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# **SERD** | **STUDIES IN EDUCATIONAL RESEARCH AND DEVELOPMENT**

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### Editorial

As a biannual peer-reviewed journal, the first issue of Studies in Educational Research and Development (SERD) was announced about six months ago and now we are glad to publish another issue of SERD in June, 2018. We believe any scientific journal should be developed in an iterative process just as science itself is advanced progressively. In this sense, we keep trying to improve the quality of SERD in each issue.

Regarding the improvements following the previous issue, first of all, an e-ISSN has been reserved for SERD. In addition, SERD has started being indexed in Google Scholar including the first issue. Last but not least, we have conducted some minor format changes in the journal to enhance its readability and the appearance.

As we declared before, although the primary language of SERD is English, the articles in Turkish are accepted to get published in SERD as well for now. However, considering all the progress we have made up to now, we are planning to publish all the articles (only) in English starting the first issue in 2019. As another essential step to create a high quality international journal, we are in the application process of being indexed in some other comprehensive international academic indices. We believe SERD will be a respected peer-reviewed journal in education in near future.

We would like thank all the authors and referees who helped us to publish the current issue of SERD.

If you have any feedback about anything related to format and/or content of SERD, as the editorial team, we would be more than happy to hear them.

We hope you all enjoy reading the articles.

Sincerely,

The Editorial Team

# **SERD** | Teacher opinions about school and teacher professional development

Evren Erzen<sup>1</sup>

## **Abstract**

This study aims to evaluate teacher opinions about the professional development. The sample consists of 8 teachers from different branches. These teachers were selected from two schools with the best and the worst professional development conditions in line with extreme or deviant case sampling. Semi structured interview form was employed as the data collection tool. Firstly, the study analyses self-development opportunities of the teachers within the education system and the schools. Secondly, it addresses the perceptions of the teachers about the teacher development roles in the schools. Lastly, it investigates the professional development problems of the teachers that should be resolved and the difficulties encountered in this process. Within the qualitative research framework, the data obtained was analysed via descriptive analysis, content analysis and constant comparison method. The findings illustrate that professional development of the teachers is largely unsystematic and varies from one school to another. The implications of the interviews are that the number, accessibility and quality of the in-service trainings should be enhanced.

**Keywords:** Teacher, professional development, in-service training, difficulties

## **Introduction**

For many years researchers have studied how to overcome difficulties related to improving teacher qualifications. In this context, concepts such as school development and teacher professional development gain more importance every day. Hopkins (1987) stated that there are different definitions of school development, the first of these two concepts, are available in the current literature. In one of these definitions, school development refers to improving schools for better learning. However, the second definition, which is more comprehensive, regards school development as a strategy. Applying this strategy, student outputs and management capacity of the schools can be enhanced. All these are educational transformation strategies (as cited in Hopkins 1996). Another definition in the same vein is that

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school development is used to mean changing education/learning conditions to achieve educational requirements and make schools more effective (Balci, 2007). When school development is achieved concepts such as school transformation, efficiency, and culture are affected, and these concepts are interactive (Hargreaves, 1995). For example, if the school does not attach importance to the job satisfaction of the teacher and if the teachers are unhappy, they may not want to develop their own expertise. Or the educational institution is not innovative and lacks a vision based on professional development may also cause the teacher to perceive the professional development as unnecessary. So the professional development of teachers cannot be ignored within this interactive network.

Professional development of teachers can be defined both ideally and realistically. An idealistic definition is given by Billings. Billings (1977) states that the professional development of the teachers is a continuous process encompassing the needs of the personnel. This is a planned process that provides professional satisfaction opportunities to teachers. According to this definition, personnel are aware of the development opportunities, experience professional satisfaction and the needs and actions of personnel appear to be consistent (as cited in Bell, 1991). With a variety of prepared programs professional development has been proven to increase the qualifications of teachers (Gaikhorst, Beishuizen, Zijlstra & Volman, 2015). As a result, professional development is a factor affecting increases in teacher qualifications.

The professional development of teachers can be summarized in four steps. These are participation in in-service training, changes in the knowledge and beliefs of the teacher, the changes in in-class practices and increases in the quality of the output (Clarke & Hollingsworth, 2002). Another point of view that summarizes teachers' expertise is the Lewin model. According to this point of view, there are three steps in teacher development. These are *unfreeze* which refers to the teacher abandoning old beliefs, *change* which refers to teacher's acquiring new information and *refreeze* which refers to assimilating and using the new information (Lewin, 1947). People generally have difficulty abandoning their beliefs. In other words they accept what they believe as true and they have a tendency to defend their beliefs. E le Roy (1917) stated people begin to believe the truth of their dogma, indicating the presence of this tendency.

Teachers, though not defenders of middle age mentality, are very reluctant to add new information to what they obtained during training or to accept that their information may not be up-to-date. However, the information they refuse to update makes them feel insufficient and the feeling of insufficiency is a factor that negatively affects people's motivation (Pajeras, 2003). As a result, a change in teachers' beliefs provides observable outputs of teacher daily lives. On the way of being more effective teacher, professional development may lead teachers to update their knowledges. Via professional development teachers can develop new abilities that can change the surface of old ineffective education.

Professional development has many outputs for teachers. Some examples of these outputs are improvement in ability, knowledge, understanding and efficiency in school (Rhodes & Brundrett, 2009). Schlager and Fusco (2003) do not consider in-service training merely a course. According to them, in-service training is a learning process of putting what is learnt into practice. Consequently, professional development of teachers aims to obtain better student outputs through enhancing the competence of the teachers (Hampton, Rhodes, & Stokes, 2004). Therefore, it is necessary to transform schools into more efficient places. As stated by Louise Stoll (1992), teachers should be efficient researchers to acquire contemporary information, cooperating partners in the decision-making mechanisms of the schools and be involved in a continuous learning process to render schools efficient. In the literature, the key components to successful change are defined as a high level of teacher cooperation and teachers' involvement in the decision-making mechanisms (Holden, 2002; as cited in Rhodes & Brundrett, 2009). Nevertheless, different components should also develop to allow change because the change process of the school encompasses multiple factors such as leadership and management. The effect of management of the school is related to the leadership at the school. It seems that management, directly or indirectly, affects the educational quality of the school (Hallinger & Heck, 2003; Leithwood & Jantzi 2000). School management plays a crucial role in the development of schools; however, management are only one of the tens of factors within the ideal systematic structure. Accordingly, for the school to exhibit a holistic development it is necessary that the multidimensional system gain functionality.

A systematic development plan is required in order to achieve sufficient school development. Within this development plan, the development of the teachers' expertise takes an important place. To this end, there are 4 professional development models; these are apprenticeship, course-based, school-based, and school-centred models. As can be understood from the name of the apprenticeship model, which is the first of these models, this model is based on the fact that educating teachers in line with an apprentice-expert relationship may be beneficial. The second model, the course-based model, proposes that it is possible to create development through courses such as in-service training, which are currently undertaken in the Republic of Turkey (Bağcı & Şimşek, 2000, MEB, 1996). It is evident that these two models are based on individual initiatives. The other two models are based on group approaches. One is the school-based education model which states that schools should determine their needs and run a development programme in line with these needs. The school-centred model emerged out of the need to correct the deficiencies of the school-based model and advocates that each school needs to put a development model into practice for personnel. In the school-based model, the school personnel are responsible for determining all educational needs and running the development programme. Nonetheless, in this model the school is able to determine its own needs; however, the trainings performed are more centralized at institutions like schools (Bell & Day, 1991). In many education systems, one of these models is used for professional development of teachers. In Turkey, the course-based model is commonly preferred. The Ministry of National Education figures reveal that 16483 teachers participated in in-service training with 36.6% participation rate in 2009 (MEB, 2009). The 36.6% participation rate might be considered a significant value but if the aim is to achieve a clear professional development goal, this rate and in-service training perceptions do not appear to be satisfactory compared to levels in developed countries. Further, in 2015 and 2016 in service training activity report of National Ministry of Education (MEB, 2015; 2016), most of the aims of trainings seem reached, but complaints have still being continuing (Şahin & Türkoğlu, 2017). Thus, although in-service training participation rates are acceptable, it can be said that the effectiveness levels are low. This indicates that in-service training is not effective for development.

