (1919-1938)

The analyses of the secondary and primary sources revealed that education had to be national (related to the principles of nation building; nationalism), rational (based on science; related to the principle of laicism), and practical (resting on a foundation of life experiences; pragmatic), under the control of the state (centralized; related to the principle of *étatisme*), guaranteed by the Turkish Republic (related to the principle of republicanism). Equality of opportunity, (related to the principles of populism, *étatisme*, and republicanism) was also an aim. As is clearly seen, these policies emerged under the influence of Atatürk's six arrows. In addition to these principles, a humanistic approach to education was also emphasized during this period.

The fourth question was related to the educational philosophies behind the curricula developed in Turkey during the period of Atatürk (1919-1938). The need for a practical education which would train individuals for the new Turkish society, of which the politics was framed by the six principles, led to the choice of the pragmatic philosophy of John Dewey, who is the pioneer of the progressive education movement.

The second group of questions dealt with each of these curricula. The main question was related to the number of major curricular changes made in Turkey during the period of Atatürk (1919-1938). As a result of the analysis of the decisions of the three Scientific Council Meetings (1923, 1924, 1925), and scholarly books and articles about curricular changes in Turkey, three such changes seemed to emerge in the science curricula. These were:

1. 1924 Science Curriculum, Entitled "Exploring Nature, Agriculture, Hygiene" (*Tabiat Tetkiki, Ziraat, Hıfzıssıhha*),
2. 1926 Science Curriculum, Entitled "Courses on Nature and Non-living Things" (*Tabiat Dersleri, Eşya Dersleri*) and
3. 1936 Science Curriculum, Entitled "Natural Science" (*Tabiat Bilgisi*).

Under the second category, for the science curricula of Atatürk's period, the thesis asks four questions which are related to parts of the "Curriculum Design Model of Güzver Yıldıran (2006)" (see Figure 2 in Chapter I). These are: the general aims, organization, teaching methods and techniques, and the evaluation procedures.

The first question in the second category was related to the general aims of the science curricula of primary education, implemented in Turkey during the period of Atatürk (1919-1938). The general aims of all science curricula during the specified period reflect John Dewey's pragmatic philosophy. The investigations of living and non-living things in natural environments were the concern of the 1924, 1926, 1936 science curricula. After the suggestions of foreign experts, the general aims were stated in more detail. The general aims of the 1926 science curriculum revealed three points of emphasis in terms of the pragmatic philosophy. First, the selection of the course materials is from real life (such as food, clothing and shelter goods and materials that students encounter and use in their daily lives). Secondly,

the aim is to give children useful information about their daily lives, in such areas as tools, machinery and equipment they encounter, and agriculture, with which especially rural children have to be acquainted in order to be productive members of their localities. Thirdly, the aim is to train productive individuals for society by simply teaching the daily implementations of nature in life. The application to life situations of what is learned so that beneficial outcomes for the nation, the region, and the family (see the analysis of the Kühne and Buyse's report in Chapter IV) are guaranteed seems important for the 1936 science curriculum as well. The hope is that students will use the skills acquired to investigate events and things, as well as interpreting them in the future. Unlike the 1924 and the 1926 curricula, the relationship between the subjects and national and home economics are stated explicitly within the aims of this curriculum. The relationship between educational and economic development is also emphasized in the 1934 report of Parker, another foreign expert from the United States.

The second question was related to the organization (instructional theories, the general layout, content, objectives) of the science curricula of primary education implemented in Turkey during the period of Atatürk (1919-1938). The instructional theory of the three science curricula during the period of Atatürk was experiential theory, which takes the real as the laboratory for learning. Even though the general layout of the curricula should be arranged according to the instructional theory, this was not the case for the 1924, 1926, and 1936 science curricula. The arrangement of the three science curricula seems to serve the following main aims: The first aim was to educate productive and adaptive individuals who would meet the needs of the country by means of practical education. Secondly, the aim was to make it easier to follow the subject matter areas for those who would continue to higher levels of

education. Thirdly, the subject areas were designed to encourage the development of vocational and technical education to train the necessary skilled workers. As Kühne stated in his report, primary education was the foundation of vocational and technical education at higher levels (see Chapter IV). The contents seemed to be selected from the subjects closely related to the human life and the lives of other organisms, as required by pragmatic philosophy. In all of the three curricula, objectives were rudimentary and not separate from the content. We observed three kinds of objective statements in the texts of the curricula: SA (Student Activity), TA (Teacher Activity), TOP (Topical).

The third question was related to teaching methods and techniques used in the science curricula of primary education. As was stated in Parker's report (1939, p. 17), experimentation is one of the modern scientific methods through which students have a chance to take part in activities in learning. The use of the method of experimentation is emphasized in the texts of all of the science curricula developed during this period. Another scientific method, direct observation and investigation for children to interpret causal relations, was also stressed in all of the science curricula. As Parker stated in her report (Ibid, p. 17), the theories of the modern educational system were known widely but not clearly by the teachers. This could be the reason for the extensive explanations about the use of various methods in the 1936 curriculum. In terms of teaching methods, the 1936 science curriculum includes examples as well as instructional materials in the class.

The fourth question was related to the evaluation techniques in the science curricula of primary education implemented in Turkey during the period of Atatürk. None of the curricular changes includes information on the evaluation of students or

the curricula. As a result of an interview with two people[1], the students were evaluated with the following terminology. During the implementations of the 1924 curriculum, *aliyyül alâ* (greater than good), *alâ* (good), *orta* (average), *geçmez* (not passing) were used, and during the implementations of the 1926 curriculum, *pekiyi* (very good), *iyi* (good), *orta* (average), *zayıf* (failing) were used. In addition, in Parker's report, the following terminology also seemed to be the case for the evaluation of students: *pekiyi* (very good), *orta* (average), and *yavaş* (poor).

Recommendations for Further Studies

In his book *Analyzing the Curriculum* (1992), Professor George J. Posner answers the question of "how to make curriculum decisions" and why different experts disagree on this basic question, using the idea of "reflective eclecticism". According to Posner (1992, p. 3),

> Reflective eclecticism is based on the assumption that, much as we would like to deny it, there is no panacea in education. People who are looking for "the answer" to our educational problems are looking in vain. Different situations require different practices. The curriculum "cultists" make a fundamental error in assuming that they have the answer to any problem, regardless of the particulars of the situation.

In order to understand the particular situation in Turkey, this thesis presents two models of Yıldıran (2006), one for the analysis of the precedents of a curriculum and the other for the analysis of the curriculum proper. These models were utilized for the analysis of the curricular changes during the period of Atatürk (1919-1938). We

[1] This information was obtained from the thesis advisor's father Dr. Cafer Yıldıran, born in 1920 and mother Mukdime Yıldıran, born in 1923.

think that this thesis perhaps evokes an interest by providing models for the analyses of the other curricular changes in Turkey.

There were several other curricular changes after the period examined in this thesis. General curricular changes occurred in 1948, 1958, and 1968, in which changes were in all subject areas. In 1948 and 1958, the title of the Science Curricula was "Natural Science" (*Tabiat Bilgisi*), and in 1968, "Science and Natural Sciences" (*Fen ve Tabiat Bilgileri*). However, after 1980, the curricular changes were undertaken separately for each course. In 1982, Turkish; in 1987, Physical Education; in 1988, Social Sciences; in 1992, Art Education and Religious Education; in 1994, Music Education; and in 1998, Life Science and Mathematics curricula were changed. In 1992 and in 2000 new Science Curricula (*Fen Bilgisi Müfredatı*) were developed. In 2004, the Ministry of National Education (*Milli Eğitim Bakanlığı-MEB*) decided to change the educational system via curricular reform. The Ministry began to carry out a project entitled "Primary and Secondary School Curriculum Planning Project" (*İlköğretim ve Orta Öğretim Programları Tasarımı Projesi*) for which the pilot implementations started in 2004 (Milli Eğitim Bakanlığı Talim ve Terbiye Kurulu Başkanlığı-MEB; TTKB, 2005, p.1).

In order to develop the new curricula of Turkey, it is necessary to analyze all of these curricular changes in the history of the Turkish Republic, rather than copying examples from other cultures. These analyses can provide an understanding of the success and errors of the past. Furthermore, such a study would prevent us from reinventing the wheel by wasting time, energy, and financial resources.

APPENDIXES

- A -

THE TURKISH FORM OF THE 1924 SCIENCE CURRICULUM

"EXPLORING NATURE, AGRICULTURE, HYGIENE"

Türkiye Cumhuriyeti
Maarif Vekâleti
İlk Tedrisat Dairesi

İLK MEKTEPLERİN MÜFREDAT PROGRAMI

İstanbul – Matbaa-ı Âmire
1340
(1924)

TABİAT TETKİKİ, ZİRAAT, HIFZISIHHA

Tabiat tetkiki dersi, eski programlarımızda eşya dersi unvanıyla mevcut olan dersin yerine konulmuştur.

Tabiatı tetkik derslerinin gayesi çocuğun tabii muhitinde bulunan ve gıdamız, elbisemiz, meskenimiz ve umumi hayatımızda alakadar olan hayvanlar, nebatlar ve sair mahsulleri bütün hayati safhalarıyla birlikte canlı olarak tetkik ettirmektir. Tabiatı tetkik derslerinde yapılacak tetkikler mutlaka doğrudan doğruya tabiatı tetkik esasına istinat etmelidir. Tetkik ettirilecek çiçekler, meyveler ve sair zirai mahsuller mümkün olduğu mertebe mektebin bahçesinde veya saksılarda yetiştirilir. Veya talebe, bunların yetiştirildiği yere götürülerek orada tetkik ettirilir. Hayvanlar da canlı olarak tetkik ettirilmelidir. Muhtelif mevsimlerde talebeye yaptırılacak gezintiler esnasında mektebin haricinde sokaklarda, kırlarda, bahçelerde ve tarlalarda tesadüf edilen nebatlar, hayvanlar ve tabii hadiseler hakkında çocuklara seviyelerine göre tetkikler yaptırılır. Ziraat malûmatı bu tetkik neticesinde ameli olarak telkin olunmalıdır. Her mevsimde nebatların, hayvanların hayatlarına ve tabii hadiselerine ait muhtelif safhalara ayrı ayrı dikkat ettirmek lazımdır. Tabiatı tetkik dersinde hayvanlar ve nebatlara ait, tetkiklerin neticeleri çocuklara her sınıfta basit resim ve krokilerle ve kısa notlarla tesbit ettirilmelidir. Tetkik ettirilen muhtelif nebatlar ve mahsullerle hayvanlar ve sair mevaddan çocuklara kolleksiyonlar yaptırılmalı ve bunların münasip olanları mektebin müzesinde hıfzedilmelidir. Programın müfredatında gösterilen mevad, tetkik ettirilecek mevzular hakkında umumi bir fikir vermek içindir. Yoksa program mevadının aşağıda gösterilen sıra tertibiyle takibi zaruri değildir. Fırsat ve imkan bulundukça bu mevzular üzerine çocuklara tetkikler yaptırılacaktır.

BİRİNCİ VE İKİNCİ SINIFLAR
(Haftada üçer ders)

MEVSİMİN ÇİÇEKLERİ: Evlerde, saksılarda, bahçelerde, kırlarda, tarlalarda, tesadüf edilen (Düğün çiçeği, ebe gümeci, gelincik, papatya, gül, sümbül, leylak, sardunya,lale gibi) maruf çiçeklerin tetkiki. Her mevsimde çiçeklerin çocukları alakadar edecek cihetleri safha safha tetkik ettirilir. Bahçede çiçek yetiştirilir ve her mevsimde çiçeği muhafaza için ne gibi tedbirler ittihazı icap edeceği telkin edilir. Çiçeklerle böcekler arasında münasebetler, çiçek nasıl yaşar neye yarar?

AĞAÇLAR: Mektebin bulunduğu muhitte yetişen meyveli ve meyvesiz (söğüt, çınar,kavak, beyaz salkım,çam, kiraz, armut, erik, elma)gibi ağaçların muhtelif mevsimlerde tetkiki ağaçlardan istifade. Ağaçlara faydalı ve muzurlu ameller, ağaçların iktisadi kıymetleri, ağaçlara karşı vazifeler.

SEBZELER: Mektebin bulunduğu muhitte yetişen (lahana, pırasa, fasulye, bakla, patlıcan, kabak) gibi muhtelif sebzelerin muhtelif mevsimlerde tetkiki ve yetiştirilmesi.

HUBUBAT: Mektebin bulunduğu muhitte yetişen hububatın tetkiki, ehemmiyeti. Hububat nasıl ekilir, nasıl biçilir, nasıl öğütülür, hububattan neler yapılır?

EHLÎ VE GAYRÎEHLÎ HAYVANLAR: Mektebin bulunduğu muhitte yaşayan (kedi, köpek, at, inek, tavuk, kaz, hindi, ördek, köstebek, kirpi, tilki, sansar) gibi muhtelif hayvanların canlı olarak tetkiki, itiyatları, yaşayışları, gıdaları, yuvaları, tarzı müdafaaları, faydaları, zararları, iktisadi kıymetleri. İnsanlarla münasebetleri.

BÖCEKLER: Muhtelif mevsimlerde mektebin bulunduğu muhitde tesadüf edilen (çekirge, kara sinek, sivri sinek, karınca, arı, tırtıllar, kelebekler, pire, tahta kurusu, güve, ipek böceği ... ilh. Gibi) böceklerin tetkiki, itiyatları, yaşayışları, istihaleleri, yuvaları, yumurtaları, fayda ve zararları, insanlarla münasebetleri, iktisadi kıymetleri.

