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Savaş KARAGÖZ¹
¹Aksaray University

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An Investigation into the Changes and Developments in Teaching Methods Applied in Ottoman Educational Institutions: Sati Bey's Suggestions and Practices

Savaş KARAGÖZ^{1*}

¹Aksaray University

Abstract

From the perspective of Turkish education history, it can be said that the teaching methods applied in the educational institutions of the Ottoman Empire had deductive characteristics. The application of the deductive method was carried out in various forms including memorization, repetition, comprehension, discussion and note taking. Since the transfer of lessons in primary schools and madrasahs, which were traditional Ottoman educational institutions, was predominant, memorization as a teaching method was also dominant. Along with the modernization period in the nineteenth century, with innovations in the social, economic and military fields of the Ottoman state, there were also changes and developments in the field of education. After the second Constitutional Monarchy, the *Darülmualimin* (the teachers' school for men), which was established in 1848, started to train more qualified teachers as part of the changes and developments in the historical process. The ideas, suggestions and practices of Sâti Bey, the principal of the teachers' school in that period, as the key implementer of these changes are still considered important today. In this study, the necessity, importance and characteristics of the methods of *takrir* ('explaining') and *teşîf* ('discovering') in Sati Bey's thinking as opposed to memorization are emphasized. The findings show that the discovering method is more useful than the explaining method in terms of permanent learning as an alternative to memorization. Another finding of the present study is that methods of explaining and discovering cannot be applied in every academic course.

Key words:Sati Bey, teacher school, teaching principles and methods, memorization, explaining and discovering methods.

Introduction

The Ottoman Empire, which had a deep-rooted, historical educational tradition, raised scholars in *akli* ('rational') and *nakli* ('religious') sciences. For example, Murat Bin İshak was famous for his work titled "*Havass-ül edviye*" in the field of medicine, as were Celalettin Hızır, Hekim Bereket, Tacettin İbrahim and Ahi Çelebi. Kadı Zade Rumi was famous in the field of astronomy; Sinan Paşa, Tokatlı Molla Lütü, Sadrettin Şirazi, Mirim Çelebi and Celal Devvani were prominent in the field of mathematics and Piri Reis and Seydi Ali Reis were famous in the field of geography (Adıvar, 1991). However, because they depended on the *İlmiye* ('learned institutions') which started to deteriorate in the sixteenth century, it was observed that progress in science after that period slowed down and original works were not produced. After the sixteenth century, the abandonment of the *akli ilimler* (rational sciences) such as mathematics, theology and philosophy which had motivated thought in *madrasahs*, or simply putting them aside, also led to the move away from the teaching methods used in previous years. Instead of teaching methods which stimulated thinking and ideas such as debate, adopting the *nakli ilimler* (religious sciences) and focusing on memorization were the principal reasons for the decline in education (Ergin, 1977; Uzunçarşılı, 1988). The reasons for the decline in education were criticized by both senior staff and thinkers of the period, and they worked on measures to be taken to address it. The enlightened Selim III tried to prevent the deterioration of education by issuing edicts in 1789, 1791, 1793, 1794, 1795 and 1798 and tried to consolidate the position of the *İlmiye* (Furat, 2018).

* Corresponding Author: Savaş KARAGÖZ, savaskaragoz@aksaray.edu.tr

From the eighteenth century, in the educational institutions whose decline was one of the reasons for the decline of the Ottoman Empire, the courses, the teaching methods used to teach them and the qualifications which they awarded were criticized on the grounds that they were not useful. With the Renaissance and the reform and the rise of humanism which took place in the western world, increasing industrialization contributed to the increase in the number of sciences and the development of teaching methods suitable for the characteristics of each science. By the end of eighteenth century, Turks had to admit that the western states were stronger than the Ottoman empire. The first conscious attempts to introduce westernization and innovation were made in the early nineteenth century by imitating and adopting some elements selected from western European civilization. Recognizing the superiority of the west, Ottoman statesmen established some educational institutions in order to make the state strong again so that it could compete with European powers. These new institutions started to deliver new curriculums and different teaching methods, such as observation, query and teaching by doing and experiencing (Duman, 2002). After the fall of Selim III in 1807, military training was first overhauled and this innovation was followed by the opening of western-style schools, and bringing educators from the west and renewing the curriculums of these schools were seen as important developments in terms of the modernization of education (Akyüz, 2020).