As seen in the literature, school development and teacher professional development are intertwined concepts. So it is necessary to consider the other developments in order to explain the change and development of one. As mentioned above, many factors, including the attitudes of the students in the school, the in-service training conducted by the Ministry of National Education and the working atmosphere of the schools, can be reflected positively or negatively on the professional development of the teachers. From this point of view, it is aimed in this study that the development of the teacher professional development and the obstacles to the development of the teachers are showed.

## **Method**

This study was carried out via a qualitative research method. A phenomenological research pattern was used in the study. The phenomenological research method is used with the aim of analysing the perceptions and attitudes of the individuals to certain subjects, based on their experiences in detail (Creswell, 2012).

### *Sampling*

The extreme or deviant case sampling method was used in the study. Extreme or deviant case sampling is used when extreme cases can provide rich information (Neuman, 2007). This sampling method was preferred in this study because examination of the extreme opposite examples helps explain the limits of a case and provides detailed information about the subject. Accordingly, two schools in the Eastern Black Sea Region, Turkey with good and bad working conditions and professional development opportunities were included in the sampling. Four volunteer teachers from each school were included in the study.

### *Participants*

In this study, good and bad working conditions, intentional and offensive politics of school administration to break the motivation of teachers, reduce professional satisfaction and cooling out. The statements of good and bad working conditions belong to participants. All participants stated the same opinions about the working



conditions of schools' which are in the same region. When these two schools were selected, interviews were made with the teachers from different branches working on the ground, and the name of the two schools came to the fore in terms of the working atmosphere. This was followed by interviews with the teachers at the designated schools and the validity of this classification among the teachers was tested. At this stage, the opinions of the participants were used in the classification of working conditions. Teachers in both schools classified both their own schools and other schools and observed that the best and worst school assessments overlap with each other in terms of working atmosphere.

T1, working at good school in the chosen region, complained about previous in-service trainings attended and the lack of quality. Although they are happy with the attitude of the school management, they suggested that there was not a healthy cooperation between teachers and school administration. Displaying a comfortable attitude during the interview, T1 stated they were not afraid of encountering any problem in the future due to what they would say, and that they would express the current problems in the most open fashion.

Working at same school with T1, T2 had attended in-service training for their area and saw the most significant problem of in-service training as insufficient quantity and quality. Happy with the comfortable attitude of the school management, T2 was nervous during the interview and contrary to assurances about the confidentiality of information shared, found it difficult to express their opinions easily. When asked about the possibilities for professional development at the school, they could not give a clear answer but said the school was successful in this regard, displaying a tendency to avoid stating contrary opinions.

Working at the school with bad atmosphere in the region, T3 was an excitable and energetic person. Before the interview they stated they had experienced severe bullying. They complained about the lack of seriousness of in-service training attended in their first years in the profession. They complained that the school had no possibility for development, in fact even purposely prevented development. During the interview T3 was observed to be willing to talk about topics of complaint, reflecting the comforting effect of expressing themselves in gestures and facial expressions.

T4 said that she had a different political perspective from management. She added because of that management would take an unfair action because of her responses. So she said she was anxious. They worked at the school with good conditions in the region. With the tension reduced slightly by assurances about the confidentiality of any answers given before the interview, T4 appeared to be avoiding by only touching on interpretations and opinions. They stated they were not sufficiently happy with in-service training received.

Working at the school with bad conditions in the region, T5 was very eager to give their opinions. Stating they were overwhelmed by severe bullying experienced at the school and extreme workload, T5 complained that in-service trainings lack quality and seriousness. Additionally they complained of the intimidating effect of the school's lack of any organisation for self-development and that this effect had nearly caused them to lose interest in their profession.

T6 comfortably participated in the interview with a calm appearance and confident behaviour. Working at the school with good conditions, T6 complained that the school presented no opportunities for self-development, and that in-service trainings attended lacked seriousness and aim. Stating they had experienced less bullying in the school than their colleagues due to being newly assigned there, T6 still thought the situation was unacceptable.

T7 worked at the school with good conditions in the region. They talked with comfortable attitude, stating themselves in a sure manner. They had not attended in-service training; however, due to what they had seen and heard second-hand, they thought this training lacked seriousness and did not believe there was any benefit to it. Though the conditions at the school were good, they stated there was no supportive vision for expert development and stated that though they had not exerted any pressure themselves that did not mean they were ignoring the problems in the system.

T8, working at a school with good conditions, expressed their opinions comfortably with open statements and body language. They complained that in-service training received was given by non-experts and lacked seriousness. On the other hand, if they could use their excess time and energy after working productively (though this was

very difficult due to tiredness, workload and stress), they thought they would provide partial personal development with their own means.

### *Procedure*

For teachers working under oppressive and intimidating conditions, the interviews were conducted in their homes in order for them to express themselves freely, not feel under pressure and to be free from the anxiety of being labelled. Confidentiality and school management being aware of the interviews were the primary concerns voiced by the volunteer participants. In this way, confidentiality was ensured and school managers were not aware of the interviews. The interviews with teachers from the second school with good working conditions and where the teachers have professional development opportunities were held in an empty room allocated for the interview by the school. This is because teachers stated that carrying out the interviews in the interview hall allocated by the school would not create any problems. The characteristics of the participants are presented in Table 1.

Table 1. Background information of participants

Code	Gender	Age	Teaching experience	Subject area	Working Condition	Received INSETE?	INSETE subject?
T1	Male	34	13	Physical education	Good	Yes	About branch
T2	Male	33	12	Classroom teacher	Good	Yes	About branch
T3	Female	24	3	Pre-school education	Bad	Yes	About branch
T4	Female	37	14	Classroom teacher	Good	Yes	About branch and out of branch
T5	Female	27	5	Pre-school education	Bad	Yes	About branch
T6	Female	26	4	Pre-school education	Bad	Yes	About branch
T7	Female	27	4	Pre-school education	Bad	No	-
T8	Female	31	8	Classroom teacher	Good	Yes	About branch and out of branch

INSETE: In-service training

### *Data Analysis*

In the interviews, 9 semi-structured questions were asked. These questions were thought to reflect the opinions of the teachers about professional development. The responses obtained were examined through three different analysis methods. These are (i) descriptive analysis method, which includes direct quotes for highlighting and objectively reflecting the important points of the statements in the interview, (ii) content analysis to determine the common themes in the interview records, and (iii) constant comparative method to compare opinions.

Participants were asked the following questions. *i)* How do you evaluate the possibilities offered by the Ministry of National Education for your professional development? *ii)* How do you assess the opportunities your school offers for your professional development? *iii)* How do you assess the role of teachers in the development of your school? *iv)* How do you evaluate teachers' tasks in school development? *v)* According to you, do you explain which one of the teacher and the school develops the other? *vi)* Do you explain which model is more effective in your professional development? *vii)* Which in-service trainings do you contribute more to your professional development? *viii)* Can you explain the problems of in-service training in Turkey? *ix)* Do you disclose your suggestions for resolving school development problems?

There is a single encoder in the study. The responses of the participants to the questions were recorded by voice and after they were transferred to the text, themes were created by setting similar expressions in the records and the frequencies of these themes were determined. After the coding process was completed, a supervisor's opinion was taken to confirm the correctness of the themes and the final format was given in the direction of the suggestions. In this way, the internal validity of the work has been tried to be provided.

## Results

In the first phase of the study, participants were asked whether teachers had systematic professional development opportunities through the Ministry of National Education or not. The responses given are summarized in Table 2.