KUŞLAR: Muhtelif mevsimlerde muhitde tesadüf edilen (leylek, kırlangıç, serçe, ağaçkakan, karga, güvercin gibi) kuşların tetkiki, itiyatları, yaşayışları, yuvaları, yumurtaları, faide ve zararları, iktisadî kıymetleri, insanlarla müsabetleri.

SU HAYVAN VE NEBATLARI: Mektebin bulunduğu muhite göre, deniz, göl ve nehirlerde yaşayan (balıklar, kurbağa, yengeç, yosunlar, sazlar gibi).

Hayvan ve nebatlar hakkında tetkikler: Yaşayışları, itiyâtları, faydaları, zararları, nasıl elde edildikleri, iktisadî kıymetleri.

GIDA, ELBİSE VE MESKENLERİMİZ HAKKINDA TETKİKLER: (Bu tetkikler çocuklara gıda ve elbise ve mesken hususunda sıhhi, itiyâdlar telkin edilecektir.

AVÂRIZ-I ARÂZÎYE TETKİKLERİ: Birinci ve ikinci sınıfta coğrafya dersi yoktur. Binanaleyh tabiat tetkiki derslerinde ve gezintiler esnasında tabii hadiselere ve mektebin bulunduğu muhitte avârız-ı arâzîye ayrı ayrı dikkat ettirilecek ve bu avarızın muhite yaptığı tesirler hakkında tetkikler yaptırılacaktır. Muhitin gıda, mesken ve elbise ihtiyaçlarının nasıl temin edildiği ve bu ihtiyaçları tatmin edecek mevad, mahsülât ve eşyanın nerelerden ve hangi vasıtalarla nakledildiği hakkında tetkik ve mükayeseler yaptırılacaktır.

TABİİ HADİSELER HAKKINDA TETKİKLER: Gece, gündüz, kış, yaz, sonbahar, ilkbahar, yıldızlar, yağmurlar ve kar.

ÜÇÜNCÜ SINIF
(Haftada 2 ders)

Birinci ve ikinci sınıfta mektebin muhitinde yetişen ve yaşayan çiçekler, ağaçlar, sebzeler, nebatlar, hububat, ehlî hayvanlar, böcekler, kuşlar ve saire hakkında yapılan tetkiklere ve basit ziraat tecrübelerine devam.

MAHALLİ SANATLAR HAKKINDA TETKİKLER: (Yerine göre bakırcılık, ipekçilik, halıcılık, debağat, çömlekçilik, dokumacılık gibi)

TABİİ HADİSELER HAKKINDA TETKİKLER: Gece, gündüz, mevsimler ve farkları. Hava ve su, yağmur, rüzgar, kar, buz, yıldırım, şimşek, sis, kırağı, çiğ.

MEKTEP VE EV EŞYASI HAKKINDA TETKİKLER: (Tebeşir, kalem, kurşun kalem, kağıt, mürekkep. Bardak. Sürahi, çatal, kaşık gibi.)

MESKEN İNŞAAT HAKKINDA TETKİKLER

TENVİR VE TESHİN HAKKINDA TETKİKLER

DÖRDÜNCÜ SINIF
(Haftada iki ders)

Hayvanlar ve nebatlar ve tabii hadiseler hakkında evvelki sınıflarda başlanılan tetkiklere devam. Basit ziraat tecrübelerine devam.

VÜCUD-U BEŞER HAKKINDA MALÛMAT:

Nasıl hareket ederiz? Kemikler ve adelenin, hareket ve idmanın fayda ve ehemmiyeti, amut fikri. İyi ve fena vaziyetlerin kemiklere tesiri. Kemiklerin hıfzısıhhası.

Nasıl besleniyoruz? Ağız ve boğaz, dişler, dişlerin sıhhati, dişlerin vazifesi, hazım cihazı, tagaddi hakkında sıhhi kaide ve telkinler.

Nasıl teneffüs ediyoruz? Ciğerler, hicab-ı haciz, havanın tahvili, teneffüsü hakkında sıhhi kaide ve telkinler.

Kan damarları, kalp, kan, deveran, yürek çarpıntısı ve nabız, büyük ve küçük deveranlar, kırmızı ve siyah kan, deveran hakkında sıhhi kaideler ve telkinler.

Nasıl hissediyoruz? Beş duygu, cümle-i asabiye, cümle-i asabiyenin hizmetleri, cümle-i asabiye hakkında sıhhi kaideler ve telkinler.

Vücud-u beşer hakkında izahat mücmel olacak ve ıstılâh öğretilmeyecektir.

Hıfzısıhha kaideleri ve telkinleri: Mikroplar, sular, temiz ve fena sular. Kızamık, çiçek, verem, tifüs, kolera, dizanteri, sıtma gibi sari hastalıklardan korunma çareleri.

BEŞİNCİ SINIF
(Haftada iki ders)

Hayvanlar ve nebatlar ve tabii hadiseler hakkında tetkiklere ve basit ziraat tecrübelerine devam olunacaktır.

Sade ve amelî fennî malûmat ve tetkikler: Fıskiyeler nasıl fışkırtıyor? Yüksek binalara su nasıl çıkıyor? Su cenderesi nasıl iş görüyor?Vapurlar nasıl yüzüyor?Uçurtmalar, balonlar, teyyareler, barometre, tulumbalar, terazi ve kantar, manivelalardan nasıl istifade edebiliriz? Buhar kuvveti ve basit tatbikatı, vapur nasıl yürür, lokomotif nasıl işliyor, mikyas-ı hararet.

Sürat hadiseleri hakkında basit müşahâde ve tetkikler. Gözlük pertev-sûz, dürbün hakkında basit tetkikler ve tecrübeler. Elektrik ve elektrik tatbikatı hakkındaki basit tecrübeler. Şimşek, yıldırım, siper-i saika.

- B -

THE ORIGINAL FORM OF THE 1924 SCIENCE CURRICULUM

"EXPLORING NATURE, AGRICULTURE, HYGIENE"

IN ARABIC SCRIPT

طبیعت تدقیق ، زراعت ، حفظ الصحه

طبیعت تدقیق درس ، اسکی پروغرامله‌ریمزده اشیا درسی عنوانیله موجود اولان درسك یرینه قونولمشدر .

طبیعی تدقیق درسلرینك غایه‌سی چوجوجوغك طبیعی محیطنده بولنان وغدامز ، البسه‌مز ، مسکنمز وعمومی حیاتمزله علاقه‌دار اولان حیوانلر ، نباتلر و سائر محصوللری بوتون حیاتی صفحه‌لریله برلکده جانلی اوله‌رق تدقیق ایتدیرمکدر . طبیعی تدقیق درسلرنده یاپیله‌جق تدقیقلر ، مطلقا دوغرودن دوغرویه طبیعی تدقیق اساسنه استناد ایتملیدر. تدقیق ایتدیریله‌جك حیچکلر ، میوه‌لر وسائر زراعی محصوللر ممکن اولدیغی مرتبه‌مکتبك باغچه‌سنده ویا صاتیلرده یتشدیریلیر. ویا طلبه، بونلرك یتیشدیرلدیکی یره کوتوریله‌رك اورادہ تدقیق ایتدیریلیر. حیوانلرده جانلی اوله‌رق تدقیق ایتدیرله‌لیدر. مختلف موسملرده طلبه‌یه یاپدیریله‌جق کزینتیلر اثناسنده مکتبك خارجنده سوقاقلرده ، قیرلرده ، باغچه‌لرده ، و تارلالرده تصادف ایدیلن نباتلر ، حیوانلر و طبیعی حادثه‌لر حقنده چوجوقلره سویله‌ریمکوره تدقیقلر یاپدیریلیر . زراعت معلوماتی بوتدقیق نتیجه‌سنده عملی اوله‌رق تلقین اولونملیدر . هرموسمده نباتلرك ، حیوانلرك حیاتلرینه وطبیعی حادثه‌لرینه عائد مختلف صفحه‌لره آیری آیری دقت ایتدیرمك لازمدر . طبیعی تدقیق درسنده حیوانلر و نباتلره عائد تدقیقلرك نتیجه‌لری چوجوقلره هر صنفده بسیط رسم وقروکیلرله و قیصه نوطلرله تثبیت ایتدیریله‌لیدر . تدقیق

ایتدیریلن مختلف نباتات و محصولاتدن حیوانات و سائر مواددن چوجوقلره قولکسیونلر یاپدیرمالی و بونلرك مناسب اولانلری مکتبك موزه‌سنده حفظ ایدیلمه‌لیدر . پروغرامك مفرداتنده کوستریلن مواد ، تدقیق ایتدیریلمه‌جك موضوعلر حقنده عمومی بر فکر ویرمك ایچوندر . یوقسه پروغرام مواددینك آشاغیده کوستریلن صره ترتیبنه تعقیبی ضروری دکلدر . فرصت وامکان بولوندقجه بو موضوعلر اوزرینه چوجوقلره تدقیقلر یاپدیریلمه‌جقدر .

برنجی وایکنجی صنفلر (هفته‌ده اوچر درس)

موسمك چیچکلری — أولرده ، صاقیلرده ، یانچه‌لرده ، قیرلرده ، تارلالرده تصادف ایدیلن (دوکون چیچکی ، ابه‌گومه‌جی چیچکی ، کلینجك ، پاپاتیه ، گل ، سنبل ، لیلاق ، ساردونیا ، لاله‌گبی) معروف چیچکلرك تدقیق . هرموسمده چیچکلرك چوجوقلری علاقه‌دار ایده‌جك جهتلری صفحه صفحه تدقیق ایتدیریلیر . یانچه‌ده چیچك یتشدیریلیر وهرموسمده چیچکی محافظه ایچون نه‌گبی تدبیرلر اتخاذی ایجاب ایده‌جکی تلقین ایدیلیر . چیچکلرله بوجکلر آرمسنده مناسبتلر ، چیچك ناصیل یاشار ، نه‌یه یارار ؟

آغاجلر — مکتبك بولوندیغی محیطده یتیشن میوه‌لی و میوه‌سز (سوگود ، چنار ، قاواق ، بیاض صاقیم ، چام ، گیراز ، آرمود ، اریك ، الما) گبی آغاجلرك مختلف موسملرده تدقیق آغاجلردن استفاده .

آغاچلره فائدەلی ومضر عاملار ، آغاچلرك اقتصادی قیمتلری، آغاچلره قارشی وظیفەلر .

سبزەلر — مکتبك بولوندیغی محیطده یتیشن (لحنه ، پراسه ، فاصولیه ، بقله ، پطلیجان ، قاباق) کی مختلف سبزەلرك مختلف موسملرده تدقیق و یتشدیریلەسی .

حبوبات — مکتبك بولوندیغی محیطده یتیشن حبوباتك تدقیق ، اهمیتی . حبوبات ناصیل اکیلیر ، ناصیل بچیلیر ، ناصیل اوکوتولور ، حبوباتدن نەلر یاپیلیر ؟

اهلی وغیر اهلی حیوانلر — مکتبك بولوندیغی محیطده یاشایان (کدی، کوپك، آت، اینك، طاووق، قاز، هندی، اوردەك کوستەبك، کیرپی ، تیلکی ، صانصار) کبی مختلف حیوانلرك جانلی اولەرق تدقیق، اعتیادلری ، یاشایشلری ، غدالری ، یووالری ، طرز مدافعەلری ، فائدەلری ، ضررلری ،اقتصادی قیمتلری . انسانلرله مناسبتلری .

بوجکلر — مختلف موسملرده مکتبك بولوندیغی محیطده تصادف ایدیلن (چکرکه ، قره سینك ، سیوری سینك ، قارنجه ، آری ، طرطیللر ، کلبکلر ، پیره ، تخته قوروسی ، گووه ، اینك بوجکی... الخ کبی) بوجکلرك تدقیق ، اعتیادلری ، یاشایشلری ، استحالەلری ، یووالری ، یمورطەلری ، فائده و ضررلری ، انسانلرله مناسبتلری ، اقتصادی قیمتلری .

قوشلر — مختلف موسملرده محیطده تصادف ایدیلن (لیلك ، قیرلانغیچ ، سرچه ، آغاچ قاقان ، قارغه ، کوکرجین کبی) قوشلرك تدقیق ، اعتیادلری ، یاشایشلری ، یووالری ، یمورطەلری ، فائده وضررلری . اقتصادی قیمتلری ، انسانلرله مناسبتلری .

صو حیوان ونباتلری — مکتبك بولوندیغی محیطه کوره دکز ، کول ، ونهرلرده یاشایان(بالیقلر، قورباغه، ینکیچ، یوصونلر،سازلرکی) حیوانلرونباتلر حقنده تدقیقلر: یاشایشلری ، اعتیادلری ، فائده‌لری ، ضررلری ، ناصیل ألده ایدلدکلری ، اقتصادی قیمتلری .

غدا ، البسه ومسکنلرمز حقنده تدقیقلر — (بوتدقیقلر اثناسنده چوجوقلره غدا، البسه‌ومسکن خصوصنده‌کی اعتیادلرتلقین ایدیله‌جکدر.)

عوارض ارضیه تدقیقلری — برنجی وایکنجی صنفده جوغرافیا درسی یوقدر . بناءً علیه طبیعت تدقیق درسلرنده و کزینتیلر اثناسنده طبیعی حادثه‌لره ومکتبك بولوندیغی محیطده‌کی عوارض ارضیه‌یه آیری آیری دقت ایتدیریله‌جك وبو عوارضك محیطه یاپدیغی تأثیرلر حقنده تدقیقلر یاپدیریله‌جقدر . محیطك غدا ، مسکن والبسه احتیاجلرینك ناصیل تأمین ایدلدیکی وبو احتیاجلری تطمین ایده‌جك مواد، محصولات و أشیانك نره‌لردن وهانکی واسطه‌لرله نقل ایدلدیکی حقنده تدقیق ومقایسه‌لر یاپدیریله‌جقدر .