In the *Tanzimat* period, the practices which were carried out in the Ottoman education system were made more systematic by the introduction of the Education General Regulation of 1869 (Kamer, 2017a; 2020). Despite these changes, however, *madrasahs* and *sıbyan* schools (Ottoman elementary-primary schools) continued to exist and rejected innovative effective and efficient teaching methods such as debate, criticism, inquiry-based learning and learning by doing, and continued to teach by memorization, and this dual system caused confusion for some time (Demirtaş, 2007). With the *Tanzimat* period bringing change and development in the field of education, as well as increasing the understanding of the importance of the social and political functions of education, education began to be seen as a science in Ottoman society. Under an instruction of 1847, primary education was increased to six years, life-oriented lessons were included in education programs and the teaching principles and methods regarding how these lessons would be taught were revised. During this period, the most important work on teaching methods was the *Usul-u Cedid* ('new educational method') introduced by Selim Sabit Efendi to replace the *Usuli Atika* ('old educational method'). Selim Sabit Efendi guided teachers in new teaching methods with his work *Rehnuma-i Muallimin* (1870). He stated that there were positive and negative sides of the individual teaching method, the collective teaching method and the mutual teaching method, and he proposed a new teaching method which took the positive aspects of these three former teaching methods (Akyüz, 2020). This view formed the basis for the methods of explaining and discovering which are the subject of the current study.

In 1847, Ahmet Kemal Pasha had introduced a new teaching method in five *Rüştiye* (secondary) schools in Istanbul. In the following years, many books were written on teaching principles and methods; the most significant were *Rehnumai Muallimin* (1870) and *İlmi Terbiye-i Etfal* (1870) by Selim Sabit Efendi, *Rehberi Tedris and Terbiye* (1894) by Musa Kazım, *Usulu Talim and Terbiye* by Ayşe Sıdıka Hanım (1897), *Usul-i Tedris and Tedriüs* (1899) by Melekzade Fuat, *İlmi Terbiye-i Etfal* (1907) by Aristokli Efendi, and *Fenni Terbiye* (1911) by Sati Bey. Ayşe Sıdıka Hanım's *Usûl-i Talim and Terbiye* is recognized as the first book in the field of education science and teaching principles and methods in the modern sense as well as being one of the most important references in the fields of sociology and psychology. It was used for many years as a textbook in the curriculums of teacher training schools (Gündüz, 2020). These books on teaching methods expressed a common opinion that the current teaching methods were not effective. It can also be seen that they contained sample lessons suitable for the characteristics of each course in order to show the need for and benefit of applying new educational methods in every educational context.

Muallim Cevdet (1918) stated that the reason for the decline and the obstacles to progress were the traditional teaching methods applied in educational institutions: "In literature and religious sciences, it is necessary to abandon the *dhikr* ('remembering' or 'recollection') method of rules and laws first, and to start with examples and observations, then to apply and spread the procedure of giving rules and laws. The most important reason for not being able to train technical staff that we will be proud of against Europe in our *madrasahs* is the current teaching method. Nobody worked on this subject until Sati Bey". This statement shows how important Sati Bey's views and suggestions on teaching methods were.

Although Muallim Cevdet stated that the only person who had articulated the need for a renewal in teaching methods was Sati Bey, when the writers and works listed above are examined, it can be seen that there were many educators who advocated innovation in teaching principles and methods in the Ottoman educational system. The *Dariümuallimin*, which was founded in 1848 as part of the changes and developments in the traditional structure after the second Constitutional Monarchy, started to provide a more modern education and to train more qualified teachers. It was observed that teachers now taught in accordance with the new educational methods in practical school applications, as well as in the application of examination, research and discussion methods. In addition to his works in different fields such as education, the natural sciences, politics, language and nationalism in the Ottoman lands during the period when the modernization movements and the

schooling processes were most active after the *Tanzimat* period, Sati Bey also wrote important articles on memorization and teaching methods, and these are subjected to evaluation in this study. As a result of his trips to western countries for educational purposes, Sati Bey had the opportunity to get to observe many philosophical and sociological groups which focused on the relationship between education, sociology and philosophy. Within this context, Sati Bey adhered to the individualist philosophy of Herbert Spencer, whereas Ziya Gökalp adopted a socialist view by adhering to the collectivist views of Emile Durkeim. Sati Bey recommended his views on ‘child-centered education’, especially in contemporary pedagogy, to teachers in his first Turkish work *Fenni (Science) Education* (Şenel & Taibi, 2017).

Sati Bey, as principal of the *Darülmualimin*, saw education as a solution to stop the decline of the Ottoman empire, and he gave practical explanations about the teaching methods of explaining and discovering to *Dârülmualimîn* teachers, teacher candidates and also other teachers in the form of in-service training in order to eliminate rote memorization and to achieve full learning, especially for the purpose of increasing the qualifications of the teachers. This current study focuses on the ‘discovering’ and ‘explaining’ pedagogy which he applied to replace memorization. Developments in the field of psychology at the end of the nineteenth and the beginning of the twentieth centuries made it necessary to take into account individual differences in education and training and revealed that the method of teaching by memorization did not ensure the permanence of the taught knowledge. Educators therefore developed different teaching methods and techniques, drawing attention to the need to consider learners’ individual development periods and the importance of training according to individual differences. This led to a change in teaching methods (Karagöz, 2017).

Sati Bey’s explaining and discovering methods were applied in the practice school in the teacher training establishments. The application of these methods, especially in an institution for training teachers, and the comprehension of new teachers about them can be considered as the first steps taken against the traditional method of memorization. Sati Bey’s applications and explanations of how to apply the methods of explaining and discovering together with the question-and-answer method, the features, advantages and disadvantages of these two methods, and in which courses these methods would be more appropriate pedagogical developments can be considered as an important pedagogical development both for that period and for today.