Table 2. Views on teacher professional development opportunities via Ministry of Education

Code	T1	T2	T3	T4	T5	T6	T7	T8
I can find proper chances to develop myself	√							
I can partially develop myself in this system		√		√	√	√		√
No, there is no chance to develop in this system			√				√	

As Table 2 illustrates, the majority of teachers do not think that the Ministry of National Education provides good opportunities to teachers for professional development within the education system. It is worth noting that five teachers gave *partially* in answer to the question (T2, T4, T5, T6, T8) and complained that they could not find opportunities for professional development within the system. T5 stated:

*"We have a general organization and mass problem to do with in-service trainings. They cannot resolve the mass problem. They train teachers from different branches at the same time. Consequently, it inhibits practice. Only theory is taught but we all learnt the theory at university."*

The same question including their schools was asked to teachers who stated that they do not have professional development opportunities provided by the Ministry of National Education with the aim of learning whether they have these opportunities locally. The results are summarized in Table 3. Table 3 shows the responses about professional development opportunities provided to the teachers by the schools. It is evident that the majority of the teachers are unhappy and have complaints. The striking point is that teachers said "I do not have professional development

opportunities and I am also prevented from accessing them". The response indicates the negative and unsupportive working atmosphere at the school.

Table 3. Views on the chance of developing in schools

Code	T1	T2	T3	T4	T5	T6	T7	T8
Yes, my school gives me opportunities to develop				√				
I can find some partial opportunities for development in my school		√						
No, there is no chance to develop myself in my school	√					√	√	√
I can find no chance to develop myself, I am even prevented from developing myself			√		√			

Taking the opinions of the teachers into consideration, it is clear that teachers do not think there is a professional development programme being implemented at the schools. While 4 out of 8 participant teachers stated that they did not have professional development opportunities, two of them stated that they both lack these opportunities and are being hindered from development opportunities. Examining the number who answered this question negatively, it is seen that 6 out of 8 teachers revealed that no professional development programme is being implemented at the schools. T1, the only teacher who answered this question positively, was asked about studies carried out for professional development of teachers and stated that no barrier exists for teachers who want to develop themselves and they were allowed to participate in such activities. This response indicates that the limited autonomy given to teachers seems satisfactory despite the absence of a professional development programme for teachers within the system. Likewise, T2, who works at a school with a positive environment, stated that their efforts are not being hindered saying that "*I can find partial opportunities to develop myself*". However, T4, who works at a school with a positive environment, stated that there was no planned professional development programme and only individual initiatives were being supported, and responded negatively to the question.

Looking at responses by T3 and T5, which are quite interesting examples, it is possible to gain an impression about the presence of negative working conditions and hindering attitudes.

T3: *"There is no study. There are only obstacles. That is not true... Even when we would like to participate in such activities, we experienced many difficulties. Difficulties in going, reaching, and acquiring the information.... There are no such school services, support services..."*

T5 was in agreement with T3: *"I don't think that the school I work at provides many opportunities. I can even say that they create disadvantages... More precisely, they demotivate the teachers. They prevent us from fulfilling what we could achieve. It is about their perspective on education. They also consider the school a private school, it is not like a state school; the families of the students have so much to say but the teachers are forgotten about..."*

It is understood that management has an influence on these opinions. These opinions are parallel with the literature studies on the impact of management on school development. The studies reveal that improving working conditions of the teachers maximises the impact of the leaders on the teachers (Leithwood, Day, Sammons, Harris, & Hopkins; 2007). Successful managers are those who try to achieve professional development at the school with a perspective embracing the personnel and the students (Rhodes & Brundrett, 2009). It can be said that the study findings are consistent with the literature. It is understood from the interviews that the management who display irksome and obstructive attitudes lead to loss of motivation of the teachers. On the contrary, it is observed that the teachers who work at the school with a positive working atmosphere tend to ignore many drawbacks at the school and support management. In brief, it can be observed that satisfaction of the personnel is a prerequisite to achieving professional development.

At the end of the interviews, it was determined that the intimidating attitudes of managers towards the teachers results in a loss of enthusiasm for their profession and decreases the performance of the teachers. It was also specified that teachers who faced such attitudes are less eager to support school development and are less enthusiastic about professional development.

### *The roles of the teachers in school development*

Aln this part of the study, the teachers were asked what kinds of roles they assumed in the development of the schools they are employed in. The purpose is to reveal whether they have a role in school development or not. The responses of the teachers to this question are summarized in Table 4.

Table 4. Ideas about the role of teachers in school development

Code	T1	T2	T3	T4	T5	T6	T7	T8
Implementing the requirements of being a teacher is enough	√	√	√	√			√	√
Every kind of work should be done	√							
Teachers should develop themselves			√		√	√		
Teachers should participate in social projects			√	√				

It was understood from the previous questions asked to teachers who participated into the study that the activities performed were insufficient in terms of professional development of the teachers. Table 4 indicates that 6 out of 8 teachers (T1, T2, T3, T4, T7, T8) expressed that it would be enough for the teachers to fulfill the requirements of the teaching profession.

The second most frequent response was that teachers should develop themselves. The responses clearly shed light on the fact that teachers consider themselves the source of the problem and share the responsibility.

Another striking fact that arises when Table 3 and 4 are assessed together is that many of the teachers believe that *the school will develop if the teachers develop themselves* even though they think that the schools do not provide professional development opportunities. This indicates that there are teachers conscious of problems in these schools, however, management are incompetent and hinder development.



T2: "If everyone is sincere, becomes aware of their duties and responsibilities, nothing is impossible"

With the sentence above, T2 implies that teachers and management have an equal role in achieving school development. Nevertheless, T2 chooses the word *sincerity* in this statement and implies that he or she has some doubts over the meticulousness of the management when performing their jobs. This situation indicates that teachers do not trust the personnel at their schools. The mistrust manifesting itself in this sentence might arise out of intimidating behaviour displayed by other teachers and other personnel toward T2.

The research conducted has proposed that most studies carried out for school development might do more harm than good. It can be asserted that lack of sincerity underlies the intimidating potential of these studies at schools. There are negative and positive examples regarding how the professional development concept increases success. This makes the situation controversial (Coe, 2009). Therefore, it should be considered that the expectation of sincerity of T2 is realistic and reasonable.

Upon learning the opinions of teachers about the roles that should be assumed in professional development, another question was asked to reinforce the response to the question and clarify its contents. This question asked what kinds of the roles teachers took on in professional development to obtain more concrete suggestions. Looking at the responses, the content is not very satisfactory. Six out of 8 teachers who participated in the study stated that teachers should participate in social projects. This response is quite thought-provoking. Despite the fact that teachers state they dislike social responsibility projects stipulated by the Ministry of National Education within the framework of various projects (e.g. conducting the family visits in a way which encompass the all families) when they exchange opinions with their colleagues or write on social media, the first response made by the teachers to the question of what should be done outside the school was *participation in social projects*. It is also the first response by the authorities at the Ministry of National Education. It can be claimed that this situation arises out of the fact that the personnel working under the body of Ministry of National Education have adopted a similar thinking system or that they answer the questions without thinking.

Table 5 illustrates the responses made to the question of what kinds of school development activities teachers can participate in. It is evident that teachers made quite limited responses to proposing concrete suggestions.

Table 5. Views on what teachers can do for school development apart from teaching activities

Code	T1	T2	T3	T4	T5	T6	T7	T8
Teachers should do all kinds of work	√							
Teachers should participate in social projects		√	√	√	√	√		√
Teachers should develop themselves							√	

The question was general in Table 4. The second most frequent response was that teachers should develop themselves. However, only one condition changed in this table and teachers were asked how they could contribute to the school apart from educational activities. The table clearly indicates that only one teacher thinks that he/she should develop herself/himself.

T6 *"It might be family-oriented... Our branch includes families socially not educationally... Things can be done for the families. E.g. conversation, group meetings... A common project... Education could be provided implicitly by keeping education in the background...Its purpose is to provide guidance but education can also be provided implicitly. Education will be our goal. The tool is different..."*

With regard to the question about the educational activities that should be performed, many of the teachers said that social projects should be implemented and that especially projects for families should be carried out. It is a generally accepted fact that family and environmental support are of great importance in projects implemented for successful school development (Guhn, 2009). The first project about family education is current parent teacher meetings and interviews and especially for class teachers or preschool education where children require one-to-one attention,

contact is made more frequently with parents. Nevertheless, in family education, an area which needs to be improved, it is highly probable that efforts to develop projects without practical, easy to understand content and a standard procedure will result in a waste of time and money.