طبیعی حادثه‌لر حقنده تدقیقلر — کیجه ، کوندوز ، قیش ، یاز ، صوك بهار ، ایلك بهار ، بیلدیزلر ، یاغمورلر وقار .

اوچنجی صنف (هفته‌ده ایکی درس)

برنجی وایکنجی صنفده مکتبك محیطنده یتیشن ویاشایان چیچکلر آغاچلر، سبزه‌لر ، نباتلر، حبوبات ، اهلی حیوانلر ، بوجکلر ، قوشلر وسائره حقنده یاپیلان تدقیقلره و بسیط زراعت تجربه‌لرینه دوام .

محلی صنعتلر حقنده تدقیقلر — (یرینه کوره باقیرجیلق ، ایبکجیلك ، خالیجیلق ، دباغت ، جوملکجیلك ، دوقومه‌جیلق کبی)

طبیعی حادثه‌لر حقنده تدقیقلر — کیجه ، کوندوز ، موسملر وفرقلری . هوا وصو ، یاغمور ، روزکار ، قار ، بوز ، بیلدیرم ، شیمشك سیس ، قیراغی ، چی .

مکتب وأو اشیاسی حقنده تدقیقلر — (تبه‌شیر ، قلم ، قورشون قلمی ، کاغذ ، مرکب ، بارداق ، صوراحی ، چاتال ، قاشیق کبی) .

مسکن انشاآتی حقنده تدقیقلر —

تنویر وتسخین حقنده تدقیقلر —

دردنجی صنف (هفته‌ده ایکی درس)

حیوانلر ونباتلر وطبیعی حادثه‌لر حقنده اولکی صنفلرده باشلانیلان تدقیقلره دوام . بسیط زراعت تجربه‌لرینه دوام .

وجود بشر حقنده معلومات — ناصیل حرکت ایدییورز ؟ کیکلر وعضله‌نك ، حرکت وادمانك فائده و اهمیتی ، عمود فقری . انی و فنا وضعیتلرك کیکلره تأثیری . کیکلرك حفظ الصحه‌سی .

ناصیل بسله‌نییورز ؟ آغیز و بوغاز ، دیشلر ، دیشلرك صحتی ، دیشلرك وظیفه‌سی ، هضم جهازی ، تغدی حقنده صحی قاعده‌لر وتلقینلر .

ناصیل تنفس ایدییورز ؟ جکرلر ، حجاب حاجز ، هوانك تحولی ، تنفس حقنده صحی قاعده و تلقینلر .

قان دامارلری . قلب ، قان ، دوران ، یورك چارپینتیسی ونبض ،

یوبوك وكوچوك دورانلر ، قیرمزی وسیاه قان ، دوران حقنده محی قاعده‌لر وتلقینلر .

ناصیل حس ایدییورز ؟ بش دویغو ، جلهٔ عصبیه ، جلهٔ عصبیه‌نك خدمتلری ، جلهٔ عصبیه حقنده محی قاعده‌لر و تلقینلر .

وجود بشر حقنده ایضاحات مجمل اوله‌جق واصطلاح اوكره‌تیلمیه‌جكدر.

حفظ الصحه قاعده‌لری و تلقینلر — میقروبلر ، صولر ، تمیز وفنا صولر ، قیزاموق ، چیچك ، ورم ، تیفوس ، قولرا ، دیزانتری ، صیتمه كبی ساری خسته‌لقلردن قورونما چاره‌لری .

بشنجی صنف (هفته‌ده ایكی درس)

حیوانلر ونباتلر وطبیعی حادثه‌لر حقنده تدقیقلره وبسیط زراعت تجربه‌لرینه دوام اولونه‌جقدر .

ساده وعملی فنی معلومات وتدقیقلر: فیسقیه‌لر ناصیل فیشقیریلیور ؟ یوكسك بنالره صو ناصیل چیقیور؟ صو جندره‌سی ناصیل ایش كورییور؟ واپورلر ناصیل یوزویور ؟ اوچورتمالر ، بالونلر ، طیاره‌لر ، بارومتره ، طلومبه‌لر ، ترازی وقنطار ، مانیوه‌له‌لردن ناصیل استفاده ایدیلیور ؟ بخار قوتی وبسیط تطبیقاتی ، واپور ناصیل یورویور ، لوقوموتیف ناصیل ایشله‌یور ، مقیاس حرارت .

صوت حادثه‌لری حقنده بسیط مشاهده وتدقیقلر — كوزلك ،

پرتوسوز، دورین حقنده بسیط تدقیقلر وتجربه‌لر ـ الکتریق والکتریق تطبیقاتی حقنده بسیط تجربه‌لر ومشاهده‌لر . شمشك ویلدیرم ، سپر صاعقه .

أو اداره‌سی (قیزمکتبلرنده)

بشنجی صنف (هفته‌ده بر درس)

أو ، عائله .
أو اداره‌سنك فائده واهمیتی ، أو خادمی .
تصرف ، احتیاط ، تمیزلك ، انتظام ، تنظیم مساعی .
مسکن ، مسکنك شرائط صحیه‌سی ، تهویه‌سی ، تفریشی ، تزینی
أو اشیاسنك اصول محافظه‌سی ، جلالر وسائر اصوللر .
أوك تنویری ، تسخینی ، هوالاندیریلماسی .
وسائط تنویریه وتسخینیه‌نك محافظه‌سی اصولی، تمیزلنمسی و تدابیر تحفظیه‌سی .
عائله بودجه‌سی . بودجه دفترلرینك غایت بسیط اصولده تنظیمی.
چارشی وپازاردن مبایعه اصولی .
آداب معاشرت .
ملبوسات و چامشیر ، اسکیدن یوزمه وتعمیر .
چامشیر یقامه اصوللری ، أوتو ، قولا ، لکه چیقارمه .

THE TURKISH FORM OF THE 1926 SCIENCE CURRCULUM

"COURCES ON NATURE AND NON-LIVING THINGS"

Türkiye Cumhuriyeti
Maarif Vekâleti
İlk Tedrisat Dairesi

İLK MEKTEPLERİN MÜFREDAT PROGRAMI

BİRİNCİ TAB'

İstanbul Milli Matbaa
1342
(1926)

TABİAT DERSLERİ

İlk mektebin dördüncü ve beşinci sınıflarında okutulan tabiat derslerinin hedefleri şunlardır:

1. Çocuğa, tabiî muhitinde bulunan ve gıdamız, elbisemiz ve meskenimiz ve umumî hayatımızla alâkadar olan hayvanları, nebatları ve sair mahsulleri bütün hayti safhalarıyla birlikte canlı olarak tetkik ettirmektir.
2. İnsanın tabiat üzerine ve tabiatın insan üzerine ve mevcûdât-ı uzuvîyenin yekdiğerine yaptıkları mütekabil tesirlerden çocuğun anlayabileceklerini kendisine gayet basit bir suretde izah etmek.
3. İnsanın vücudundaki azalar ve bunların vazifeleri hakkında çocuklara gayet basit malûmat vermek ve bazı hıfzı sıhhat kaideleri öğretmek
4. Çocuklara tabiat muhabbeti telkin ederek çiçekleri, ağaçları ve faydalı hayvanları himayeye alıştırmak.
5. Çocuklara gayet basit ziraî malûmat vermek.

TABİAT TEKKİKİ DERSİNİN TEDRİSİNDE AŞAĞIDAKİ NOKTALARA DİKKAT LAZIMDIR

1. Hayvanat ve nebatat gibi mevzûların tedrisinde evvela canlı numune üzerinde müşahede ve tecrübelerden başlanmalıdır. Talebe, bu müşahedeleri ya bizzat veya mudlimle birlikte yapar. Birici hale göre muallim, bir mevzuyu okumaya başlamazdan bir veya birkaç hafta evvel, talebeye o mevzu hakkında yapılacak müşahede vazifeleri verir. Talebe o nebat veya hayvana tesadüf edince her biri ayrı ayrı veyahut grup halinde toplanarak müşahedeler yapılır.

   Müşahede neticelerini suret-i mahsusada tutukları küçük deftere hülaseten kaydederler. Ders esnasında muallim, talebenin müşahedelerini dinler. Onların yanlış yerlerini tashih ve noksan yerlerini ikmal eyler.

2. İkinci halde tetkik edilecek mevadı muallim dershaneye getirir. Veyahut talebesini bunların bulunduğu yere (bahçeye, tarlaya) götürür. Tetkik ettirilecek nebatlar, mümkün mertebe mektebin bahçesinde veya saksılarda yetiştirilir. Ve yine mektep bahçesinde çekirdekten fidan yetiştirmek ve aşı yapmak usulleri gösterilir. Hayvanlar da mümkün mertebe tabiî muhitlerinde tetkik ettirilir.

3. Mektep bahçesinin münasip bir yerine bir miktar buğday, arpa, çavdar gibi şeyler ekilerek gübrenin, suyun ve ziyânın nebat üzerine yaptığı tesirlere dair müşahedeler yaptırılır ve fikirler verilir.

4. Talebe bir mevzûyu yalnız bir defa tetkik ile iktifa etmemeli nebat ve hayvanların her mevsimdeki hallerinin muhtelif safhalarına ayrı ayrı dikkat etmelidir.

5. Talebe hayvan ve nebatlara ait tetkiklerin neticelerini kısa cümlelerle hülasa eylemeli ve basit resim ve krokilerle defterlerine tesbit etmelidir.

6. Tetkik ettirilen muhtelif nebatlar ve mahsullerle haşerelerden talebeye koleksiyonlar yaptırılmalıdır. Mesela muhtelif nebatların kurutulmuş yaprakları, tohumları, tahta numuneleri, namî kabukları, hayvan dişleri ve iskelet aksamı muhtelif kuş tüyleri ve saire toplattırılır. Bunların münasipleri mektep müzesinde hıfz edilmelidir.

7. Hayvanların azâ-yi dâhiliyelerini göstermek için balık veya tavuk gibi hayvanlar basit surette teşrih edilebilir.

8. ÖLÜ NUMUNELER: Bir şeyin canlısını elde edemeyince muhtelif suretlerle ihzar edilmiş numuneleri gösterilir. Mevzuyu lakırdı ile anlatmağa uğraşmaktansa hazırlanmış numuneyi göstermek iyidir. Fakat ölü numunenin canlı hayvanın yerine kaim olamayacağı unutulmamalıdır.

9. LEVHALAR: Muallim tabiat tetkiki derlerinin mektepte mevcud tavhalardan dahi istifade etmelidir. Fakat aynen kabil-i araî olan mevadın tedrisinde levha medbe-i hareket olmamalı; evela tabiatta tetkik yapıldıktan sonra ancak temrin makamında levha istimâl edilmelidir. Eğer tetkik edilen mevzuya dair mektepde levha yoksa muallim elden geldiği kadar renkli tebeşirlerle resim yapar. Nebat ve hayvanat atlasları da aynen iraesi kabil olmayan hayvanlar ve nebatlar hakkında bir fikir verebilmek için istimal edilmelidir.

10. İnsanın vücudu hakkında çocuklara verilecek teşrih ve fizyoloji malumatı gayet basit olacaktır. Ve en ziyade hıfzısıhha hakkında ilmi malumat vermeye ehemmiyet atf-edilecektir.

11. Tabiat tetkiki derslerinde Türkçe'de menus-u mukabili bulunan Arapça tabirler istimal edilmeyecektir(Maruf tabirler yerine indi tabirler ikame etmek caiz değildir).

4'ÜNCÜ SENE

(Haftada 2 Ders)

ÇİÇEKLER: Mektebin bulunduğu mahalle muhtelif mevsimlerde tesadüf edilen çiçekler. Bunların nem'â şartları, çiçeklerden istifade.

AĞAÇLAR: Muhitte yetişen meyveli ve meyvesiz ağaçlar, Ağaçlardan istifade.

HUBUBAT: Ehemmiyeti. Hububat nasıl ekilir? Orakçılık, harman, değirmen

EHLİ VE GAYRİEHLİ HAYVANLAR: Hayvanların itiyadları, yaşayışları, gıdaları. Yuvaları, üremeleri, tarzı müdafaaları, faydaları, zararları.

BÖCEKLER: Muhtelif mevsimlerde mektebin bulunduğu muhitde tesadüf edilen (çekirge, karasinek, sivrisinek, karınca, arı, ipek böceği, tırtıl, kelebekler, pire, tahta kurusu, güve gibi) böceklerin tetkiki.

KUŞLAR: Muhtelif mevsimlerde muhitte tesadüf edilen leylek, kırlangıç, serçe, ağaçkakan, karga gibi kuşların tetkiki, fiyatları, yaşayışları, gıdaları, yuvaları, yumurtaları, fayda ve zararları.

SU HAYVANLARI VE NEBATLARI: Mektebin bulunduğu muhite göre deniz, göl, ve nehirlerde yaşayan (balıklar, kurbağa, yengeç, kaplumbağa, yosunlar ve sazlar gibi) Hayvanlar ve nebatlar, yaşayışları, itiyatları, faydaları, zararları, iktisadî kıymetleri.

İNSANIN VÜCUDU HAKKINDA MAÛMAT: Nasıl hareket ediyoruz? Kemiklerin ve adelelerin, hareket ve idmanın fayda ve ehmmiyeti. Bel kemiği, iyi ve fena vaziyetlerin kemiklere tesiri. Kemiklerin hıfzısıhhası. Deri, tırnak, saçlar. Derinin temizliği, vücudun bir yeri kesildiği veya yaralandığı zaman ne yapmalıdır?