General teaching methods in the educational institutions of the Ottoman empire

The teaching methods applied in the educational institutions of the Ottoman empire had the feature of being deductive. The origins of this method came from authorities such as scientists and philosophers, who wrote works on certain subjects and produced ideas. Attempts to resolve existing problems were based on the views of these scientists. The application of the deductive method was carried out in various forms including rote memorization, repetition, comprehension, discussion and note-taking. In the traditional Ottoman educational institutions, from elementary and primary schools to *madrasahs*, memorization was the predominant teaching method due to the exclusively one-way transfer of lessons (Anameriç & Rukancı, 2008; Şanal, 2003). Akgündüz (1997), however, reported that although memorization was used as a principal teaching method, different teaching methods used in *madrasahs* had been taken over from the Seljuks to the Ottoman schools in terms of purpose-structure-operation. The methods and techniques of multiple training were used and an holistic problem-solving approach which involved more than one teaching method and technique, and the main dynamics of education, including *iktisar* (economics) and *istiska*, were of great importance. In this method, short texts read at the beginning of the lesson were called *iktisar*, middle texts were called *iktisad* (‘accumulating and increasing knowledge’) and the texts which described the subject in detail were called *istiska*. Student would read the books of these three levels in sequence. Other methods which complemented this theoretical learning method were approaches such as explaining, dictation and memorization.

The teaching method traditionally applied in *madrasahs* involved reading specific texts from a book chosen by the teacher, that is, by the explaining method. This method was called ‘teaching from an open book’ (Akgündüz, 2002; Uzunçarşılı, 1988).

When the teaching methods employed in Ottoman educational institutions are examined, it can be seen that more than one teaching method was used. These methods can be listed as memorization, comprehension, dictation, repetition, question-and-answer as well as *müzâkere* (‘negotiation’) and *munâzara* (‘discussion’) (Açık, 2020; Sarıkaya, 1997). Ebü Amr b. Alâ emphasized the importance of the method of discussion teaching by stating that the first rule of science is calmness, the second is to ask good questions, the third is to listen well, the fourth is to memorize well, and the fifth is to defend the obtained knowledge well against others (Makdisi, 1981).

The explaining method

In the explaining method, which was the basic teaching method in *madrasahs*, the teacher was at the center and explained the course subject in detail. Lessons taught through the explaining method were delivered through texts and explanations read from a book chosen by the teacher. In this method, which was also called *açık kitap*

tedris usulü ('the open-book education method'), students sat in a circle around the teacher, repeated each of his statements and took notes, reproducing what the teacher said in their own copies (Açık, 2020).

This was intended to arouse interest in the course subjects. In *madrasah* practice, the method of explaining was applied by the teachers as a general presentation of the subject to the students, the students then presenting the subjects which they prepared separately to the teacher and to each other.

The memorization (*Hifz*) method

In the classical format, the question-answer technique is based on the principle that students memorize stereotyped answers corresponding to certain questions and repeat their answers when asked. The most important feature of this method is that it is a repetition process based on memorization. In teaching situations in which the question-answer technique is applied, the main task of the students is to memorize the answers to the questions to be asked and to simply repeat them without changing them (Dündar, 2013; Leife & Rustin, 1974).

Memorization was used as an oral training method. Due to the content of *madrasah* education programs and the Arabic language and literature which was the language of written communication, the memorization technique was frequently used as an education method (Ergün, 2015).

Akgündüz (1997) did not see the memorization technique as a negative technique in terms of its nature and usage in *madrasahs*. Concerning the importance of memorization and repetition, Dündar (2013) expressed the following thoughts in the *Muqaddimah* of Ibn Khaldun: 1. For a student to reach mastery of the subject matter, a three-fold process of repetition is necessary. Some students can reach this level with less repetition because of their individual features and skills, and 2. memorization is especially essential in language learning.

Makdisi (1981) stated that the teaching method followed in traditional Ottoman educational institutions such as Ottoman elementary-primary schools and *madrasahs*, was based on memorization, and saw the understanding of memorization as an invariable feature of improving memory due to the nature of *madrasahs*, and memorization, repetition, comprehension, negotiation and writing were used as teaching methods in *madrasahs*. Makdisi also regarded memorization as appropriate in the circumstances at that time in order to protect the manuscripts.