Figure 1 shows that 6 out of 8 teachers who participated in the study (T1, T2, T3, T4, T5, T6) think that the basic factor in school development is the teacher. One teacher T7 thinks that the school is the main factor in development of teachers and another teacher T8 says that two factors are inseparable. Underlining an important point, T8 expressed that:

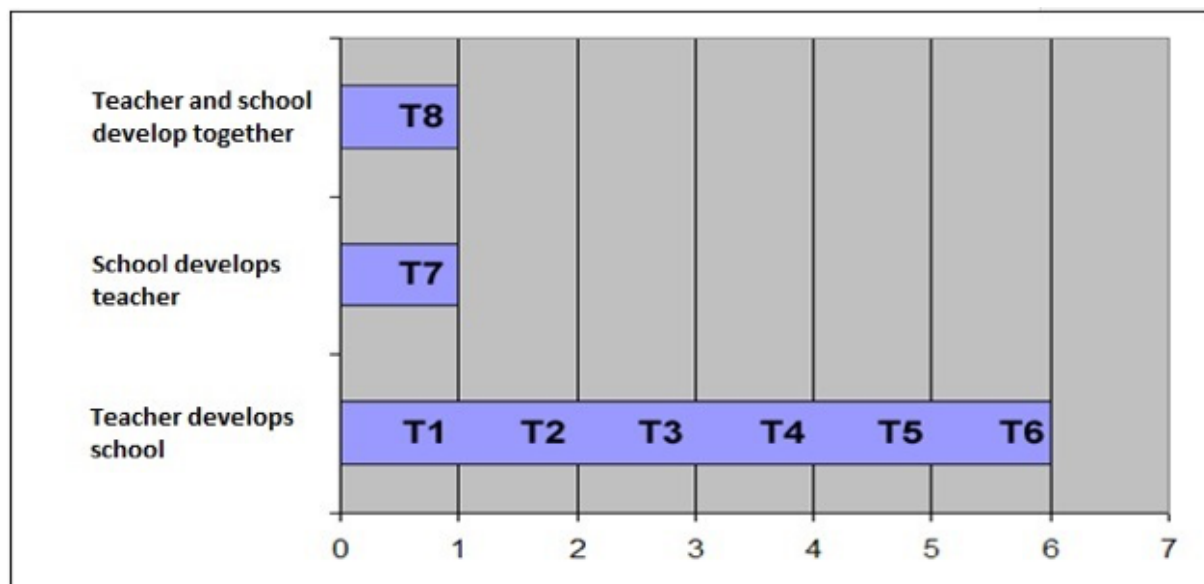


Figure 1. Teachers' views about which factors come first in development

*"If the teacher is good and the school is bad, the teacher develops the school; if the school is good and teacher is bad, the school develops the teacher. That's the only possible answer to this question."*

This sentence summarises the essence of school development. It is a relative concept whether the teacher develops the school or the school develops the teacher. Taking into consideration that teachers do not go through an intense internship period yet gain their own skills through the experience gained over time, it is fair to say that schools must serve as the places that develop teachers. This is because each faculty of

education provides education with different quality, and every teacher develops themselves at different levels and in different respects. Within this context, it is possible to prevent the new teachers from facing problems arising out of inexperience through the implementation of a programme for minimum development necessary for teachers.

As seen in Figure 2, the great majority of the teachers (T1, T3, T4, T5, T6) agree on the apprenticeship model. The majority of the teachers underlined the nature of teaching, which develops in time. Also, many of the teachers complained about the inefficient in-service training and the fact that these trainings are only conducted theoretically.

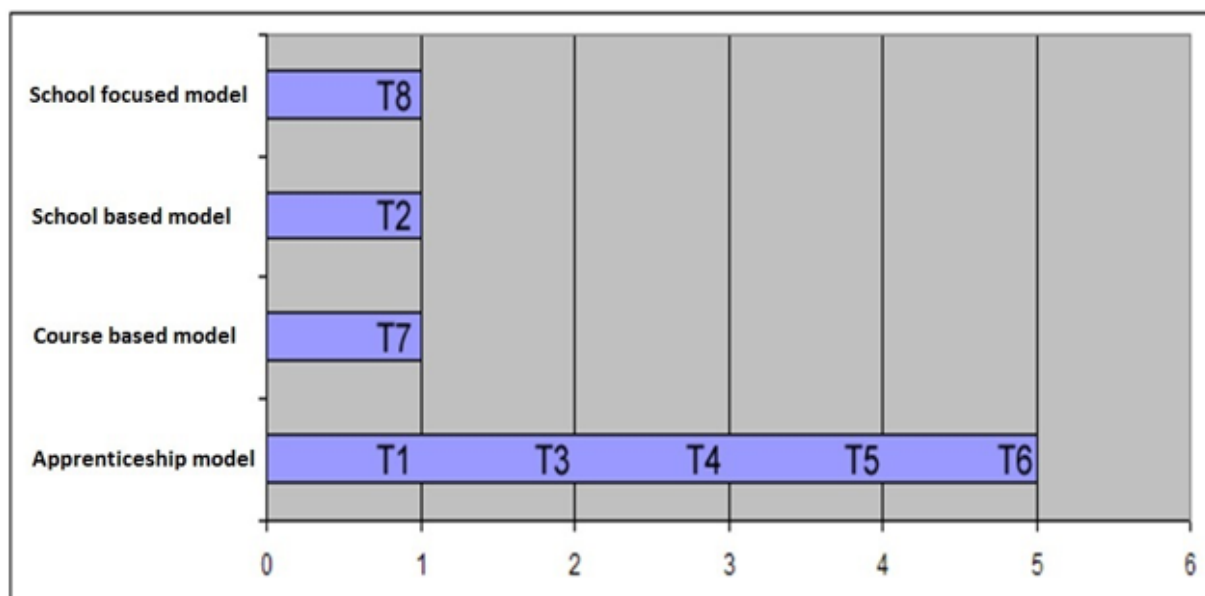


Figure 2. Teachers' choices of teacher professional development models

In this respect, T4 expresses that:

*"I think apprenticeship... For instance, I have been doing something better over the years. I am becoming better than last year. I have been teaching for 14 years. I look at my first years. It is definitely experience... Ok, you can participate in the seminars, do other things. They are also beneficial but what matters is definitely experience... Years are so important..."*

The studies performed reveal that the teacher development models are beneficial. For instance, a study conducted in England identified that a school-centred development model is better for teachers (Mc Dougal & Suires, 1997). However, studies carried out have illustrated that the apprenticeship model is the most important source in transmitting professional accumulation to the next generation (McCormack, Gore, & Thomas, 2006). Like most of the teachers whose opinions were asked, T4 advocates for the apprenticeship model and states that teaching is a profession that develops through experience. It might be considered that the attitude of T4 is a result of his/her experience but teachers who are new in the profession share the same opinion. This perception might result from the fact that even the experience gained within a short time can be translated into action in the teaching profession. It is not surprising that the teachers who are aware how much the experience contributes to the educational environment share the same opinion.

#### *Perspectives of the teachers on in-service training problems*

This topic was evaluated with two questions. The first related to what kinds of in-service trainings were demanded. The details of responses are summarised in Table 6.

Table 6. Teachers' INSETE course demands

Code	T1	T2	T3	T4	T5	T6	T7	T8
Courses related to branch	√	√			√	√	√	
Courses that can help teachers in class, like classroom management		√		√		√	√	√
Courses that can enhance the quality of teaching, like elocution			√				√	

INSETE: In-service training

In Table 6, it is clearly seen that the training demands of the teachers are divided in two. While the first group demanded training related to their branches, another group demanded training related to class management and so on. Two teachers, who

are in the minority, demanded training aimed at enhancing the quality of education. These two teachers gave examples of courses on diction, visual arts and music.