NASIL BESLENİYORUZ? Ağız ve boğaz, dişler. Dişlerin sıhhati (Talebe diş fırçası istimaline alıştırılacaktır). Dişlerin vazifesi. Hazım cihazı, gıdalarımızın enva'ı, besleyici ve hararet verici gıdalar. Meşrubat tagaddi hakkında sıhhî kaideler ve tekkinler.

BEŞİNCİ SINIF
(Haftada 2 Ders)

TOPRAK: Tarla, bahçe ve çayırlardaki toprak ile çorak arazi arasında mukayese. Killi toprak, çanak, çömlek, tuğla, kiremit nasıl yapılır?

ÇİFTÇİLİK: Kışlık ve yazlık ziraat. Sapan, pulluk, traktörle ziraat mukayeseleri. Gübre. Tohum. Orak, tırpan. Orak makinesi. Buğday, arpa, çavdar, başakları. Yulaf . Harman, düğen, harman makinesi. Nohut, bakla, mısır gibi sair mahsûller. Muhite göre tütün, haşhaş, pamuk, susam, keten, kenevir hakkında malumat.

TAŞ VE MADEN: Adi kireç taşı, mermer, kumtaşı, malta taşı, granit, alçı, arduvaz, çakmak taşlarının tefriki ve evsafı. Muhitte kabili tedarik olan pirit, simli kurşun, kalay, bakır, nikel, çinko, alüminyum, gümüş ve altın madenlerini tanıtmak ve başlıca evsafını öğretmek.

MADENİ KÖMÜRLER: Linyit, adi taş kömürü, havagazı, kok kömürü, antrasit, granit (kurşun kalemi imalı) maden kömürleri. Amele hayatı. Asansör, kazma, çekiç, madenlerin suret-i ihracı. Petrol ve benzin.

AĞAÇLAR: Muhitte yetişen meyveli ve meyvesiz ağaçlar. Ağaçlardan istifale: Kerestecilik. Talebeye çam, meşe, gürgen, kestane ve ıhlamur gibi başlıca tahtaların nevileri ve evsafı öğretilecektir.

EHLİ VE GAYRİEHLİ HAYVANLAR: Bu sınıfta resimler ianesiyle kurt, tilki, arslan, kaplan, fil gibi vahşi hayvanlar da tanıttırılacaktır.

AVCILIK: Ördek, kaz, bıldırcın, tavşan, karaca, geyik avcılıkları. Av köpekleri. Muzur hayvanların imhası. Faydalı hayvanların himayesi.

KUŞLAR: Bülbül, saka, ispinoz, kartal kuşu, kanarya gibi ötücü kuşlar. Kuşların faydaları. Kuş yuvalarına dokundurulacak. Çiftçilere zarar veren kuşlar: Karga, saksağan , serçe.

YIRTICI KUŞLAR: Çaylak, atmaca, şahin, kartal (resimler inasıyla)

BALIKLAR: Denizlerde ve nehirlerde balıkçılık muhitde bulunan maruf balıkları tanıttırmak. Balık kurutmak, tuzlamak, muhafaza etmek.

SEBZE VE MEYVE: Kurutmak, konserve, reçel, şuruplar yapmak (mevsimlerine göre)

İNSAN VÜCUDU HAKKINDA MALUMAT: Nasıl teneffüs ediyoruz? Nefes boruları, Akciğerler, Hicâb-ı hâciz. Havanın tahvili, nefes hakkında sıhhi kaideler ve telkinler.

KAN DAMARLARI VE KALP: Duran (basit bir tarzda) kalbin hareketleri, nabız.

NASIL HİSSEDİYORUZ? Beş duyu. Dimağ. Cümle-i asabiye hakkında sıhhî kaideler ve telkinler. Vücudun harareti ve bu hararetin ölçülmesi. Hıfzısıhha kaideleri: Mikroplar, sular, temiz ve fena sular. Kızamık, çiçek, kuşpalazı, verem, tifüs, tipo, kolera, sıtma gibi hastalıklardan korunma çareleri.

EŞYA DERSLERİ

Evvelki programda "Tabiat Tetkiki" unvanı altında toplanan mevzuların bir kısmı fizik ve kimya ilimlerinin sahasına dahil olan şeylerdir.

Mesela: Her gün her yerde karşılaştığımız otomobil, şimendifer, telefon ve diğer elektrik tatbikatı evlerde kullanılan mihaniki aletler tertibat ve ilh. Fizik ve Mihamil ilminin sahasına dahil mevzulardır. Hava ve su gibi en lüzumlu hayat unsurlarının terkipleri, yemeklerimizin terkiplerindeki gıda unsurları ve saire de kimya ilminin havzasına dahil mevzulardır. İsminden de anlaşıldığı vechiyle "Tabiat Tetkiki" derslerinin daha ziyade tabiatın doğrudan doğruya müşahede ve tetkiki ile münasebetdar mevzuları ihtiva etmesi lazım gelir.

İnsan elinin tabiat unsurlarını terkip ve tahvil ederek vücuda getirdiği eşya ve aleti, hayvanlar, nebatlar gibi zihayat mevcudlar ve taşlar ve madenler gibi tabiatın ham mevadı ile bir araya koyarak hepsini birden aynı dersin mevzuu addetmek muvafık görülmemiştir.

Yeni programlara "eşya dersleri"nin ilavesi işte bu mülahazanın neticesidir. Evvelce "Tabiat Tetkiki" dersine dahil olan bazı mevzuların "Eşya Dersi" namı altında toplanmasının diğer mühim bir sebebi de şudur: İlk mektep başlı başına bir cüz-itam olmakla beraber aynı zamanda orta tahsil ve lise tahsili için de bir temel teşkil etmektedir. Vakia ilk mektebin ikinci devresi olan dördüncü ve beşinci sınıflardaki "Tabiat Tetkiki" ve "Eşya" derslerinin birinci hedefi ilk mektepte okuyan gençlere tabiat ve hayat hakkında ve hayatta her gün tatbikatını gördükleri, takip edecekleri mesleklerde az çok kendilerinin de istimal edeceği eşya ve alet hakkında esaslı malumat vermekten ibaret ise de bu derlerin diğer mühim bir maksadı daha vardır ki o da daha yüksek tahsil takip edecek talebeyi ileride tetabuk edecekleri ilmi tabiiye ve fizik ve kimya derslerine ihzar eylemektir.

Her iki dersin ayrı ayrı tedrisi bu ikinci maksada daha ziyade elverişlidir. Çünkü daha ziyade tabiatın doğrudan doğruya müşahedesine müstevid tetkiklere istinat eden "Tabiat Tetkiki" dersleri gençleri müşahede ve tetkik usulü ile teçhiz suretiyle onları ilmi tabiyeye ihzar edeceği gibi "Eşya Dersleri" de onları tecrübeyle tetkik usulüne istinâs ettirmek suretiyle ileride tetabuk edecekleri, fizik ve kimya derslerine ihraz eyler. Mamafih tedrisatta bu iki dersin bu iki dersin birbiriyle ve diğer derslerle olan sıkı irtibatları hiçbir vakit gözden kaçırılmamalıdır.

İLK MEKTEPLERDE "EŞYA DERSLERİ"NİN HEDEFİ ŞUDUR:

Talebeye, her gün gördüğü, kullandığı eşya ile medeniyetin maddi cihazlarını teşkil eden alet ve makinelerin en mühimleri hakkında esaslı ve ilmi malumat vermek ve bu alet ve cihazların istinat ettiği ilmi prensipleri kendilerine tanıttırmak.

TEDRİSTE DİKKAT EDİLECEK CİHEDLER:

1. Derslerde talebenin en yakınındaki eşyayı nokta-i hareket ittihaz etmelidir.
2. Dersler behemehal tecrübeye ve müşahedeye müstenit olmalıdır.
3. Yapılması mümkün olan tecrübeler mutlaka yapılmalıdır.
4. Tecrübelerin yalnız muallim tarafından yapılması kâfî değildir, imkan derecesinde bizzat talebenin de yapması lazımdır.
5. Mekteplerde her vakit kâfî ve sait bulunması imkansızdır. Bu cihetle derslerin mektep haricinde tetkik ve müşahedelerle canlandırılması ve takviye edilmesi lazımdır (Mesela benzin ve saire motorları hakkında verilecek dersin, imkânı müsait olan yerlerde evvela bir otomobil veya traktör veya sabit bir motorun tetkikine ve bu hususta şoför ve makinistten alınacak izahata istinat etmesi lazımdır).
6. Müsait zamanlarda civarlardaki fabrikalar, ziraat ve sanayi mektepleri, tamirhaneler, garajlar ziyaret edilmelidir.
7. Birçok tecrübelerin kolayca ve ucuzca tedarik edilebilen bazı vesait (misal: adi bir bardak, bir miktar cam boru, basit bir ispirto lambası, bir iki kapsül veya adi bir cezve ve top) ve birkaç nevî ecza ile pekala yapılabileceği daima hatırda tutulmalıdır.
8. Talebenin sâyı yalnız kitaptan çalışmayla münhasır kalmamalıdır. Her talebenin bir ders defteri olmalı. Bu deftere yapılan tecrübelerin kroki ve resimleri, neticeleri, ziyaretler esnasında öğrenilen malûmat hulâsaten yazılmalıdır.
9. Talebeye ara sıra tetkik mevzuları vermeli ve onlar bu mevzuları bizzat tetkik ederek küçük raporlar tanzim etmelidir. Bu raporların dershanede okunarak münakaşa edilmesi faydalı olur.

   Raporlar icap eden şekil ve numuneler ile beraber talebenin mesai defterlerine geçirilir.
10. Tedrisatın bir mihver etrafında devrederek hayata sıkı bir suretle raptedilmesine itina olunacaktır. Programdaki mevzular nokta-i nazara göre ayrılmıştır. Yalnız bunların sırasını muallimler, esasa sadık kalmak şartıyla, zaman ve mekan icabına göre tebdil eyleyebilirler.

BEŞİNCİ SINIF
(Haftada 2 Ders)

CİSİMLERİM ÜÇ HALİ

1. Etrafımızdaki cisimler: salep, maî, gaz cisimler
2. Cisimler hallerini değiştirebilirler: suyun üç hali.

TABİATIN KUVVETLERİ

1. Cezbe: Cisimlerin düşmesi, cisimlerin ağırlığı, cisimlerin muvazene şeraiti.Cisimlerim merkez sıkleti
2. Hararet: Hararetin en büyük memba'ı güneştir.

   Hararetin Tesirleri: Hararet cisimleri imbisat ettirir.

   Hararet cisimlerin hallerini değiştirir. Salepleri, ma'î ve sonra gaz yapar.

   Hararetin hayvan ve nebatlara tesiri, kâfî hararet olmazsa hayat olmaz.
3. Ziya: Ziyanın en büyük memba'ı: Güneş.

   Güneş ziyasının hayat üzerindeki tesiri. Ziyasız nebatat yetişemez, ziya ve renkler. Aynalar, pertav-suzlar, gözlükler. Ziyanın hayatımızdaki tesiri. Ziyadan mahrumiyetin neticeleri: Gözlerde, bedende.

   Ziya sıhhat için lazımdır. Ziya bazı mikropları imha eder.
4. Elektrik: Kehribar, reçine ve cam gibi cisimlerin ovulması neticesinde zuhur eden elektrik hadiseleri. Gök gürlemesi, şimşek çakması, yıldırımın tesirleri. Paratoner.

GAZ HALİNDE CİSİMLERİN EN MÜHİMİ: HAVA

1. Havanın mevcudiyeti neden bellidir? Dünyayı çepçevre sarmıştır. Dünya etrafındaki hava tabakasının kalınlığı. Havanın tazyiki. Oyun topları nasıl şişirilir? Havada tazyik azalınca ne duyarız? Balonlar nasıl uçar? Uçurtmalar ve tayyareler. Yüksek dağlarda havanın tazyiki azdır.

   Havanın tazyikini nasıl ölçerler: Barometre nedir? (Mümkünse toriçelli borusu tecrübesi yapılır).Madeni barometre nedir ve ne için kullanılır?
2. Havanın sühuneti: Sühunetin havaya tesiri. Rüzgarlar ve fırtınalar. Sühunetin hayata tesiri. Sühunet nasıl ölçülür? Termometrenin esasları. Termometrenin istimali. Tıbbi termometre.
3. Havanın hayata tesiri: Havanın terkibi. Teneffüs. Nebatların teneffüsü. Saf ve temiz hava. Pis ve mahzur havanın zararları. Hava ve ses: Sesin havadaki sürati.

MAÎ CİSİMLERİN EN MUHİMİ: SU

1. Suyun Tazyiki.
   Suda cisimler neden yüzer, neden batar? Zırhlı ve çelik gemiler neden batmaz? Tahtel bahrlar. Hayvanların ve insanların yüzmesi. Suyum muvazeneti. Su cereyanı. Şelaleler, şadırvanlar.
2. Deniz suyu, tatlı su, acı su, içilebilecek sular. İyi suların evsafı. Fena ve tehlikeli sular: sulardan gelen mühlik hastalıklar: Tifo humması, Kolera

BASİT MAKİNALAR:

1. Manivela. Nevileri ve tatbikatı. Makara ve palanga tertibatı (basit vinçle). Dişli çark tertibatı: Kuvvetin istikametini değiştirmek, ufki istikamette bir kuvveti şakulî istikamete çevirmek.

2. Makinelerde kayış ve zincir tertibatı: Bisiklet zinciri, bir dikiş makinesinin, bir et kıyma makinesinin ve bunlara mümasil her yerde bulunabilecek nispeten basit makinelerin tetkiki.