The dictation (*İmla*) method

Akgündüz (1997) defined the dictation technique as a process used for pedagogical purposes within the framework of mind and brain interaction. The first and most important proponent of the dictation method in Turkey was Selim Sabit Efendi, who stated the following points regarding the use of the dictation method in his *Rehbuma-yı Muallimin* ('Teacher's Guidebook'):

Letters are written on a blackboard, the shapes and names of the letters are taught to the students. After the teacher has pronounced them individually by showing the letters he has written on the board with a thin stick, he asks the students to pronounce them together and so he gets them used to the correct pronunciation as he shows the letters again and pronounces them. After the names of the letters are memorized and [the students are] accustomed to their pronunciation, the differences and similarities between them are shown on the board and explained to the students. After explaining the shape and names of the letters to the students, the letters are written on the board in an irregular and mixed manner in groups of five and exercises are given to the students with the question-answer method. (Buyrukçu, 2002: Selim Sabit, 1883)

The notebook method

Another method used during the education given in *madrasahs* was keeping a notebook (for spelling and writing) or taking notes. In this method, it was necessary to write exactly what the teacher said during the lesson or what was in the books for the course. Keeping a notebook was an important teaching method used alongside the memorization method in *madrasahs* (Taşdemirci, 1989). It is in the writing of the notebook that the student reads and learns the writings of the teacher; it is not simply a routine copying process.

Okçu and Pilatin (2018) reported that other methods such as negotiation, peer teaching, memorization and expressing opinions were also widely used in Ottoman educational institutions. The negotiation method encouraged students to collaborate and supported the permanence of the learning achieved through this interaction. It has been stated that one of the most striking methods in *madrasah* teaching was the peer teaching method, and it is still used today. In the negotiation method, which was applied in the form of question-and-answer, the students were asked questions and gave their answers to the teacher. The negotiation method was

the most common method not only in Ottoman educational institutions but also in the *Nizamiye madrasahs* of the Seljuk period. In those *madrasahs*, students first read the subject matter and then the teacher asked them questions by giving the necessary explanation. At the end of the lesson, students' written questions were answered by the teacher and discussed (Ocak, 2017).

The discussion method, which started in the *madrasahs* and was transferred to mosques and literary meetings over time, had been the source of the development of the academic skill in which both the teacher and the students express their own views (Akgündüz, 1997). The method of memorization was the most criticized aspect of the *madrasahs*. Pilatin and Okçu (2018) supported the views of Makdisi and Akgündüz that memorization was considered necessary because *madrasah* lessons had been kept in the memory mainly by the method of memorizing verses and *hadiths* and memorizing patterns in some grammar books. This is still applied in today's formal education system. For example, some formulas and operations in science, grammar rules and literary works are learned by the memorization method. It can therefore be said that memorization was not a general or dominant method in *madrasahs*; on the contrary, it can be said that it was used when memorization was necessary due to the nature of the acquired knowledge similar to formal education. Another method used was the 'expressing an opinion' method, which involved the studies and activities which students did on their own after taking lessons from the teacher. The students generally tried to solve the logic of the lesson they had received and reinforced the lesson by repeating it and thinking about it. Each student organized his studies individually according to his learning style and tried to increase his/her learning level. In this method, the individual speed and personal learning style of the student became important.

According to Taşdemirci (1984), only verses, *hadiths* and other texts were used based on Aristotelean logic, and unlike the discussion method in *madrasahs* did not include subsequent practice, analysis or discussion. This situation became a scholarly process which valued the word rather than its meaning and gave no importance to the teaching of writing. Teachers could therefore not offer rational solutions to existing problems. Teachers' contentment with the old information led to an increase in the number of people who lacked the ability to think, research and question in *madrasahs*. In a report in 1876 prepared by fifteen teachers on this issue, it was stated that the students in *madrasahs* spent their time unnecessarily by dealing with annotations, and it was observed that the necessity of repeating the previous lesson by question-and-answer before starting the next lesson was emphasized (Şanal, 2003; Zengin, 1993).

Ottoman elementary-primary schools and *madrasahs* were unique educational institutions in terms of the period in which they took place and the course content which they taught. When the teaching methods applied in Ottoman educational institutions in the empire's historical development are examined, it can be seen that it was not just the memorization which was used, especially in *madrasahs*, but that modern teaching methods such as discussion were employed in new schools opened during the *Tanzimat* period. The educational institutions in the *Tanzimat* period and especially in the second. Constitutional Period were opened in the western style and their course contents were created in imitation of the western style. Their teaching methods were therefore also more modernist. Scholars who had acquired experience in western educational institutions and teaching methods gave many opinions and recommendations on teaching methods for their own country (Gündüz, 2010; 2012). One of them was Mustafa Sati Bey. In this study, articles written by Sati Bey on teaching methods such as memorization, explaining and discovering are analysed and discussed (Başar, 2019).

Purpose of the Study

In addition to his works in different fields such as education, the natural sciences, politics, language and nationalism in the Ottoman lands during the period when the modernization movements and new education process were the most active after the *Tanzimat* period, Sati Bey wrote important articles on memorization and teaching methods and these are the area of evaluation in this study. Sati Bey was also one of the educators who had experience in both the traditional and modern educational practices of the Ottoman period. This current study is therefore significant in terms of revealing the similarities and differences between Sati Bey's traditional teaching methods and modernization period teaching techniques such as the memorization, explaining and discovering methods.