T3 underlined some overlooked points:

*“In my opinion, there are many things necessary for teachers; however, they are not given to us. Diction might be a good example. We received music lessons. What could have been taught instead of teaching us to play two childrens songs with a flute? We might have been taught to use our diagram instead. This is also mentioned in our target gains. Using your breath correctly. This year I had a hoarse voice. I went to the doctor and he said that I did not use my breath right. These might sound so simple yet I think we should have such courses. ”*

Some of the teachers achieve outputs which are below what is expected within this system. Professional development opportunities provided by the Ministry are inadequate for teachers who develop themselves above the average with respect to the requirements of their profession. The courses opened by the Ministry of National Education for teachers to develop themselves in the basic characteristics of the profession disappoint teachers who have already developed themselves in the relevant fields. Besides, the limited advanced professional development opportunities results in the perception that this profession is monotonous and closed to development.

The information in Table 7 was compiled from the opinions of the teachers concerning the shortcomings observed during in-service training. The majority of the teachers participating in the study commented in a limited manner on most of the questions. However, they made more comprehensive responses to this question compared to the other ones.

The most frequent response in Table 7 is the poor quality of the in-service organisation. Yet another complaint is that the in-service trainings are only theoretical and the trainers are incompetent. This response and other responses underline the fact that the in-service trainings are not implemented properly in the Republic of Turkey. They are far from ideal and are inefficient.

Table 7. Teachers' views on INSETE problems in TURKEY

Code	T1	T2	T3	T4	T5	T6	T7	T8
Only theoretical	√				√	√		
Seen as ineffective by teachers	√							
Inadequate to supply teacher demands		√		√				
Forced to join INSETE		√						
All courses not found in every city		√					√	
Limited number of subjects				√				√
Requirement analyses not completed regularly					√			
Staff who give INSETE not expert on the subject of the course					√	√		√
Crowding on these courses						√		
Joining INSETE not enforced							√	
INSETE planned very badly & without seriousness			√		√	√		√

INSETE: In-service training

Underlining the importance of being systematic, T3 expressed that:

*"I guess there is an organisational drawback. When we participated in the training, the professor was not informed about it. He did not even know that he would participate in such an event. He was called that day and came the next day hurriedly. This is so sad because we go there prepared, allocate our time. I thought that it would be intense and we would learn new things. New information... We would leave there loaded with information. But frankly it was shocking... You spare time, make the effort, go there but there is no trainer. The organisation is poor and it does not have intense content either. It felt like it was just done to tick the boxes and was not organised meticulously... And I just heard that it happens each and every year."*

As can be understood from the opinion of T3, the in-service trainings are not conducted as desired. The trainers are not chosen carefully, and this results in involvement of incompetent individuals in these trainings. This gives rise to the perception that in-service training doesn't contribute to the teachers. Both the trainers and those who assign these trainers contribute to the negative perception of the trainings and cast doubt on the benefits of in-service training.

### 3.3 Solutions offered by the teachers for professional development problems at the schools

The last part of the study aimed to learn the solutions offered by the teachers for school development. The purpose of obtaining these responses is to learn whether the teachers who have complaints about the absence or insufficiency of professional development can offer solutions. The responses made are given in Table 8.

Table 8. Teachers' solution suggestions for school development

Code	T1	T2	T3	T4	T5	T6	T7	T8
Social activities should be enhanced							√	
Physical infrastructure should be maintained				√		√	√	
Class populations should be decreased		√		√		√		
People without teacher qualifications must not be appointed as teachers						√		
Inspectors must be experts in the inspected area						√		
INSETE should be systematic & qualified						√		
Team work should be encouraged in school					√			
Management should relax strict attitudes toward teachers					√			
Management should be qualified in public relations & education					√			
Pupils should be divided into level classes				√				
Education should be related with further education levels			√					
New education models should be investigated thoroughly & then implemented		√	√					
Parents should be educated								√
Businessmen should support schools by providing funds	√							
Branch classes should be created								√

INSETE: In-service training



In Table 8, it is seen that there are many problems with school development. The interview results show that crowded classrooms and insufficient physical conditions at the schools are the primary barriers to school development.

Within this context, T5 stated: *"Firstly, this mentality has to change... Management should be leaders. Also teachers should work with intrinsic motivation. "*

T7: *"First of all, I would like to touch upon the buildings and the equipment of the school. School gardens and buildings should be similar to private schools. Why do our children receive education in worse buildings and bad classrooms?"*

T7 expressed that the school buildings have many insufficiencies including appearance, educational materials and internal equipment. T7 also stated in the interview that private schools create the image that *"They provide high quality education"* with visual appearances and one of the most serious issues for state educational institutions is that they cannot create the same trust and are not able to provide the same opportunities. Today, it is considered that physical equipment and infrastructure are very important, and the extent that lessons taught in classrooms with broken desks and students shivering with cold are assimilated by the students is debated. If a student is shivering from cold, they will firstly think about being warm and will not be able focus on the class. Additionally, drawing a computer screen instead of teaching using a computer programme directly deprives the students of the opportunity to practice what is taught and eliminates the opportunity for experimental learning. This problem and similar problems are related to improving the physical equipment and the expectation of having a forward-thinking education system without contemporary physical equipment is not realistic.

T6: *"...Focus should be placed on the education, educator and supervision should be performed properly and the inspectors should be competent"*

The studies in the literature suggest that inspection affects the school development in a positive way (Ehren & Visscher, 2008). However, these studies have not investigated the impact on the teachers of the inspectors supervising the different branches. T6 highlighted the fact that supervisors should be chosen from the relevant fields. T6 stated that the inspectors who examine an irrelevant area (renamed

education inspectors) created a negative impact on teachers. Therefore, it should be taken into consideration that the supervisors who received education in the relevant field should perform supervision.

## **Discussion**

This study aiming to identify the professional development problems of teachers and schools clearly indicates that there are many challenges ahead of development. Similarly, in the literature, studies carried out show that there are many challenges awaiting solutions in the professional development of teachers.

The first finding obtained in this study is that teachers think that the in-service trainings are not conducted in a planned and serious manner. The second finding is that in-service trainings only encompass theoretical information and the educators are incompetent. This results in a loss of trust in in-service training. The third finding is teachers only weakly believe that the errors in the system will be corrected. Fourth one is that teachers consider the management to be barriers and find them incompetent. The fifth finding is that teachers don't believe that preventing incompetent managers from taking managerial positions is likely. The 6th and last finding is that the absence of ideal conditions at the schools adversely affects the quality of the education.

The first finding of the study indicates that the in-service trainings conducted in Turkey are not satisfactory in terms of quality and content, are not conducted in a serious manner and are disorganised. Actually, some studies revealing similar findings about quality problems of in-service training in Turkey are available. These studies report a serious problem that those who develop, implement and evaluate the in-service training programs are not educational experts and the current in-service training developers, implementers and evaluators are not educated in the respective fields (Aytaç, 2000, Özaydın & Çolak, 2011). The findings obtained within the scope of this study suggest that this problem remains unchanged today.

The in-service trainings, the primary factor that helps teacher development, are not application-oriented and do not spur development. This is an on-going problem that

has been encountered with in-service trainings before (Ersoy, 1996; Schlager & Fusco, 2003). The studies conducted reveal that the programmes should be developed by individuals competent in the field and then with the teachers in order to overcome in-service training problems (Aydın, 1987). However there are studies which have found that the school development of management provides nothing to help teachers develop themselves within their own schools (Nuri & Dağlı, 2014). This situation indicates serious problems with in-service educational activities both within the school and outside the school.