TABİATIN KUVVETLERİNDEN İSTİFADE

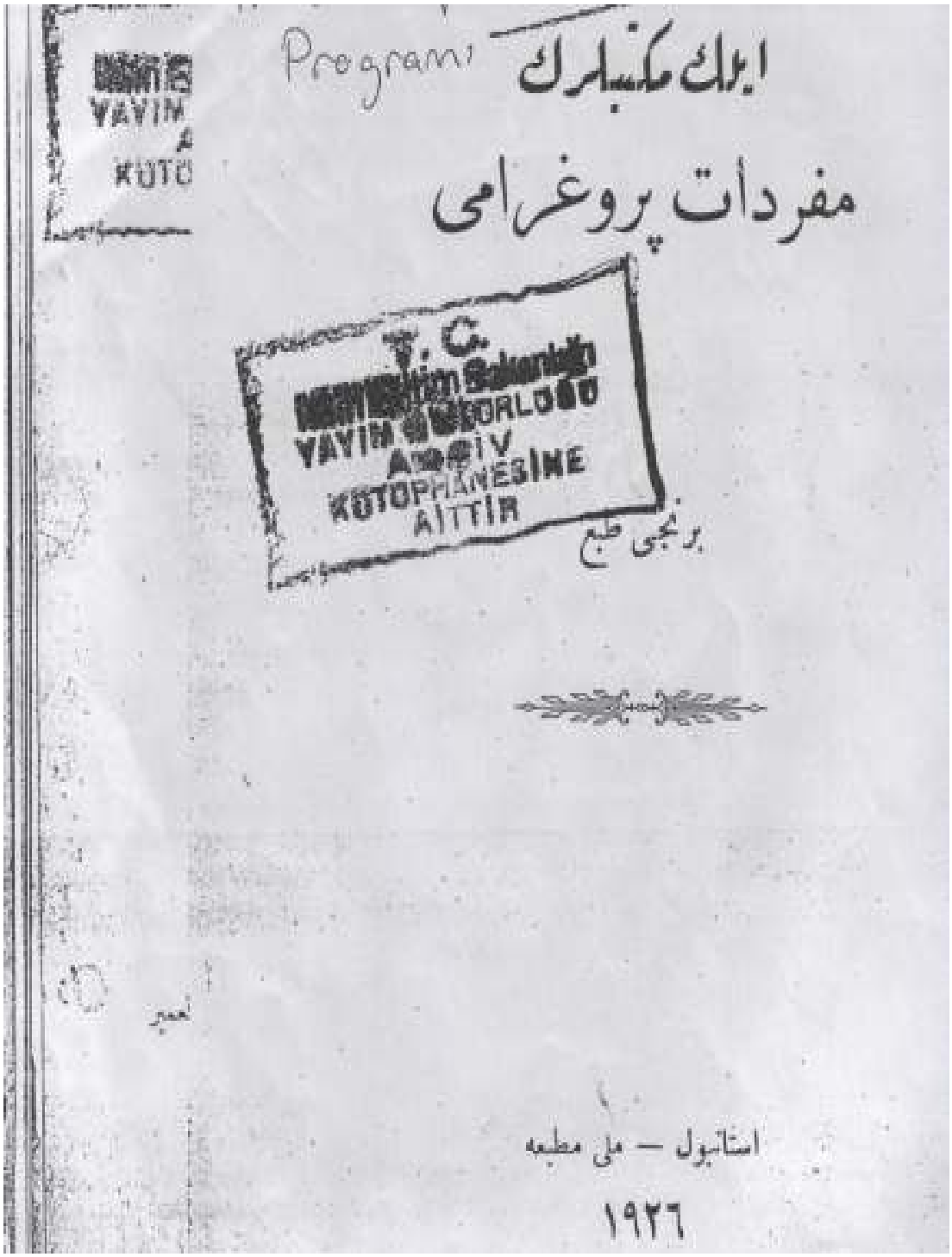
1. Rüzgâr ve sudan istifade: Yel ve su değirmenleri. Yelken gemileri. Buhar makineleri, vapur ve şimendiferler. Gaz makineleri, motorlar. Otomobil ve traktörler 8bir buhar makinesinin, bir otomobil motorunun tetkiki.
2. Elektrikten istifade: Elektrik pilleri. Elektrik cereyanı, müspet ve menfi elektrik. Mıknatıs. Elektrik zilleri. Elektrik dinamoları: telefon ve telgraf.
3. Ziyadan istifade: Fotoğraf makineleri, sinemalar.

- D -

THE ORIGINAL FORM OF THE 1926 SCIENCE CURRCULUM

"COURCES OF NATURE AND NON-LIVING THINGS"

IN ARABIC SCRIPT



Tabiat Dersleri

طبیعت درسلری

ایلك مكتبك دوردنجی و بشنجی صنفلرنده اوقوتولان طبیعت درسلرینك هدفلری شونلردر :

۱ - چوجوغه ، طبیعی محیطنده بولونان وغدامز ، البسه‌مز ومسكنمز وعمومی حیاتمزله علاقه‌دار اولان حیوانلری ، نباتلری وسائر محصولری یوتون حیاتی صفحه‌لریله برلكده جانلی اولارق تدقیق ایتدیرمكدر .

۲ — انسانك طبیعت اوزرینه و طبیعتك انسان اوزرینه و موجودات عضویه‌نك بكدیكرینه یاپدقلری متقابل تأثیرلردن چوجوغك آكلایابیله‌جكلرینی كندیسنه غایت بسیط برصورتده ایضاح ایتمك .

۳ — انسانك وجودنده‌كی اعضالر و بونلرك وظیفه‌لری حقنده چوجوقلره غایت بسیط معلومات ویرمك و بعضی حفظ صحت قاعده‌لری اوكرتمك .

٤ — چوجوقلره طبیعت محبتی تلقین ایده‌رك ، چیچكلری آغاچلری و فائده‌لی حیوانلری حمایه‌یه آلیشدیرمق .

٥ — چوجوقلره غایت بسیط زراعی معلومات ویرمك .

* * *

طبیعت تدقیق درسنك تدریسنده آتاغیده‌كی نقطه‌لره دقت لازمدر :

۱ — حیوانات و نباتات گیبی موضوعلرك تدریسنه اولا جانلی نمونه اوزرنده مشاهده و تجربه‌لردن باشلامالیدر . طلبه ، بو مشاهده‌لری یا بالذات ویاخود معلمله برلكده یاپار . برنجی حاله كوره معلم ، بر موضوعی اوقوتمه باشلامازدن بر ویا برقاچ هافتا اول ، طلبه‌یه او موضوع حقنده بایلاجق مشاهده وظیفه‌لری ویرر . طلبه ، او نبات ویا حیوانه تصادف ایدنجه هرری آیری آیری ویاخود غروب حالنده طوپلانارق مشاهده‌لر یاپارلر .

مشاهده نتیجه‌لرینی صورت مخصوصه‌ده طوتدقلری كوچوك دفترلره خلاصه قید ایده‌رلر . درس اناسنده معلم ، طلبه‌نك مشاهده‌لرینی دیكلر . اولرك یاكلیش برلرینی تصحیح وقصان برلرینی اكمال ایلر .

٢ — ايكنجى حالده تدقيق ايديلهجك موادى معلم درسخانهيه كتيرير ويا خود طلبهسنى بونلرك بولوندقلرى يره [باغچهيه ، تارلايه] كوتورور. تدقيق ايتديريلهجك نباتلر ، ممكن مرتبه مكتبك باغچهسنده ويا صاغلرده يه تيشديريلير. وبونه مكتب باغچهسنده چكيرده كدن قدان يه تيشديرمك وآشى يامق اصوللرى كوسترديلير. حيوانلرده ممكن مرتبه طبيعى محيطلرنده تدقيق ايتديريلير .

٣ — مكتب باغچهسنك مناسب بريرينه برمقدار بوغداى ، آرپا ، چاودار كبى شيلر اكيلهرك كوبرهنك ، صويك وضيانك نبات اوزرينه ياپديغى تأثيرلره دائر مشاهدهلر ياپديريلير وفكرلر ويريلير .

٤ — طلبه برموضوعى يالكيز بردفعه تدقيقايله اكتفا ايتمهملى. نبات وحيوانلرك هر موسمدهكى حالرينك مختلف صفحهلرينه آيرى آيرى دقت ايتمهليدر .

٥ — طلبه حيوان ونباتلره عائدتدقيقلرك نتيجهلرينى قيصا جملهلرله خلاصه أيلهمهلى وبسيط رسم وقروكيلرله دفترلرينه تثبيت ايتمهليدر .

٦ — تدقيق ايتديريلهن مختلف نباتلر ومحصوللرله حشرهلردن طلبهيه قولكسيونلرياپديرماليدر. مثلا مختلف نباتلرك قورودولمش ياپراقلرى، توخوملرى، تاختا نمونهلرى ، ناعمه قابوقلرى، حيوان ديشلرى واسكلت اقسامى مختلف قوش تويلرى وسائره طوپلاتديريلير . بونلرك مناسبلرى مكتب موزهسنده حفظ ايديلهليدر .

٧ — حيوانلرك اعضاى داخليهلرينى كوسترمكايچين باليق وطاووق كبى حيوانلر بسيط صورتده تشريح ايديلهبيلير .

٨ — أولو نمونهلر : برشيئك جانليسنى آلده ايدهمهيهجه مختلف صورتلرله احضار ايديلش نمونهلرى كوسترديلير . موضوعىلاقيردى ايله آكلاتمه اوغراشمقدنايسه حاضرلانمش نمونهيى كوسترمك أيدر . فقط أولو نمونهنك جانلى حيوانك يرينه قائم اولامايهجغى اونوتماماليدر .

٩ — لوحهلر : معلم طبيعت تدقيق درسلرنده مكتبده موجودلوحهلردن دخى استفاده ايتمهليدر . فقط عيناً قابل ارائه اولان موادك تدريسنده لوحه مبدأ حركت اولمامالى ، اولا طبيعتده تدقيق ياپيلدقدن صوكرا آنجاق تمرين مقامنده لوحه استعمال ايديلهليدر . اكر تدقيق ايديلهن موضوعه دائر مكتبده لوحه يوق ايسه معلم آلتدن كلديكى قادار رنكلى تبهشيرلرله رسم ياپار . نباتات

وحیوانات آطلاسلری‌ده عیناً ارائه‌سی قابل اولمایان حیوانلر ونباتلر حقنده برفکر ویره‌بیلمك ایچون استعمال ایدیله‌لیدر .

۱۰ — انسانك وجودی حقنده چوجوقلره ویریله‌جك تشریح وفیزیولوژی معلوماتی غایت بسیط اولاجقدر . واك زیاده حفظ‌الصحه حقنده عملی معلومات ویرمکه اهمیت عطف ایدیله‌جکدر .

۱۱ — طبیعت تدقیق درسلرنده تورکجه‌ده مانوس مقابلی بولونان عربجه تعبیرلر استعمال ایدیله‌یه‌جکدر . [معروف تعبیرلر یرینه عندی تعبیرلر اقامه‌ایتمك جائز دکیلدر .]

٤ نجی سنه

[هفتاده ۲ درس]

۱ — مکتبك بولوندیغی محلده مختلف موسملرده تصادف ایدیله‌ن **جیچکلر** : بونلرك نما شرطلری ، چیچکلردن استفاده .

۲ — **آغاجلر** : محیطده یه‌تیشه‌ن میوه‌لی و میوه‌سز آغاجلر . آغاجلردن استفاده .

۳ — **حبوبات** : اهمیتی . حبوبات ناصیل ا کیلیر ؟ اوراغیلق ، خارمان ، ده‌کیرمن .

٤ — **اهلی وغیر اهلی حیوانلر** : حیوانلرك اعتیادلری ، یاشایيشلری . غدالری . یووالری ، أوره‌مه‌لری ، طرز مدافعه‌لری ، فائده‌لری . ضررلری .

٥ — **بوجکلر** : مختلف موسملرده مکتبك بولندیغی محیطده تصادف ایدیله‌ن [چکیرکه ، قاراسینك ، سیوری سینك ، قارنجا ، آری ، ایبك بوجکی ، طیرطیل ، کله‌بکلر ، پیره ، تاختا قوروسی ، کووه کیی] بوجکلرك تدقیق .

٦ ــ قوشلر : مختلف موسملرده محیطده تصادف ایدیلهن لیلك، قیرلانغیچ ، سرچه ، آغاج‌قاقان ، قارغا کبی قوشلرك تدقیق، اعتیادلری، یاشایشلری ، غدالری ، یووالری ، یومورطالری ، فائده وضررلری .

٧ ــ صوصیواندری وبانلری : مکتبك بولوندیغی محیطه کوره ده‌کیز ، کول ونهرلرده یاشایان [بالیقلر ، قوربغا ، ینکج ، قابلومباغا ، یوصونلر وسازلرکبی] حیوانلر و نباتلر ، یاشایشلری ، اعتیادلری ، فائده‌لری ، ضررلری ، اقتصادی قیمتلری .

٨ ــ انسانك وجهری مفتنده معلومات : ناصیل حرکت ایدییورز؟ کیکلرك واعضالرك ، حرکت و ادمانك فائده واهمیتی . بل کیکی، ایی وفنا وضعیتلرك کیکلره تاثیری . کیکلرك حفظ‌الصحه‌سی . ده‌ری ، طیرناقلر ، صاچلر . ده‌رینك تمیزلکی ، وجودك بوزری کسیلدیکی و یارالاندیغی زمان نه یاپمالیدر ؟

ناصیل بسلنیورز ؟ آغیز و بوغاز ، دیشلر . "دیشلرك صحتی" (طلبه دیش فیرچاسی استعمالنه آلیشدیریلاجقدر) . دیشلرك وظیفه‌سی . هضم جهازی ، غدالریمزك انواعی، بسلهیجی وحرارت وبریجی غدالر . مشروبات . تغذی حقنده صحی قاعده‌لر و تلقینلر .