The permanence of teaching generally depends on the teaching principles and methods applied in the education and training environment. In the historical process, different teaching principles and methods were used in the teaching of rational and religious sciences. In fact, the discussion, questioning and criticism methods, which are the basis of today's teaching methods, were applied in Ottoman educational institutions, but as the Ottoman empire began to decline, these methods were replaced by the memorization method, which could not respond to the changing conditions of the day. Changes in the educational program made it necessary to use different teaching methods. Various opinions were put forward on the existing teaching methods and the teaching methods which should be employed. To explore this in greater detail, answers to the following questions were sought in this study:

1. What is 'memorization' according to Sati Bey?
2. What are the causes and harms of memorization according to Sati Bey?
3. How should the question-answer method be employed according to Sati Bey?
4. According to Sati Bey, what are the explaining and discovering methods?
5. What are the educational courses in which the explaining and discovering methods should be applied?
6. What are the positive and negative aspects of the explaining and discovering methods?

Method

Method

This is a qualitative study in the form of a review. Documentary analysis, one of the qualitative data collection methods, was conducted in accordance with the qualitative research design. Using this technique, Sati Bey's articles entitled *Usûl-i Tedrisin Kavaid-i Esasiyesi*, *Ezbercilik*, *Tedrisatta İsticevap*, *Usulü Takrir* and *Usulü Tekşif* published in the *Tedrisat İptidai* journal and his articles entitled *Tedrisat-ı Taliyede İstikra* and *Tekşif 1-2* in the *Terbiye* journal were examined. The texts in the Ottoman language were first translated into Turkish, then the titles were determined by the analysis of the texts and these titles are presented in the findings section.

Findings

In this section, the research questions set out above are discussed under separate sub-headings. The findings are presented under 'Memorization', 'Reasons for memorization', 'Question and answer method, the 'Explaining' and 'Discovering' methods, lessons in which the explaining and discovering methods could be applied, and the positive and negative aspects of the explaining and discovering methods..

Memorization in Sati Bey's opinion

The issue of memorization and its effect on negativity in education was discussed in many of his works on teaching methods. Sati Bey evaluated the issue of memorization in detail in his work *Fenn-i Terbiye* ('The Science of Education') under the heading 'Thought Education' (*Terbiye-i Fikriye*). He also stated that knowledge and wisdom are necessary for reasoning and that education and training are necessary for Thought Education (Sati Bey, 1909; TÜBA, 2017).

Memorization, the general teaching method of the Ottoman educational system, was regarded as the most harmful problem in schools. Many symptoms and disadvantages of this problem were observed in almost all levels of the schools. Sati Bey (1911c) stated that the numbers of especially *Mekteb-i İptidaiye* (primary schools) and *Mektebi Rüştîye* (secondary schools) which were not affected by it were negligible. According to Sati Bey, memorizing without understanding the harms of memorization does not give any benefit. Information remains unfamiliar in the mind and cannot serve the development of any ideas. Sati Bey (1910a) explained this issue as follows in his article entitled 'Basic Principles of Teaching Methods' (*Usulü Tedrisin Kavaidi Esasiyesi*): ... *The taught knowledge can serve the development of the mind but must be understood. The habit of memorizing and speaking without understanding leads to the habits of not thinking and speaking without thinking. For this reason, it causes mind-blindness. People have finally lost the connection between speaking and thinking after many years of understanding, memorizing and reciting without thinking. The connection that should exist between the mind and the words and the connection that should be between the mind and the speech is broken through memorization. And now the words that come out of his tongue and through his mind continue without interruption, without warning any thought.*

Sati Bey's greatest aim was to reveal and isolate the causes of memorization as a means of improving education in schools. According to Sati Bey, the most important reason for the continued use of memorization in schools was the teachers. He also stated that the opinion that memorization was harmful had not yet been understood among teachers at the desired level who did not know the difference between teaching and memorization. The number of teachers who were content with having the students memorize the course exactly, who wanted the students to answer the questions with the same words and the same expressions as in the book, and showed favor to the students who acted in this way were particularly high in secondary schools. According to Sati Bey (1911a), who evaluated memorization in terms of its benefit and harm:

... above all, memorization is not only useless, but it should also even be considered as harmful. However, the development of this idea is not enough to isolate memorization because some situations and behaviors in teaching naturally lead students to memorization.

The reasons for memorization in Sati Bey's opinion

The prevalence of memorization teaching from ancient times to today is striking. Text memorization continues to exist in the form of memorizing the concepts and rules of positive sciences. Essentialism is seen as representative of this situation. When the philosophical and sociological foundations of educational innovations in the *Tanzimat* period are examined, it can be seen that there are those who advocated Durkheim's view that "education should create social individuals through the formation of values and the creation of social actors adapted to the conditions of the society in which they live" (İnal, 1991), whereas thinkers such as Mill, Kant, Herbert and Spencer stated that the aim of education is to raise the abilities of the individual to the highest level of maturity, and that individualism is of great importance (Tezcan, 1985).

a. Most teachers have the habit of making students write stereotyped questions and answers. This habit encourages the students to memorize, so it is necessary to ask questions in various ways in order to prevent them from memorizing and to enable them to achieve full learning. Stereotypical questions and answers cause information to take a fixed form in the learners' minds and remain undigested.

b. Most teachers do not take the developmental levels of the children into consideration while teaching. Especially when they are teaching, not taking into account the teaching principles of 'from concrete to abstract' and 'phased progress' is the main reason for persisting with rote memorization. When a child does not understand a lesson, he is nevertheless forced to memorize it, but he still cannot grasp it with his mind.

c. The majority of teachers do not see any necessity to make an effort to understand whether children are memorizing effectively. In order to release the child from the obligation to memorize without understanding, it is first necessary to give importance to explaining the lesson well and to act according to the student's needs.