Research on teachers in preschool education have shown that teachers who perceive the school culture positively have more self respect, higher occupational satisfaction and fewer health problems (Wong & Zhang, 2014). As a result to solve problems in teaching, which is a high-stress job, as much as professional development and school development are important, it is necessary that school culture be perceived positively. Management are at the focal point of all these development activities. The fact that management does not have managerial qualities, vision and communication skills is considered a factor that impedes professional development of the teachers. Preliminary studies indicate that management with leadership qualities carries the development of the schools forward (Rhodes & Brundrett, 2009; Leithwood & Jantzi, 2000). Some teachers who faced suppressive behaviour and psychological violence were concerned over being labelled, and over facing pressure. This justifies the evaluation because development is a concept that can be achieved with free thought, exchange of opinions, discussing needs, and sharing the information in a free environment (Aysevener, 2017). It cannot be expected that teachers develop themselves freely at schools where unqualified management who use destructive language are present (Arslantaş & Özkan, 2014). Therefore, selecting management in line with competence and questioning whether they have leadership skills or not are necessary in terms of paving the way for professional development activities. However, because of the general characteristics of the practices in place so far, it appears that teachers do not believe that unqualified managers can be eliminated from the system. To this end, the managers who are knowledgeable, who have communication and leadership skills should be assigned in the long run and those who are unqualified should be assigned to different positions. Thus, the trust of the teachers in the sensitivity shown in selecting the managers will be restored.

The last finding obtained is that the poor physical conditions at schools adversely affect teacher development. Teachers stated that high student population negatively affects the quality of the education and teachers have to exert more energy and be more devoted in order to enhance the decreasing quality of education. The general expectations of the teachers include providing service under healthy educational conditions and finding opportunities to develop themselves. Within this context, decreasing the number of students in classes, enhancing the working conditions of the teachers and other physical conditions, selecting management who are skilful and attach importance to the development of school and teachers are among the measures that need to be taken. However the development of technology in school buildings is affected by political decisions and the urbanization process (İbrahim, Osman & Bachok, 2014). As a result lowering the number of students in classes involves topics within the scope of policy-makers, such as building more schools or increasing the capacity of pre-existing schools. Additionally important responsibilities fall on management to improve the working conditions in schools. Researchers have shown that management do not affect self-development of teachers and school development (Hoşgörür, 2014). However there are many data sources that can be used to change the working atmosphere and encourage school development. Resources such as inputs, processes, context and process outputs can be assessed and are resources that can be used for school development (Ikemoto & Marsch, 2007). All of these efforts indicating the school's total development activities suggest the need for qualified leadership. Upon identifying these, it is necessary to translate a contemporary and efficient in-service training into action. On the other hand, an interactive communication channel between management, ministry and teachers free from intense bureaucracy should be established and accordingly, the problems should be identified within a short time.

One of the most significant limitations of this study is that it encompasses two school types and it is carried out at pre-school and primary and middle school levels. Therefore, no information about the extent of the similarity between the problems at high school level has been obtained. However, previous research showed that the same problem exists at that education level (Gönen & Kocakaya, 2006; Tekin & Ayas, 2006). So these research findings indicate that these problems exist at other education levels.

Even though interviews were held with a total of eight teachers from two different school types and the opinions of participants from the schools with the best and worst working conditions were included through extreme or deviant case sampling, it was found that teachers agree on many points regarded as problems. This situation indicates that these problems are recognised by different individuals, independent of their condition and positions.

With results in parallel to the results of previous studies, though this study is helpful in providing a significant idea about the source of the problem, there is a question mark as to how much this teacher development problem in the Turkish education system can be generalised as it was identified from a sampling of only eight individuals. Different types of generalisation can be used with quantitative and qualitative studies. Firestone (1993) defined three generalisation types for known case to case translation as statistical generalisation, analytic generalisation and transferability. The appropriate type for our study is analytic generalisation. Analytic generalisation begins from the current situation and sample and means that similar results may exist for groups in similar conditions (Polit & Beck, 2010). This study found that in schools with opposite environments of comfortable, non-coercive and supportive conditions and coercive, intimidating and psychological violence levels, teachers working at preschool level, class level and physical education teachers complained about in-service training and that there were no opportunities to develop at the school. This shows that the working conditions did not affect their opinions on the lack of quality of in-service training or on the lack of opportunities for teachers to develop themselves. At this point, the sampling method becomes important for generalisation. Extreme or deviant case sampling includes participants working in the best and worst conditions and is a sampling method that allows researchers to obtain results about the end-member situations and compare them (Teddlie & Yu, 2007). Within the scope of this study teachers from schools with the best and worst working conditions in the region had the same opinions of teacher professional development, so it may be considered that the perception in schools with moderate conditions will be similar.

While many previous studies have obtained parallel results to the problems identified in our study (Gönen & Kocakaya, 2006; Erişen, 1998), a comprehensive

study of the in-service training problems in Turkey has been performed (Aytaç, 2000). It was stated that the lack of solutions to this problem was rooted in the lack of a quality educational policy (Bağcı & Şimşek, 2000). As a result, the most important finding of this study is the perceptions of teachers in schools without serious difficulties and good working conditions. Combining the findings of this study with those from studies completed without using the deviant case sampling method, it appears that teachers in all working conditions are aware of the problem and draw attention to common failures. This situation indicates that teachers under different working conditions see the problem in similar ways.

Future research involving qualitative studies of political bureaucrats determining educational policies will be helpful to change approaches to teacher professional development, in spite of the obtained findings, and to determine the true reasons for failure of development. Additionally repetition of results obtained for education managers will be helpful to determine the opinions of managers who have their own complaints and for consideration in studies working toward a solution.

## References

- Arslantaş, H. İ., & Özkan, M. (2014). Öğretmen ve yönetici gözüyle etkili okulda yönetici özelliklerinin belirlenmesi. *The Journal of Academic Social Science Studies*, 26, 181-193.
- Aydın, M. (1987). Bir hizmet içi eğitim olarak denetim. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 2(2), 241-249.
- Aysevener, K. (2017). The value attribution function of teaching philosophy in a multi-cultural world. *Dokuz Eylül Üniversitesi Edebiyat Fakültesi Dergisi*, 4(1), 57-65.
- Aytaç, T. (2000). Hizmet içi eğitim kavramı ve uygulamada karşılaşılan sorunlar. *Milli Eğitim Dergisi*, (147).
- Bağcı, N., & Şimşek, S. (2000). Milli Eğitim personeline yönelik hizmet içi eğitim faaliyetlerine genel bir bakış. *Millî Eğitim Dergisi*, 146.

- Balci, A. (2007). *Effective School Development Theory Practice and Research* (4th Edition). Ankara: Pegem.
- Bell, L. (1991). Approaches to the professional development of teachers. In *Managing the professional development of teachers*, Buckingham Open University Press, 3-21
- Clarke, D. J., & Hollingsworth, H. (2000). Seeing is understanding: examining the merits of video and narrative cases. *Journal of Staff Development*, 21(4), 40-43.
- Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, 18(8), 947-967.
- Coe, R. (2009). School improvement: Reality and illusion. *British Journal of Educational Studies*, 57(4), 363-379.
- Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Erişen, Y. (1998). Öğretmenlere yönelik hizmet içi eğitim programları geliştirmede eğitim ihtiyacı belirleme süreci. *Millî Eğitim Dergisi*, 140.
- Ehren, M.C.M, & Visscher, A.J. (2008). The relationships between school inspections, school characteristics and school improvement. *British Journal of Educational Studies*, 56(2), 205-227.
- Ersoy, Y. (1996). Hizmetiçi eğitim ve yetiştirme kurusunu geliştirme-I amaçlar ve matematik öğretmenlerinin görüşleri. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 12(12), 151-160.
- Firestone, W. A. (1993). Alternative arguments for generalizing from data as applied to qualitative research. *Educational researcher*, 22(4), 16-23.
- Gaikhorst, L., Beishuizen, J. J., Zijlstra, B. J., & Volman, M. L. (2015). Contribution of a professional development programme to the quality and retention of teachers in an urban environment. *European Journal of Teacher Education*, 38(1), 41-57.
- Gönen, S., & Kocakaya, S. (2006). Fizik öğretmenlerinin hizmet içi eğitimler üzerine görüşlerinin. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 19(19), 37-44.