٥ نجی صنف

[هفتاده ٢ درس]

١ ــ طوپراغه : تارلا ، باغچه وچایرلرده‌کی طوپراق ایله چوراق اراضی آراسنده مقایسه . کیللی طوپراق ، چاناق ، چوملك ، طوغلا ، کیرمید ناصیل یاپیلیر . ؟

۲ — جیفتیلك : قیشلق و یازلق زرعیات . صاپان ، پوللق ، تراقتورله زرعیات ؛ مقایسه‌لری . کوبره . توخوم . اوراق . طیرپان . اوراق ماکیناسی . بوغدای ، آرپا و چاودار ، باشاقلری . یولاف . خارمان ، دوکن ، خارمان ماکیناسی . نوخود ، باقلا ، مصرکیی سائر محصوللر . محیطه کوره توتون ، خاشخاش ، پاموق ، صوصام ، کتن ، کنویر حقنده معلومات .

۳ — طاسه ومعدنیه : عادی کیرمج طاشی ، مرمر ، قوم‌طاشی ، مالطا طاشی ، غرانیت ، آلجی ، آردوواز ، جاقماق طاشلرینك تفریق و اوصافی .

محیطده قابل تدارك اولان پیریت ، سیملی قورشون و قروم کیبی معدن نمونه‌لری . دمیر ، جلیك ، قوات ، قورشون ، قالای ، باقیر ، نیکل ، چینقو ، آلومینیوم ، کوموش و آلتون معدنلرینی طانیتمق و باشلیجه اوصافنی اوکرهتمك .

٤ — معدنی کومورلر : لینیت ، عادی طاش کوموری ، هوا غازی ، قوق کوموری . آنتراسیت ، غرافیت [قورشون قلمی اعمالی] معدن قوبولری . عملهٔ حیاتی . آسانسور ، قازما ، چکیچ ، معدنلرك صورت اخراجی . پترول و بنزین .

٥ — آغاجلر : محیطده یهتیشهن میوهلی و میوهسز آغاجلر . آغاجلردن استفاده : کراستهجیلك . طلبهیه جام ، میشه ، کورکن ، کستانه واخلامور کیبی باشلیجه تاختالرك توعلری واوصافی اوکرهتیلهجکدر .

٦ — اهلی وغیراهلی حیوانلر : یوصنفده رسملر اعانهسیله آیی ،

قورد ، تیلکی ، آرسلان ، فاپلان ، فیل کبی وحشی حیوانلرده طانیتدیریلاجقدر .

۷ — آرمیلی : اوردهك ، قاز ، بیلدیرجین ، طاوشان ، قاراجا ، کبیك آوجیلقلری . آوکوپکلری . مضر حیوانلرك امحاسی ، فائدهلی حیوانلرك حمایهسی .

۸ — قوشلر : بلبل ، صاقا ، اسپینوز ، تارلا قوشی ، قاناریا کبی اوتوچی قوشلر . قوشلرك فائدهلری . قوش یووالرینه دوقونمامق . چیفتچیلره ضرر ویرهن قوشلر : قارغا ، صاقصاغان ، سرچه .

یرتیجی قوشلر : چاپلاق ، آتماجا ، شاهین ، قارتال [رسملر اعانهسیله] .

۹ — بالیقلر : دهکیزلرده و نهرلرده بالیقچیلق محیطده بولونان معروف بالیقلری طانیتدیرمق . بالیق قورومق ، طوزلامق ، محافظه ایتمك .

۱۰ — سبزه ومیوه : قورومق ، قونسروه ، رچل ، شروبلر یاپمق [موسمارینه کوره] .

بالیقچیلغك وقونسروه جیلكك اقتصادی قیمتلری : خارجدن مملکتمزه ادخال ایدیلهن سوت ، میوه وبالیق قونسروهلری . بویوزدن مملکتمزك غایب ایتدیکی پارالر .

۱۱ — انسانك وجودی حقنده معلومات : تاصیل تنفس ایدییورز؟ نفس بورولری . آق جکرلر . حجاب حاجز . هوانك تحولی ، تنفس حقنده صحی قاعدهلر و تلقینلر .

قانهدامارلری وقلب : دوران [بسیط برطرزده] قلبك حرکتلری نبض .

ناصیل مس ایدیورلر؟ بش دویغو .. دماغ و جملهٔ عصبیه .
جملهٔ عصبیه حقنده صحی قاعده‌لر و تلقینلر . وجودك حرارتی و بو
حرارتك اولچوله‌سی .

۱۲ — حفظ صحت قاعده‌لری : میقروبلر ، صولر ، تهمیز و فنا
صولر . قیزامق ، چیچك ، قوش پالازی ، ورم ، تیفوس ، تیفو ،
قوله‌را ، صیتما کیبی خاستالقلردن قورونما چاره‌لری .

Eşya Dersleri

اشیا درسلری

اولکی پروغرامده « طبیعت تدقیقی » عنوانی آلتنده طوپلانان موضوعلرك بر قسمی فیزیك وکیمیا علملرینك ساحه‌سنه داخل اولان شیلردر . مثلا : هر کون هر یرده قارشیلاشدیغمز اوطوموبیل ، شومه‌ن‌دوفه‌ر ، تلغراف ، ودیکر الکتریق تطبیقاتی ، أولرده قوللانیلان میخانیکی آلتلر ، ترتیبات والخ ، فیزیك ومیخانیك علمنك ساحه‌سنه داخل موضوعلردر . هوا وصو کبی اك لزوملو حیات عنصرلرینك ترکیبلری ، یمکلریمزك ترکیبنده‌کی غذاعنصرلری وسائره‌ده کیمیا علمنك حوزه‌سنه داخل موضوعلردر . اسمندن‌ده آکلاشیلدیغی وجهله « طبیعت تدقیقی » درسلرینك داها زیاده طبیعتك دوغرودن دوغرویه مشاهده و تدقیق ایله مناسبتدار موضوعلری احتوا ایتمه‌سی لازم کلیر .

انسان أنك طبیعت عنصرلرینی ترکیب و تحویل ایده‌رك وجوده کتیردیکی اشیا و آلاتی ، حیوانلر ، نباتلر کبی ذی حیات موجودلر وطاشلر ومعدنلر کبی طبیعتك خام موادی ایله برآرایه قویارق هپسنی بردن عینی درسك موضوعی عد ایتمك موافق کورولمه‌مشدر .

یکی پروغرامده « أشیادرسلری » نك علاوه‌سی ایشته بوملاحظه‌نك نتیجه‌سی‌در . اولجه « طبیعت تدقیقی » درسنه داخل اولان بعضی موضوعلرك « اشیا درسی » نامی آلتنده طوپلانماسنك دیکر مهم برسببی‌ده شودر : ایلك مکتب باشلی باشنه بر جزؤ تام اولمقله برابر ، عینی‌زمانده اورتاتحصیل ولیسه‌تحصیلی ایچین‌ده برتمل تشکیل ایتمکده‌در .

واقعا ایلك مکتبك ایکنجی دوره‌سی اولان دردنجی وبشنجی صنفلرده‌کی « طبیعت تدقیق » و « اشیا » درسلرینك برنجی هدفی ایلك مکتبده اوقویان کنجلره طبیعت و حیات حقنده، وحیاتده هر کون تطبیقاتی کوردکلری، تعقیب ایده‌جکلری مسلکلرده آز چوق کندیلرینك‌ده استعمال ایده‌جکی اشیا و آلات حقنده اساسلی معلومات ویرمکدن عبارت ایسه‌ده بو درسلرك دیکر مهم بر مقصدی داها واردرکه اوده داها یوکسك تحصیل تعقیب ایده‌جك طلبه‌یی ایلریده تتبع ایده‌جکلری علوم طبیعیه وفیزیك وکیمیا درسلرینه احضار أیله‌مکدر .

هرایکی درسك آیری آیری تدریسی بوایکنجی مقصده داها زیاده أولویریشلیدر . چونکه داها زیاده طبیعتك دوغرودن دوغرویه مشاهده‌سنه مستند تدقیقلره استناد ایدن « طبیعت تدقیق » درسلری کنجلری مشاهده و تدقیق اصولی ایله تجهیز صورتیله اونلری علوم طبیعیه‌یه احضار ایده‌جکی کبی « اشیا درسلری » ده اونلری تجربه‌ایله تدقیق اصولنه استیناس ایتدیرمك صورتیله ایلریده تتبع ایده‌جکلری فیزیك‌وکیمیا درسلرینه احضار ایله‌ر. مع‌مافیه تدریسانده بوایکی درسك بربریله ودیکر درسلرله اولان صیق ارتباطلری هیچ بر وقت کوزدن قاچیریلمامالیدر .

ایلك مکتبلرده « اشیا درسلری »نك هدفی شودر :

طلبه‌یه، هرکون کوردیکی، قوللاندیغی اشیا ایله، مدنیتك مادی جهازلرینی تشکیل ایده‌ن آلت وماکینالرك اك مهملری حقنده اساسلی و عملی معلومات ویرمك و بو آلات و جهازلرك استناد ایتدیکی عملی پرنسیپلری کندیلرینه طانیتدیرمق .

تدریسده دقت ایدیلهجك جهتلر :

۱ — درسلرده طلبهنك الك یاقینندهکی اشیایی نقطهٔ حرکت اتخاذ ایتمهلیدر .

۲ — درسلر بهمهحال تجربهیه ومشاهدهیه مستند اولمالیدر .

۳ — یاپیلماسی ممکن اولان تجربهلر مطلقا یاپیلمالیدر .

٤ — تجربهلرك یالکیز معلم طرفندن یاپیلماسی کافی دهکیلدر ، امکان درجهسنده بالذات طلبهنكده یاپمامی لازمدر .

٥ — مکتبلرده هر وقت کافی وسائط بولونمامق امکانسزدر. بو جهتله درسلرك مکتب خارجنده تدقیق و مشاهدهلرله جانلاندیریلماسی وتقویه ایدیلهسی لازمدر .

[مثلا بنزین وسائره موتورلری حقنده ویریلهجك درسلك ، امکان مساعد اولان یرلرده اولا بر اوطوموبیل و یا تراقتور ویاخود ثابت برموتورك تدقیقنه وبوخصوصده شوفورومانیستدن آلیناجق ایضاحاته استناد ایتمهسی لازمدر .]

٦ — مساعد زمانلرده جوارلردهکی فابریقالر ، زراعت و صنایع مکتبلری ، تعمیر خانهلر ، غاراژلر زیارت ایدیلهلیدر .

۷ — بر چوق تجربهلرك قولایجه و اوجوزجه تدارك ایدیلهبیلهن بعض وسائط [مثلا : عادی بر بارداق ، بر مقدار جام بورو ، بسیط بر اسپرطو لامباسی ، برایکی قاپسول ویا عادی بر جزوه و توپ] وبر قاچ نوع اجزا ایله پك اعلا یاپیلابیلهجکی دائما خاطردهٔ طوتولمالیدر .

۸ — طلبهنك نظری یالکیز کتابدن چالیشمایه منحصر قالمامالیدر. هرطلبهنك بردرس دفتری اولمالی. بودفتره یاپیلان تجربهلرك قروکی وزسملری، نتیجهلری ، زیارتلر اثناسنده اوکرهنیلهن معلومات خاصهٔ یازیلمالیدر .

۹ — طلبه‌یه آرا صیرا تدقیق موضوعلری ویرمه‌لی و اونلر بوموضوعلری بالذات تدقیق ایده‌رك کوچوك راپورلر تنظیم ایتمه‌لی‌در . بوراپورلرلك درسخانه‌ده اوقونارق مناقشه ایدیلمه‌سی فائده‌لی اولور .

راپورلر ایجاب ایده‌ن شکل و نمونه‌لرله برابر طلبه‌نك مساعی دفترلرینه کچیریلیر .

۱۰ — تدریساتك بر محور اطرافنده دور ایده‌رك حیاته صیقی بر صورتله ربط ایدیلمه‌سنه اعتنا اولوناجقدر . پروغرامده‌کی موضوعلر بونقطهٔ نظره کوره آیریلمشدر . یالکیز بونلرك صیراسنی معلملر ، اساسه صادق قالمق شرطیله ، زمان و مکان ایجابنه کوره تبدیل ایلهیه‌بیلیرلر .

٥ نجی صنف

[هفتاده ۲ درس]

I. جسملرك اوچ حالی .

(۱) اطرافنزده‌کی جسملر . صلب ، مایع ، غاز جسملر .

(۲) جسملر حاللرینی دکیشدیره‌بیلیرلر : صویك اوچ حالی .

II. طبیعتك قوتلری .

(۱) جاذبه : جسملرك دوشمه‌سی ؛ جسملرك آغیرلی . جسمك موازنه شرائطی . جسملرك مرکز ثقلی .

(۲) حرارت : حرارتك اك بویوك منبعی کونشدر .

حرارتك تأثیرلری : حرارت جسملری انبساط ایتدیریر . حرارت جسملرك حاللرینی دکیشدیریر . صلبلری مایع و صوکرا غاز یاپار .

حرارتك حيوان ونباتلره تأثيری ، كافی حرارت اولمازسه حيات اولاماز.

(٣) ضيا : ضيانك الك يويوك منبعی : كونش .

كونش ضياسنك حيات اوزرنده كی تأثيری. ضياسز نباتات يه تيشه مه‌ز، ضيا ورنكلر . آينالر پرتوسزلر . وكوزلكلر . ضيانك حياتمزه تأثيری. ضيادن محروميتك نتيجه‌لری : كورلرده ، بدنده .