Being negligent while watching or examining students' behavior sometimes causes memorization to become unnoticed. Sati Bey (1911a) conveyed his experience on this issue as follows:

... While I was visiting a primary school, I picked up a reading book in front of a child. I said 'Read this' by opening a page and putting it in front of the child. The boy began to read freely and properly, but when I looked closely, I saw that none of the things which he read were written there. He had started to recite that page, thinking that I had opened the page of the previous lesson ... 'Where is what you just said?' I asked, and taking that book in my own hand, I pointed to the first line with my finger. The boy paid attention for a while and succeeded in reading a few words by making an effort. After these words, he continued to read without needing any help. But this time, my fingers were even following the words and lines that were under my hand ... No doubt, he had understood what the text on the page was from the first line, and since he had memorized it, he started to recite it.

d. This is why it is not enough to believe that only memorization is harmful and to say 'I do not want to memorize'. In order to eliminate memorization, the lessons should be explained thoroughly and the questions and answers should be examined in detail. As a result, the careful use of memorization should only be done by following a good new teaching method.

The question-and-answer method in Sati Bey's opinion

One of the most important stages of education and training is undoubtedly asking questions and ensuring that the student answers the questions about the content of the lesson because the teacher can only understand whether or not the student is following the lesson or understands the repeated subjects or not by asking questions and assessing the answers. Whether a student has studied and learned previous lessons can be determined again by means of asking questions. Sati Bey (1911b) recommended that the questions should be as follows:

a. The questions should be specific. They should not cause any confusion in the student's mind. Some teachers ask such ambiguous questions that they are difficult for anyone to understand. A student's inability to answer such questions or giving an incorrect answer might be due to the inability to understand, or to have misunderstood, the question. Otherwise, it does not necessarily indicate that they cannot know or think what is being asked. Teachers should never ignore this situation. They should pay attention to the understanding of the questions shown by the student, and then be prepared to repeat their questions in a more understandable way, not forgetting the possibility that the questions have not been understood when they do not get an answer or receive wrong answers.

b. Avoid haste in expecting an answer to the question asked: when the teacher cannot get an answer to the question he has asked, or gets a wrong or incomplete answer, he should repeat the question in another way or encourage the student to find the mistake himself. If there is a deficiency, the teacher should ask other questions on the same subject in order to help the student to repair this deficiency. If he does not get an answer in this way, the teacher should ask the other students, and only if the question remains unanswered by all the other students should the teacher provide the answer himself.

However, teachers in Turkey follow a completely opposite behavior. They put a question to a student and when they see that the answer is slow in coming, they themselves give the answer. When a student gives an incomplete answer, the teachers complete it themselves.

c. During a question-and-answer session, dealing with only one student for a long time should be avoided. The teacher should try to obtain the answer from all of the students as much as possible. The best action for this is to ask the question to the whole class first, and after you have compelled them to think for a certain amount of time, appoint one of them and say 'Say the answer'. In the seconds which pass between asking the question and the choice of a student who will answer, all of the students will of course have to prepare mentally and examine their mind quickly with the thought that 'Maybe he will ask me'. For this reason, students will not be indifferent to either the teacher's questions or the selected student's answer from the beginning and will focus their attention on the subject. In this way, the teacher prevents the class from being indifferent to the lesson and ensures that the class is interested in the lesson. The teacher should be careful to prevent indifference and to ensure students' interest in the lesson, both to the answers given by the selected student and to the questions asked by him. In this context, the teacher should give importance to making the students find and complete their own shortcomings in the answers by occasionally asking the other students some relevant questions which will arise during the question-and-answer session.

It is necessary to be prepared to act according to other rules within the context of the question-and-answer method. The questions asked to the student during the lesson are divided into three in terms of their purpose:

a. Repetitive questions: These are the questions asked to assess whether a previously taught lesson has been learned or not. After the general principles set out for the subject, the most important situation is to choose questions, especially in the liveliest part of the lesson, which represent different aspects of the subject. Whether the lesson has been properly understood or not can only be recognised by asking questions which do not follow the order of the subject and which are answered in the students' own words.