- Guhn, M. (2009). Insights from successful and unsuccessful implementations of school reform programs. *Journal of Education Change*, 10 (4), 337-363.
- Hallinger, P., & Heck, R. (2003). Understanding the contribution of leadership to school improvement. In M. Wallace & L. Poulson (Eds.), *Learning to Read Critically in Educational Leadership and Management* (pp. 215–235). London: Sage Publications.
- Hampton, G., Rhodes, C., & Stokes, M. (2004). *A practical guide to mentoring, coaching and peer-networking: Teacher professional development in schools and colleges*. Routledge.
- Hargreaves, D. H. (1995). School culture, school effectiveness and school improvement. *School Effectiveness and School Improvement*, 6 (1), 23-46.
- Holden, G. (2002). Towards a learning community: The role of mentoring in teacher-led school improvement. *Journal of In-service Education*, 28(1), 9–21.
- Hopkins, D. (1996). Towards a theory for school improvement. In Gray J. (Ed.), *Merging Traditions*, London: Cassell.
- Hoşgörür, V. (2014). School Development Applications in Turkey. *Education*, 134(3), 404-419.
- Ibrahim, N. M., Osman, M. M., & Bachok, S. (2014). Public School Development and Planning: Parents' Criteria of Selecting Public School in Gombak District. *Procedia-Social and Behavioral Sciences*, 153, 274-285.
- Ikemoto, G. S., & Marsh, J. A. (2007). Cutting through the data-driven mantra: Different conceptions of data-driven decision making. In P. A. Moss (Ed.), *Evidence and decision making*. USA: Wiley-Blackwell.
- Le Roy, E. (1917). What is a dogma? Editorial introduction. *The Monist*, 481-523.
- Leithwood, K., & Jantzi D. (2000). The effects of transformational leadership on organizational conditions and student engagement. *Journal of Educational Administration*, 38(2), 112–29.



- Leithwood, K., C. Day, P. Sammons, A. Harris, & D. Hopkins (2007). Seven strong claims about successful school leadership. *School Leadership and Management*, 28(1), 27-42.
- McCormack A. et al. (2006). Early career teacher professional learning. *Asia-Pacific Journal of Teacher Education*, 34(1), 95-113.
- Mc Dougal, A., & Squires, D. (1997). A framework for reviewing teacher professional development programmes in information technology. *Journal of Information Technology for Teacher Education*, 6(2)- 115–126.
- MEB (1996). Millî Eğitim Bakanlığı aday memurların yetiştirilmelerine ilişkin yönetmelik. Retrieved from: <http://mevzuat.meb.gov.tr/html/42.html>
- MEB (2009). Hizmet içi eğitim istatistikleri. Retrieved from: [http://hedb.meb.gov.tr/net/index.php?option=com\\_content&view=category&layout=blog&id=48&Itemid=73](http://hedb.meb.gov.tr/net/index.php?option=com_content&view=category&layout=blog&id=48&Itemid=73) Date: 21.05.2011
- MEB (2015). Faaliyet raporu. Ankara. Retrieved from: [http://sgb.meb.gov.tr/meb\\_iys\\_dosyalar/2016\\_02/29061209\\_2015darefaalyetraporu.pdf](http://sgb.meb.gov.tr/meb_iys_dosyalar/2016_02/29061209_2015darefaalyetraporu.pdf)
- MEB (2016). Faaliyet raporu. Ankara. Retrieved from: [https://sgb.meb.gov.tr/meb\\_iys\\_dosyalar/2017\\_02/28172815\\_2016\\_FR\\_webde\\_yayYmlanacak\\_kitap.pdf](https://sgb.meb.gov.tr/meb_iys_dosyalar/2017_02/28172815_2016_FR_webde_yayYmlanacak_kitap.pdf)
- Neuman, L. (2007). Toplumsal Araştırma Yöntemleri. Ankara: Yayın Odası.
- Nuri, E., & Dağlı, G. (2014). Evaluation of school development approaches by administrators at TRNC State Primary Schools, according to administrators, teachers, and parents. *Procedia-Social and Behavioral Sciences*, 141, 1074-1078.
- Özaydın, L., & Çolak, A. (2011). Okul öncesi öğretmenlerinin kaynaştırma eğitimine ve okul öncesi eğitimde kaynaştırma eğitimi hizmet içi eğitim programına ilişkin görüşleri. *Kalem Eğitim ve İnsan Bilimleri Dergisi*, 1(1), 189-226.

- Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading & Writing Quarterly*, 19(2), 139-158.
- Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International journal of nursing studies*, 47(11), 1451-1458.
- Rhodes, C., & Brundrett, M. (2009). Leadership development and school improvement. *Educational Review*, 61(4), 361-374.
- Schlager M. S., & Fusco J. (2003). Teacher professional development, technology, and communities of practice: Are we putting the cart before the horse?. *The Information Society*, 19 (3), 203-220.
- Stoll, L. (1992). Teacher growth in the effective school. In M. Fullan & A. Hargraves (Ed.), *Teacher Development and Educational Change*. (pp. 104-121). London: Falmer.
- Şahin, Ü. & Türkoğlu, A. (2017). Sınıf öğretmenlerine yönelik hizmet içi eğitim model önerisi. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*. 37(14), 90-104.
- Teddlie, C., & Yu, F. (2007). Mixed methods sampling a typology with examples. *Journal of mixed methods research*, 1(1), 77-100.
- Tekin, S., & Ayas, A. (2006). Kimya öğretmenlerinin hizmet-içi eğitim ihtiyaçlarının belirlenmesi: Trabzon örneği. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 31(31).
- Wong, Y. H. P., & Zhang, L. F. (2014). Perceived school culture, personality types, and wellbeing among kindergarten teachers in Hong Kong. *Australasian Journal of Early Childhood*, 39(2), 100-108.

# SERD | The impact of Jigsaw and STAD on social studies pre-service teachers' academic achievement\*

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## Abstract

The aim of this study is to compare two cooperative learning methods, jigsaw and student teams achievement divisions (STAD), in terms of their effects on social studies pre-service teachers' academic achievement. The study group of the research consisted of 40 students who attended teaching principles and methods course at Artvin Çoruh University College of Education Department of Social Science Education. Data was collected during 12 weeks implementation and with Academic Success Test (AST) which was developed by the researcher and was analyzed with independent samples t-test and one way analysis of variance (ANOVA). The findings of the research show that STAD is more effective than jigsaw on social studies pre-service teachers' academic achievement. Research also includes the recommendations for future applications.

**Keywords:** Cooperative learning, jigsaw, STAD, academic achievement, teacher education

## Introduction

Today's education should make students overcome the difficulties that they would face in work environment and everyday life. For this reason, "students not only need knowledge but also communication skills, problem solving skills, creative and critical thinking skills in the years ahead" (Zakaria & Iksan, 2007, p. 36). Therefore, it seem that teacher centered, traditional methods which are criticized for not attaching

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enough importance to problem solving and critical thinking skills (Hannafin & Land, 1997), give their place to the learning methods which consider different thinking techniques and participation. Cooperative learning is one of these methods that is student centered and aimed to improve social skills. In teacher centered classes “students become passive recipients of knowledge and resort to rote learning. The majority of work involved teacher-talk using either a lecture technique or a simple question and answer that demand basic recall of knowledge from the learners” (Zakaria & Iksan, 2007, p. 35). In cooperative learning groups on the other hand, “students are employing their social skills to help all group members to achieve and to maintain effective working relationships within the group” (Johnson, Johnson, Holubee, & Roy, 1984, p. 8).

In traditional learning groups students usually study individually and the system is competitive (Slavin, 1977). In individualistic and competitive models students are evaluated independently and generally with comparing with each other. This system is being criticized for many years. On the other hand new research shows that cooperative teaching techniques provides much more academic achievement and social development than traditional methods (Slavin, 1978). “An individualistic goal structure is one in which students are given individual goals, and by using a criterion-referenced evaluation system students are assigned individual rewards. Whereas student interdependence is required in the cooperative structure, students behave quite independent of each other in an individualistic structure. Individualistic structures usually use a criterion-referenced evaluation system” (Sherman, 1991, p. 5); however in cooperative learning “by sharing their knowledge with each other in small groups working toward a common goal, students can benefit from distributed cognition, where the strengths of one student complement the needs of another, and each increases her knowledge base” (Coke, 2005, p. 385).