ضيا صحت ايچون لازمدر . ضيا بعضی ميقروبلری اعا ايده‌ر .

(٤) الكتريق : كهربا ، ره‌چينه و جام كبی جسملرك اوغولماسی. نتيجه سنده ظهور ايده‌ن الكتريق حادثه‌لری . كوك كورله‌مه‌سی. شيمشك چاقماسی . .. ييلديريم . ييلديرمك تأثيرلری . پاراطونه‌ر .

III . غاز حالنده جسملرك الك مهمی : هوا .

(١) هوانك موجوديتی نه‌دن بللی‌در ؟ هوا دنيانی چپ چوره صارمشدر. دنيا اطرافنده‌كی هوا طبقه‌سنك قالينلغی . هوانك تضييق. اويون طوپلری ناصيل شيشيريلير ؟ هواده تضييق آزالنجه نه‌دويارز ؟ بالونلر ناصيل اوچار ؟ اوچورتمالر وطياره‌لر. يوكسك داغلرده، هوانك تضييق آزدر .

هوانك تضييقنی ناصيل ثولچه‌رلر : بارومترونه‌در ، [ممكنسه طوريچه‌للی بوروسی تجربه‌سی ياپيلير.] معدنی بارومترونه‌در ، ونه‌ايچين قوللانيلير ؟

(٢) هوانك سخونتی : سخونتك هوايه تأثيری . روز كارلر و فورطونالر . سخونتك حياته تاثيری . سخونت ناصيل ثولچولور . ترمومترونك اساسلری . ترمومترونك استعمالی . طبی ترمومترو .

(٣) هوانك حياته تأثيری : هوانك تركيبی. تنفس ، نباتلرك تنفسی. صاف وته‌ميز هوا . پيس ومحصور هوانك ضررلری .

(٤) هوا رسی : سسك هواده‌کی سرعتی .

IV . مایع جسملرك اك مهمی : صو .

(١) صویك تضییقی .

صوده جسملر نه‌دن یوزمر ، نه‌دن باطار ؟ زرهلی و جلیك کیلر نه‌دن باطماز ؟ تحت‌البحرلر .

حیوانلرك وانسانلرك یوزمه‌سی . صویك موازتی . صو جریانی . شلاله‌لر ، شادیروانلر .

(٢) ده‌کیز صویی ، طاتلی صو ، آجی صو : ایجیله‌جك صولر . ایی صولرك اوصافی . فنا و تهلکه‌لی صولر : صولردن کلهن مهلك خاستالقلر : تیفو حمای ، قوله‌را .

V. بسیط ماکینالر :

(١) مانیوه‌له . نوعلری وتطبیقاتی . ماقارا و پالانغا ترتیباتی [بسیط ویخلر] . دیشلی چارق ترتیباتی : قوتك استقامتنی ده‌کیشدیرمك ، افقی استقامتده بر قوتی شاقولی استقامته چویرمك .

(٢) ماکینالرده قایسه وزنجیر ترتیباتی : بیسیقلهت زنجیری . بردیکیش ماکیناسنك ، برأت قیما ماکیناسنك وبونلره مماثل هریرده بولونابیله‌جك نسبةً بسیط ماکینالرك تدقیق .

VI. طبیعتك قوتلرندن استفاده :

(١) روزکار وصودن استفاده :

یل وصو ده‌کیرمنلری . یلکن کیلری . بخار ماکینالری ، واپور

وشومه‌ن‌دوفه‌رلر . غاز ماكينالرى،موتورلر. اوطوموبيل وتراقتورلر .
[بر بخار ماكيناسنك، براوطوموبيل موتورينك تدقيقى] .

(٢) اُلكتريقدن استفاده :

الكتريق پيللرى . الكتريق جريانى ، مثبت و منفى الكتريق .
مقناطيس . الكتريق‌زيللرى . الكتريق دينامولرى : تلغراف وتلفون.

(٣) ضيادن استفاده :

فوطوغراف ماكينالرى ، سينه‌مالر .

- E -

1936 SCIENCE CURRCULUM

“NATIRAL SCIENCE”

Türkiye Cumhuriyeti
Kültür Bakanlığı

İLKOKUL PROGRAMI

1936
Devlet Basımevi, İSTANBUL

TABİAT BİLGİSİ

İzah:

1. Eski müfredat programında "Tabiat" ve "Eşya" diye ayrı adlar altında gösterilen dersler:

    a. İlk devredeki topluluğun bir nevi devamı olmak ve böylelikle iki devre arasında bir sistem uygunluğu temin etmek,

    b. Ortaokul programlarındaki Fen Bilgisi derslerinin tertibine uydurulmak maksatlarile "Tabiat Bilgisi" adı altında birleştirilmiştir.

i. Tabiat ancak bizimle olan yakın ve uzak münasebetleri bakımından değer kazanabileceğine göre bu derste tabiatta olan eşya ve hadiseler insanla olan rabıtalarına göre gruplar halinde toplanır.

Hedefler:

1. Çocuğa, muhitinde bulunan ve genel yaşamımızla ilgili olan hayvanları, nebatları madenleri, eşyayı ve tabii hadiseleri müşahede ve tetkik ettirmek;

2. Vücudümüzdeki uzuvlarla bunların yaşamımızdaki rolleri ve vazifeleri, birbirlerile olan organik münasebetleri üzerine, az fakat öz malûmat kazandırmak ve bu arada bilhassa hastalıklar ve sebeplerile bunlardan korunma çarelerine genişçe bir yer ayırmak;

3. Tabiatten ve tabiat kuvvetlerinden insanların nasıl faydalandığını tetkik ettirmek; talebenin, her gün kullandığı veya karşılaştığı eşya ile, medeniyetin maddi cihazlarını teşkil eden makinelerin en önemlileri üzerine dikkat ve alâkasını çekmek;

4. İnsanın tabiat üzerine ve tabiatın insan üzerine olan tesirlerine çocukların dikkatini çekmek ve bu tesirlerden anlayabileceklerini kendilerine sezdirmek ve kavratmak;

5. Çocuklara tabiatı sevdirmek ve tanıtmak suretile, yurdu güzelleştiren ve zenginleştiren ağaçları, çiçekleri ve faydalı hayvanları korumağa ve çoğaltmaya alıştırmak;

6. Yurdun tabii servet ve kuvvet kaynaklarını teşkil eden eşya ve hadiseleri yurt ve ev ekonomisi bakımından tetkik ettirmek;

7. Çocuklara doğrudan doğruya müşahede ve denemeler yaptırarak, ileride karşılaşacakları eşya ve hadiselerin tetkiki ve bunlar üzerine düşünerek hükümlere varmak melekesini kazandırmak.

Direktifler

1. Bu derste incelenecek mevzular daima insanla olan münasebetleri bakımından işlenecektir.

2. Bir ünitenin içinde bulunan tam cüzülerin o ünite ile olan bağlılığı daima göz önünde tutulacaktır.

3. Bu derste çocukların doğrudan doğruya müşahede ve deneme ile bilgi kazanmalarına önem verilecektir.

4. Müşahede ve denemeler iki türlü olur: a) sürekli b) zamanı gelince. Bir nebatın tohum halinden meyve verinceye kadar geçirdiği neşvünema vetirelerini tetkik ettirmek, hava rasatları bir kurbağa yavrusunun istihalesini incelemek gibi müşahedeler sürekli müşahedeye misaldir. Ders veya ekskürsiyonlar sırasında yapılan müşahedeler ise ikinciye misal teşkil ederler. Sürekli müşahedelerin mevzuları ders yılı başında seçilecek, talebeye veya talebe gruplarına bildirilecektir.

5. Müşahede ve denemeler için çok defa önceden "müşahede ve deneme vazifeleri" verilmesi faydalıdır. Çocuklar böylelikle topladıkları bilgiyi yazarak ve hatırlarında tutarak sınıfa gelirler, ve arkadaşlarına bildirirler. Elde edilen neticeler üzerine sınıfta konuşulur. Yeniden müşahede ve deneme yapılmasına lüzum görülen noktalar tesbit edilir. Öğretmen talebenin noksan bıraktığı veya yanlış gördüğü noktaları tamamlar veya düzeltir.

6. Bu derste işlenen mevzuun hulâsaları bir deftere yazdırılır. Çocuklar bu yazıları mümkün olduğu kadar taslaklar, krokiler, grafikler yaparak kesilmiş resimleri ve musattah nümuneleri yapıştırarak zenginleştirir ve bunlara ilgili olarak yaptırılacak koleksiyonlarla tamamlar.

7. Bütün bu işler için çocuklara iyi ve doğru müşahede ve denemenin yolunu öğretmeğe çalışmak " lâzımdır.

8. Müşahede ve deneme işleri için ekskürsiyonlar, okul tatbikat bahçesi, okul hayat köşeleri ve okul müzesi ile atölyesi çok işe yarar.

9. Çocukların denemelerde kullanacakları aletleri en basit ve en ucuz, mümkünse parasız malzemeden kendi kendilerine meydana getirmelerine önem verilecektir. İlk okulun Tabiat Bilgisi derslerinde para ile dışarıdan satınalınacak ders vasıtaları terazi, termometre, barometre, pertavsız gibi birkaç alettir. Kullanılmış şişeler, muhtelif kutular, makaralar, tahta parçaları gibi eşya toplatılmalı ve zamanı gelince kullandırılmalıdır.

10. Ekskürsiyonlara çıkılmadan önce yapılacak müşahedeler üzerine talebe ile birlikte etraflı bir plân hazırlamak şarttır. Bu gezintiler sırasında kısa notlar aldırılmalı, taslak ve krokiler çizdirilmeli, sınıf müzesine konmak veya koleksiyonlarda kullanılmak üzere taş, böcek, toprak, ot, v.s. toplatılmalıdır. Ekskürsiyonlarda yapılan müşahedeler okula dönüldükten sonra maksada uygun olarak işlenecektir.

11. Bu derste işlenecek mevzuların milli ekonomi bakımından da incelenmesi, reklamlarla ve grafiklerle ifadesi gerektir. Bunun için dersin hedefleri arasında ekonomi prensibine de önemli bir yer verilmiş ve müfredatında bazı mevzuların sonuna "mahalli ve milli ekonomideki değeri" şeklinde kayitler konmuştur. Hesap dersi bu işte Tabiat Bilgisine yardımcı olacaktır. Her mahallin tetkik edilen mevzu ile alâkadar hayvanları, nebatları, müesseseleri, fabrikaları…v. s. ayrıca izah edilecek, bu mevzular bu suretle derinleştirilecektir. (Muhitin ekonomik faaliyeti ile alâkadar tütün, pancar, pamuk, pirinç, incir, üzüm, afyon, fındık… v. s. mahsulleri).

12. Muhitte bulunmayan eşya, hayvan, nebat, alet ve saire nazari olarak tetkik ettirilmeyecek, bunlar hakkında ancak çocukların dikkat nazarları çekilecektir.

13. Bahçenin, kümeslerin, akvaryum, teraryum, ve enzektaryumların tatil aylarında da muhafazaları için tertibat alınacak ve çocukların bunlarla alâkaları kesilmeyecektir.

Öğretim Vasıtaları:

1. Ekskürsiyonlar,

2. Müşahedeler (sürekli, vakti gelince)

3. Okul tatbikat bahçesi: Yeri müsait olan her okulda bir tatbikat bahçesi yapılacak ve bu derste tetkik edilecek nebatlar yetiştirilecektir. Bu bahçede çocuklar çekirdekten veya tohumdan bir nebatın yetişmesi vetirelerini takip edecekler; güneşli, güneşsiz yerlerde gübreli, gübresiz, sulak ve kurak topraklarda nebatların büyüme derecelerini; nebatlara faydalı ve zararlı hayvanları tetkik edeceklerdir.

   Bahçesi müsait olmayan okullarda, bu gibi müşahede ve denemeleri tenekeler veya saksılar içinde yapmak lazımdır

4. Okul kümesi. Her okulda tavuk, horoz, kaz, hindi, ördek, tavşan, güvercin gibi hayvanları yetiştirmek üzere bir kümes bulunması tavsiye olunur. Bu kümesler, hayvanların yaşayışlarını, hayvan bakımını öğrenme cihetlerinden değerli bir ders vasıtasıdır.

5. Akvaryumlar: Suda yaşıyan hayvanların ve nebatların neşvünemalarını ve yaşayış tarzlarını, birbirleri ile olan münasebetlerini doğrudan doğruya ve yakından tetkik fırsatların temin eden bu vasıtaya ilkokulda önemli bir yer verilecektir.

6. Teraryumlar: kertenkele, kurbağa gibi hayvanların yaşayışlarını tetkik için her okulda bir veya bir kaç teraryum bulunması tavsiyeye değer.

7. Ensektaryum: Mümkün olan yerlerde ipek böceği, kelebek gibi hayvanların istihalelerini müşahedeye yarayan bu vasıtalardan da ilkokullarda istifade edilecektir.

8. Okul mikroskobu: Hastalıklar üzerine malumat verirken mikropları, deveran bahsinde kanın terkibini, iyi veya fena suyun içindeki maddeleri vesaireyi çocuklara göstermek üzere mümkün oldukça mikroskoptan da istifade edilmelidir.

9. Okul atölyesi: Bu derste kullanılacak deneme vasıtalarını ve koleksiyonları yapmak için okul atölyesinde çalışmaya önemli bir yer verilecektir.