However, most of Turkish teachers act in the completely opposite way. They ask questions in the order of the subjects in the book, and they never change the form of the questions. Most of the time, they even dictate stereotyped questions and answers to the students. The teachers thus always ask questions and expect the answers in exactly the same format.

b. Repetitive and investigative questions: These are questions asked to determine whether the important points made during the lesson have been understood or not. These questions are also the ones which teachers ask students whose facial expressions show that they do not understand the lesson. The point to be taken into consideration here is to not be content to ask 'Did you understand?', but to explain and to ask questions which require comment.

c. Discovering questions: These are questions asked on subjects which were never mentioned or emphasized during a lesson to awaken the students' attention and strengthen their judgment. These questions should imply that what is being asked is essentially unspoken and must be considered by the student. Teachers should use appropriate language, such as 'Think about it; is that what you would say?' and should encourage students with 'I didn't mention it, but if you think, you will find it'. When the teacher sees that the students cannot answer, he should not suddenly attempt to explain the point himself, but should consider guiding the students to think and interpret it for themselves. The point that the teacher should pay attention to here is not to ask the students about things which cannot be found by mental thinking and reasoning (interpretation).

The article *TedriSati Taliyede İstikra ve Tekşif* in the journal *Terbiye* (Education) is of great importance. In the article, old methods are criticized and new ones are suggested instead.

The methods of discovering and explaining in Sati Bey's opinion

The discovering method is *methode intuitive* in French and its equivalent in philosophy is 'intuition'. The word also has links with the Latin verb *intuere*, which means 'to look at, contemplate, wonder at' (Hogarth, 2001; Noddings & Shore, 1998). In Turkish, there is a word 'discoverer' which refers to someone who sees and finds things which do not have concrete form but can only be understood by deep thought. Applied to teaching, this is called the 'discovering method' and it requires making inferences about concrete things and abstract things by making comparisons (Noddings & Shore, 1998).

Sati Bey (1910b) stated that ensuring the participation of the student in the education environment entails adopting the methods of explaining and discovering, which are two different ways to be followed in teaching.

a. Explaining style: This is a way of asking questions in order to show whether the students understand what has been said and have learned the subject or not. When using the explaining method, the teacher tells the students directly what he will teach them.

b. Discovering style: In the discovery style, the teacher should not directly tell the student the information which is going to be taught. The students must try to discover and find the information for themselves before the teacher tells them. In this way, the students should strive to find and discover by using their minds. The teacher should not ask questions to find whether the subject has been understood, but should instead ask questions to enable the students to discover more truths about what he wants to teach.

Courses in which the discovering and explaining methods will be applied

The method of discovering is appropriate for lessons which require only reflection, interpretation and reasoning (Sati Bey, 1910b; 1914a; 1914b), such as language lessons. Language is already used by children and in order to rediscover the rules of a language, attention should be paid to the proper use of the rules of the language.

It is also appropriate to use the discovering method in morality lessons because the sense of morality is present in everyone and the moral code is the sum total of love, respect and proper feelings. In order to rediscover the code of morality, nothing is needed but to examine the relationship between oppositional people who tend to think differently. The discovering method is also appropriate in mathematics and science classes because it is necessary to think, examine and experiment in order to discover the necessities of these sciences. It is not appropriate to use the discovering method in geography lessons. The facts taught by geography are the result of travels and studies carried out all over the world. Since the discovery method would involve carrying out all these trips personally and repeating examinations which have already been done, it is not applied in geography classes.

It is also not appropriate to use the discovering method in history lessons because the facts taught in these lessons consist of information based on narrations whose main content is experiences. In order to discover these experiences on your own, you need to hear, see and live them again for yourself, which is of course impossible. It is not appropriate to use the discovering method in religious sciences: it is suitable for use only in rational sciences. Mathematics, morality and geometry lessons can also be taught by the method of explaining.

Positive and negative aspects of the discovering and explaining methods

After determining the characteristics of the courses in which the methods of discovering and explaining are appropriate, the teacher should think about which method would be more beneficial to use in these lessons. By considering the particular features of these methods, the benefits and harms can be easily understood.

a. When teaching with the method of explaining, the student is simply the listener and does not contribute actively to the process but listens, understands and repeats what the teacher says. In summary, the student imitates the teacher's expressions and reasoning. When teaching with the method of discovering, however, the students actually take an active role in the lesson. They participate not only by repeating and imitating the teacher's expressions and reasoning, but also by actively creating a specific way of thinking, making a judgment and making discoveries on the subject by responding to the questions posed by the teacher.

Generally, the more active an organ is, the more strength it gains. For this reason, porters' calves, boatmen's wrists, and blacksmiths' biceps are fleshy and strong. Just like this, the more active a skill or a natural capability becomes, the more it develops and matures.