10. Okul müzesi: Burada bulunan ve Tabiat Bilgisi dersine yarayan vasıtalar daha ziyade talebenin kendi kendilerine elbirliğiyle yaptıkları aletler ve koleksiyonlardır. Ancak terazi, termometre barometre, vücut uzuvlarının mücessem numuneleri, pertavsız gibi satın alınması zaruri vasıtalara da yer verilecektir.

11. Koleksiyonlar: Talebenin yaptıkları müşahedelerin veya ekskürsiyonların sonunda topladıkları materyellarle bizzat meydana getirdikleri eserlerdir. Koleksiyonlar kuru kuruya toplanmış birer malzeme veya çeşit mecmuası olmayıp talebenin yapmış olduğu müşahedelerin en önemli safhalarını gösterecek birer vetire tablosu mahiyetindedir. Meselâ: Birçok deri, meşin ve kösele parçalarının balmumlu ipliklerin, kundura çivilerin, ayakkabı resmininvesairenin bir levha üzerine yapıştırılması ile "ayakkabıcılık" koleksiyonu meydana getirilmiş olmaz; derinin alındığı hayvandan başlıyarak, posteki, ham deri, ham derinin işlenmesi, işlenmiş deri, ayak ölçüsü, derinin kesilişi, kalıba çekilişi, dikilişi, kösele çivilenişi vesaire bir tertip içinde gözterilirse ve bunlara ait kısa izahatlar ve yerine göre rakamlarla tertip tamamlanırsa o zaman bu iş için bir koleksiyon meydana gelmiş demektir. Bunun gibi çeşit çeşit kelebekleri bir karton üzerine iğnelemek te kâfi değildir; tohumdan başlıyarak, tırtıl koza, kırızalit, kelebek oluş ve yumurtalayış safhalarını da bu levha üzerinde göstermek lâzımdır.

12. Yardımcı eserler: Bir emvzu üzerinde araştırmalar yapılırken bazen başvurulması icap ededn Tabiat Bilgisi kitapları, mecmualar, Ansiklopediler ve gazete maktuaları okul veya sınıf kütüphanesinde bulundurulmalıdır. Bundan başka bazı mevzular için mütehassıslara müracat etmek, bilgi ve denemelerinden faydalanmak ta unutulmamalıdır. Çocuklar muhtelif kaynaklardan topladıkları malûmatınmehazlerini bildirmeğe ve göstermeğe alışkındırlar.

Sınıf IV

A. Gıdalarımız:

1. Bir lokma ekmek nasıl meydana geliyor?

    a. Çifçilik, tarla, bahçe ve çayırdaki toprak ile çorak arazi arasındaki mukayese – Sapan, pulluk, traktörle tarla süzmek ve bunların gördükleri iş arasında mukayese – Gübre – Tohum ve tohum atılması – Orak, tırpan ve orak makinesi, mahsul nasıl biçiliyor, harman, döven, harman makinesi, harman nasıl yapılıyor?

b. Buğday: Tarlada ve sınıfta buğday tanesi başağının tetkikı. Buğdayla öbür hububat arasında mukayeseler. Mahalli ve milli ekonomide buğday.

c. Değirmen: Civarda bulunan bir değirmenin tekikı – Değirmen nasıl işliyor? – Dişli çarkların gördükleri işler. – Değirmeni işletmek için Tabiat kuvvetlerinden istifade, değirmen ve nevileri – Buğday nasıl öğütülüyor?

d. Öğütülmüş Buğday: Un, kepek, nişasta – Undan neler yapılıyor? – Başka maddelerden yapılan unlar – Unun ekmek yapılmak üzere yoğurulması – Maya.

Fırın: Fırını ziyaret – Ekmek nasıl pişiriliyor?

2. Hayvanlardan aldığımız gıdalar:

a. Bunları bize veren hayvanlar: Koyuni keçi, sığır, dana, kümes hayvanları, balık, (bu mevzu balıkçılık ve süngerciliğin, denizciliğin büyük değeri olduğu sahil şehirlerinde ayrı bir ünite gibi derinleştirilecektir). Av hayvanları ve saire.

Bu hayvanları nasıl besliyoruz? – Mahalli ve milli ekonomideki kıymetleri

b. Et, süt, yoğurt tereyağ, sadeyağ, balık, kuş ve ev aletleri, yumurta, havyar.

c. Et kıyma makinesinin tetkikı:

3. Nebati gıdalar:

a. Sebzeler: Bunları ne halde yiyoruz? (Çiğ, pişmiş) – Kuru ve yaş sebzeler.

b. Meyvalar: Bunları ne halde yiyoruz? (Çiğ, pişmiş) – Kurumuş ve yaş meyvalar.

c. Nebati yağlar,

d. Konserve, reçel, şurup, turşu,

e. Kahve değirmeninin tetkikı

4. Madenî gıdalar:

a. Tuz: Yurdumuzda tuz istihsalârı,

b. Su: İçilecek suların vasıfları, sulardan gelen hastalıklar.

5. Yediklerimizi nasıl hazmediyoruz?

a. Ağız ve boğaz, dişler, dişlerin korunması ve diş fırçası kullanma.

b. Yemek borusu, mide, barsaklar ve hazme yardım eden guddeler.

c. Aldığımız gıdalar kana nasıl karışıyor?

d. Vücudun harareti ve bunun ölçülmesi – Tıbbi termometre.

6. Hastalıklar

a. Hazım cihazi ve gıdalarımız vasıtasile vücuda giren mikroplar ve bunların meydana getirdiği hastalıklar, bunlardan korunma çareleri: Gıda ile ve bakır kaplarla zehirlenmede alınacak ilk tedbirler.

7. Sıhhi beslenme şartları

Kalori ve vitamin hakkında kısa malûmat.

B. Giyinme:

1. Niçin giyiniyoruz?

2. Giydiklerimiz, neden yapıldıkları:

a. Hayvanlardan aldıklarımız; yün, ipek, deri, kösele. (Bunlardan yapılan şeyler).

b. Nebatlardan aldıklarımız, pamuk, keten, sun'î ipek, (Bunlardan yapılan şeyler)

} Mahalli, milli ekonomi bakımından tetkikleri

3. Yazlık ve kışlık elbiselerdeki hususiyetler (renk, kalınlık, miktar).

4. Sıhhi giyinme şartları, elbiseleri temiz tutma.

5. Dikiş makinesinin faydası ve kullanılması

C. Evimiz:

1. Kerpiçten, tuğladan, keresteden, taştan ve betondan evler (muhitteki tiplere göre).

2. Bir ev nelerle yapılıyor?

a. Temel – Duvarlar: Taş, çakıl, kum, kireç (adi kireçtaşı), mermer, alçıtaşı, çimento, bunların tetkik ve mukayeseleri, kullanıldıkları yerler.

b. Evin tahta kısımları: Kereste, muhitteki hangi ağaçlardan nasıl istifade ediyoruz? Ormandan kesilen bir ağacın muhtelif maksatlara göre işlenmesi, (kerestecilik) – Ormanları koruma – Ormanlarımız ve ekonomik kıymetleri. Marangozluk, bir marangozun atölyesini ziyaret.

c. Evin maden kısımları: Hangi maddelerden nerede ve ne şekilde istifade ediyoruz? – Çilingir, demirci, tenekeci, camcı.

d. Dam: Kiremit nasıl yapılır? Bir kiremit ocağının tetkiki. (İmkân bulunursa okulda kiremit, tuğla yapma ve kireç yakma)

e. Makara, çıkrık, basit vinçler.

3. Evin taksimatı: Bodrum katı, odunluk, kömürlük, kiler, mutfak, salonlar, odalar ve sofalar, merdivenler (muhitte varsa asansör), ayakyolları, banyo, tavanarası, (birkaç ev plânı tetkik etmek). Bir evin kullanışlı olması için şartlar.

4. Evin su tevziatı.

5. Bir ev yapılırken gözetilmesi gerekli sıhhi şartlar.

6. Evin bahçesi: Sebze ve çiçek bahçesi, meyva ağaçları (Güzel bahçe örnekleri gösterilecek ve çocuklara buldurulacaktır). Okul bahçesinde tatbikat. Fıskiyeler.

D. Evimizi nasıl ısıtırız?

1. Hararetin en büyük membaı güneştir.

2. Isınma vasıtaları: Ocak, mangal, soba (muhitte bulunan çeşitleri), kalorifer. Bunların tetkikı, sıhhat, tasarruf ve kullanılış bakımından mukayeseler.

3. Yakılan şeyler: Odun, kömür, maden kömürleri, petrol, havagazı, nasıl elde edildikleri.

4. Isıtmanın sıhhi ve ekonomik şartları.

E. Evimizi nasıl aydınlatıyoruz?

1. Ziyanın en büyük membaı: Güneş, güneş ziyasının hayatımız üzerindeki tesiri ve faydaları.

2. Aydınlatma vasıtaları: Çıra, mum, kandil, petrol lâmbaları, lüks ve radyum lâmbaları, karpit lâmbaları, havagazı lâmbası, elektrik lâmbası.

3. Aydınlatmanın sıhhi şartları (Güzdüz ve gece).

F. Nefes alıp vermek:

1. Nasıl teneffüs ediyoruz? Nefes boruları, akciğerler, diyafram (hicabı haciz).

2. Hava: Havanın varlığı neden bellidir? Havanın hayata tesiri – Havanın terkibi – Saf ve temiz hava, pis ve kapalı yerlerdeki havanın zararları.

3. Akciğerlerde havanın mibadelesi.

4. Suda boğulanlar için alınacak tedbirler.

5. Ciğer hastalıkları ve mikroplar, bunlardan korunma yolları.

G. Kanın vücutte dolaşması:

1. Kalp ve kalbin hareketleri, nabız.

2. Büyük ve küçük kan dolaşması, kanı kalpten alarak vücuda yayan damarlar (şiryanlar), kanı vücuttan kalbe getirenler (verit) – Pis kan, temiz kan.

3. Kan dolaşması ile nefes alıp verme arasındaki bağlılık.

4. Kanın vücut müdefasındaki rolü.

5. Bir yerimiz veya damarlarımız kesilince ve yanınca, arı, yılan veya akrep sokunca, kuduz hayvan ısırınca alınacak ilk tedbirler.

6. Kanla geçen hastalıklar ve mikroplar, bunlardan korunma yolları.

7. Kandaki pislikleri dışarı atan uzuvlar: Böbrekler: idrar, cilt: ter – Cildin temiz tutulması, cilt hastalıkları, tırnaklar ve saçların temizliği.

Sınıf V

A. Nasıl hareket ediyoruz?

1. Kemikler, adaleler, mafsallar ve belkemiği.

2. Hareketin mekanızması, manivelâlar, vücudumuzdaki manivelâlar – Bisiklet.

3. Hareket ve idmanın fayda ve önemi, iyi ve fena duruşların zararları.

4. Kırık, çıkık, incinme gibi vak'alarda alınacak ilk tedbirler.

B. Nasıl hissediyoruz?

1. Dimağ ve sinirler, bunlara ait sıhhi şartlar.

2. Görme duygusu:

    a. Göz ve fotoğraf makinesi ile mukayesesi. Gözün korunması.

    b. Adeseler, dürbünler ve sinema hakkında çok basit malûmat.

    c. Güneş ziyasının menşurdan geçirilerek tahlili ve Nevton çarkı vasıtasile terkibi – Alâmisema.

3. İşitme duygusu

    a. Nasıl işitiyoruz? Kulak.

b. Hava ve ses: Sesin havada dağılışı ve sür'ati. Gramafon. Radyo hakkında basit malûmat.

c. Kulağın korunması.

4. Lems, kokualma ve tadalma duyguları.

C. Tabiat kuvvetleri ve biz:

1. Arzın cazibesi ve tesirleri: Düşme, şakul – Vezin; siklet merkezi, muavenet – Terazi, bir terazinin doğruluğu nasıl anlaşılır? Bir terazi ile doğru tartmanın yolu – Bir cismin hacmi ve kesafeti.

2. Suhunet ve tesirleri: Bir cismin suhuneti, termometre ile ölçmeler – Isıtılan cisimlerin genişleme ve uzamaları ve tatbikatı – Rüzgâr, bundan faydalanma (yel değirmeni ve yelkenli) – Fırtına ve zararları, suhunet tesiri ile bir cismin hal değiştirmesinin, suyun değişmelerinin tetkikı ve bu hadiselerin şumullendirilmesi – Buhar makinesi, gaz motörü ve kullanıldığı yerler hakkında basit malûmat.

3. Hava ve tesirleri: Açık hava, tezyikı ve ölçülmesi – Civalı ve madeni barometrenin esasları (barometrenin kullanılması), hava değişmelerinin tetkiki, rasat işlerine devam, uçurtma ve teyyare (teyyarenin bir memleket müdefasındaki ehemmiyeti, teyyare hücumlarına ve gaza karşı korunma).

4. Su ve tesirleri: Sis, bulut, yağmur, kar, çiğ, kırağı. Yeryüzünde ve yer içinde birikmiş sular ve akar sular, kuyular ve su tulumbaları (maktalarla gösterilecek) – Bir cismin suda yüzmesi ve suya batması şartının tecrübe ile tetkiki, vapur ve denzialtı gemisi – Balonlar.

5. Elektrik ve tesirleri: Mıknatıs, pusula ve faydası – Cep feneri pilinin tetkiki ile bir elektrik cereyanı müvellidi ve elektrik cereyanı hakkında fikir verme, bir evde elektrik cereyanı tevziatı, elektrik lâmbası, elektrik saatinin okunması, cereyandan korunma – Elektrik zilinin tetkikı, telgraf ve telefonun esası (kısaca), telsiz telgraf ve telefonun faydaları – Şimşek, gök gürültüsü; yıldırım ve paratoner hakkında basit bilgi.

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