Since the method of discovering activates thinking power and reasoning more, it serves the development of thinking skills in children. The discovering method encourages students to explore by means of deep thinking and reasoning. Discovering is incomparably beneficial in terms of making the mind accustomed to reasoning and discovery, constantly revealing the idea of entrepreneurship.

b. When teaching with the method of explaining, the student is responsible only for listening to the lecture, but even listening requires a lot of attention and effort. The ability to pay attention is not very developed in children so a child's mind can be easily distracted during a lesson. Teachers are not easily aware of this situation, they only understand this situation from the students' obvious distance from the lesson. In other words, the teacher is mostly completely unaware of the carelessness and distractions which are not seen. On the other hand, because the students will be active when they are being taught by the discovering method, they feel responsible for being careful in the lessons. They will concentrate on the subject, thinking that questions will be asked. The teacher immediately recognises carelessness and distraction as he constantly asks questions and ensures that the students remain actively involved. As a result, the discovering method is more preferred than the explaining method because it requires the children to pay attention and reveals carelessness.

c. Students genuinely enjoy lesson taught using the discovering method as they can give appropriate answers to the teacher's questions. Their self-confidence develops and this makes them feel happy. This feeling of self-confidence and happiness is similar to the pleasure genuine explorers have from their explorations. This feeling

of joy also has a very beneficial effect on the whole school as it ensures students' commitment to the lessons. The discovering method should be preferred to the *takrir* method in terms of both showing the feeling of joy as children discover every truth and making the lessons attractive.

d. Considering the mental development levels of the students, it is more appropriate to teach using the discovering method. When using this method, the teacher cannot go beyond the level of the students' comprehension ability; if he does, he will find that the children cannot respond and cannot discover what they are expected to discover. The teacher is therefore obliged to adapt the questions to the level of the children's ability. In the *takrir* method, however, if the teacher does not consider the current mental development state of the students, he might not even be aware that he is moving away from them; he can realize this situation only when he finishes the lesson, asks questions about it and does not get an answer. This negative outcome is a waste of time for both the teacher and the students.

e. In the discovering method, the lesson is very fragmented because a straight path cannot be followed in this method. It is therefore possible that the lesson will be derailed if the teacher does not pay attention to this situation. In the explaining method, however, the lesson does follow a straight path and this has a collective effect on the minds of the students. In other words, the discovering method is less convenient as it causes fragmentation of the lesson as a result of its multifaceted nature. It is only possible to avoid this inconvenience if the teacher prepares the lesson well, organizes his questions well and reviews the lesson after it has finished.

f. The discovering method also does not have a big impact on emotions as distractions exist and this affects students' reasoning. At this point, the explaining method is more effective.

Results and Discussion

This exploration of the teaching methods applied in traditional Ottoman educational institutions has shown that many teaching methods were employed in accordance with the characteristics of the lessons. Various different teaching methods and techniques were used in Ottoman elementary-primary schools and *madrasahs* which were the traditional education institutions; methods such as explaining, dictation and memorization were used. However, scientific developments in the western world increased the number of sciences and the variety of educational programs applied in schools and this made it necessary to use different teaching methods for teacher training, which is one of the elements of the program. Since the 1800s (especially during the second Constitutional Monarchy), the fact that these views were expressed by Ottoman thinkers and intellectuals and were recommended to be applied in educational institutions shows that the Ottomans did not simply follow the changes and developments in the field of education from behind. It has been shown in this paper that there were changes and developments in the western countries which were contemporary with those in the Ottoman Empire during the same period. However, the use of the rote memorization method became constant in courses for which that method should not be used as the implementation of other teaching methods was either incorrectly employed or late. In fact, with the modernization of education in the *Tanzimat* period, the inclusion of mental sciences in the programs of Ottoman educational institutions shows that the memorization method did not work and that this led educators to search for alternative and more effective teaching methods. Sati Bey opposed memorization and stated that things memorized without understanding the subject were of no use. He also emphasized that the other negative situation caused by memorization was that it led to the habits of not thinking and speaking without thinking, causing mind-blindness. In addition, he stated that memorization was not only useless but also harmful. He stated that the memorization method was still used in schools because its potential harmful effect had not yet been fully understood by teachers. The reasons for this were explained by him as follows: most teachers were in the habit of making students write stereotyped questions and answers, ignoring their developmental levels when teaching, and not taking enough precautions to understand whether children had actually learned what they had memorized. For these reasons, it was stated that memorization on its own could only be made possible by following a good teaching method. In other words, it was seen that it was necessary and important to use the new methods of discovering and explaining.

It was also observed that the discovering and explaining methods used in teaching did have specific rules, benefits and potential harms. It was stated that the discovering method prevented the students from being distracted from the lesson, enabled them to concentrate on the lesson, and gave them a sense of responsibility for paying attention to the lesson. Since the discovery method requires teaching according to the mental development levels of the students, it also requires teachers to take this into account and to have an understanding of developmental psychology. However, it has been stated that this method also had its drawbacks in that the lessons progressed slowly and this caused potential fragmentation of the lesson. This reduces the effect of the traces left by the lesson on the learners' emotions. When the advantages and disadvantages of the discovering method are compared, it is clear that the discovering method should be

preferred over the explaining method. The advantage of the explaining method over the discovering method is only in terms of its effect on the emotions. When the information taught in the lesson does not appeal to the learners' emotions, it was seen that it is beneficial to temporarily abandon the discovering method and apply the explaining method instead. The discovering method makes children accustomed to exploring, thinking and reasoning, as well as providing twenty-first century skills. In this respect, it is important to use the discovering method which encourages students to think in accordance with the rules in teaching environments.

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