In “cooperative learning, that has been widely researched and used in classrooms around the world since the 1970s” (Vaughan, 2002, p. 359). Cooperative “teams are evaluated and/or rewarded on the basis of how much each member improves; because each student's achievement increases the success of the total team members work toward a common goal (Ascher, 1986, p. 2). An effective communication occurs

among the members work together and students force their minds with thinking and discussing (Bayrakçeken, Doymuş, & Doğan, 2013). “Cooperative learning groups are based on positive interdependence among group members, where goals are structured so that students need to be concerned about performance of all group members as well as their own” (Johnson et al., 1984, p. 9).

Jigsaw and STAD are among the most well-known (Kagan, 1989) and most widely used (Leming, 1985) structures of cooperative learning. Also according to Slavin and Karweit (1979), these two methods are among the most extensively researched and according to Zetty (1992), well-researched and highly touted cooperative learning methods.

In accordance with the findings above, the research problem is stated as “what are the effects of jigsaw and student teams achievement divisions (STAD) on social studies pre-service teachers’ academic achievement.

## **Method**

The independent variables of the study are two of the cooperative methods, jigsaw and STAD; and the dependent variable of the study is social studies pre-service teachers’ academic achievement level. To measure the effects of these two cooperative methods on dependent variable pretest-posttest, no control group design was chosen. In this type of design, pretest is given to group or groups before the experimental process start. After finishing the experimental process the same test is given as the posttest (Sönmez & Alacapınar, 2011, p. 56).

### *Research Design*

In the study a quasi-experimental design was used. It is common situation that educators do not prefer true experimental design in their researches. Because, randomly selection of classes and students that are necessary for the research, is almost impossible (Cohen, Manion, & Morrison, 2000). Karasar (2005) also took attention to the difficulties of the studies conducted in ministerial schools in Turkey

and creating equal experimental groups. In such situations quasi-experimental designs were preferred.

### *Study Group*

The study group of the research consisted of 40 students who attended teaching principles and methods course at Artvin Çoruh University College of Education Department of Social Studies Education. The class was divided to two homogenous experimental groups: jigsaw (n=20) and STAD (n=20) implementation groups. The homogeneousness of two groups was determined according to the grade point averages of the previous year.

### *Data Collection Tool*

Academic Achievement Test (AAT), which was developed by the researcher, was used in the study. To measure the validity and reliability of the test, a pilot study which is a 50 question test was conducted with 150 students, who took the methods and principles of instruction course before.

Within the scope of the validity studies of the achievement test, making factor analysis for each item in the item pool, degree of difficulty and index of distinctiveness of each item were determined. Degree of difficulty of the items was found as between .11 and .97, and index of distinctiveness of the items was found as between .04 and .61.

Accordingly, it is understood that some items in the item pool are not convenient to the indexes of item difficulty and distinctiveness these items were extracted from the achievement test. Average item difficulty of the test, which consists of the remaining 30 items, was determined as .53. This result shows that the test has an average difficulty. The average distinctiveness of the test is calculated as .32. Thus, a fair level of distinctiveness was determined. Besides, it was determined that all the items in the achievement test are at an acceptable level. In accordance with the expert opinions and item analysis results, it can be said that the validity of the 30 question achievement test is high.

To calculate the reliability of the study, Kuder-Richardson-20 reliability coefficient was used. At the end of the analysis the reliability coefficient was stated as .68 and reached to the result that the achievement test is reliable.

### *Data Collection*

After applying the AAT to both jigsaw and STAD groups as pretest, teaching principles and methods course was committed in both two experimental groups for 12 weeks by the researcher. At the end of the implementation process AAT was applied to the experimental groups as posttest. The implementation processes of jigsaw and STAD methods in experimental groups were explained below.

#### *Implementation of Jigsaw*

For implementing the method, students were separated into five original groups. Each group has 4 members.

Titles	1 <sup>st</sup> OG	2 <sup>nd</sup> OG	3 <sup>rd</sup> OG	4 <sup>th</sup> OG	5 <sup>th</sup> OG
1 <sup>st</sup> subtitle →	A1	B1	C1	D1	E1
2 <sup>nd</sup> subtitle →	A2	B2	C2	D2	E2
3 <sup>rd</sup> subtitle →	A3	B3	C3	D3	E3
4 <sup>th</sup> subtitle →	A4	B4	C4	D4	E4

Figure 1. Jigsaw original groups and distribution of titles

After assigning the original groups, subtitles were distributed to each member of the original groups as in Figure 1. Subtitles they are responsible of and related materials were given to the each member of the groups. Then, members left from the original groups and were assigned to the expert groups as in Figure 2. Each subtitle was in one expert group's expertise area.

1 <sup>st</sup> Expert group:	A1,	B1,	C1,	D1,	E1
2 <sup>nd</sup> Expert group:	A2,	B2,	C2,	D2,	E2
3 <sup>rd</sup> Expert group:	A3,	B3,	C3,	D3,	E3
4 <sup>th</sup> Expert group:	A4,	B4,	C4,	D4,	E4

Figure 1. Creating jigsaw expert groups

After giving or suggesting necessary recourses by the researcher, each expert group got ready to their subtitle in union until the next class. These preparations involve both individual and group studies in homes, dormitories, and libraries.

The expert groups came to class with materials that they studied individually or together on. They had 30 minutes to study the materials they brought, discuss, combine the studies and review. At the end of this time, each expert group finished and reported their study on the subtitle they specialized on, with a report. During all the studies researcher worked as a guide in case of possible questions, problems.

After finishing the studies in expert groups, participants returned their original groups and each original group member share her study that she prepared in the expert group with a presentation. 30 minutes were given to original groups for this part of the study including the time for question-answer and discussing.

At the last step of the implementation in jigsaw group, all the participants took a four question, multiple-choice quiz. The answers were given to the participants, right after the quiz. And then they were given 20 minutes to correct their deficiencies.

#### *Implementation of the STAD*

Like in jigsaw group, the implementation process of the method was explained in details to the STAD group by the researcher in the first hour of the course. And like in jigsaw group, titles were divided in subtitles and committed starting with the second week of the semester and during 12 weeks. Considering AAT pretest results the participants heterogeneously grouped in fours same as in jigsaw group.



After distributing the students to groups, researcher made a 40 minutes presentation. During 12 weeks implementation process, researcher used techniques like direct instruction, question-answer, and visual presentation dependently on the characteristics of subjects. Following the researcher's presentation, participants went to the groups they assigned and started to "team study". For this study to provide interdependency in group, one work sheet was given to each two participants. Groups have 40 minutes to complete their studies. During all the studies researcher worked as a guide and answer the questions if nobody could in the group.

Finishing team studies, participants took a four question quiz. Also for each participant, 5 points below was accepted as her "starting point". By comparing the starting point and quiz score, "individual improvement score" was determined. And with the sum of individual improvement scores of each member in teams, the "team scores" were provided. Lastly, to appreciate the successful team, team scores were announced to whole class.

### *Data Analysis*

Data were analyzed with SPSS and using independent samples t-test and one way analysis of variance (ANOVA).

### **Findings**

For understanding if any significant difference between pretest points to make test of normality first and because number of participants is lower than 50, to determine distribution of data, Shapiro-Wilk test was made (Shapiro & Wilk, 1965). The results of Shapiro-Wilk test showed that pretest point averages of both two groups have a normal distribution. Thus, to compare jigsaw and STAD groups' pretest point averages independent samples t-test was used.

Table 1. Independent samples t-test results regarding Jigsaw and STAD groups' AAT pretest point averages.

Variable	Group	N	Mean	SD	df	t	p
Academic Achievement	Jigsaw	20	15.95	2.35	38	0.60	0.547
	STAD	20	15.50	2.32			

As stated in Table 1, at the end of the independent groups t test it was determined that there is no significant difference between social studies pre-service teachers' academic achievement pretest points ( $t_{(38)} = .60$ ,  $p > .05$ ).

To determine the effects of jigsaw and STAD on social studies pre-service teachers' academic achievement, one way analysis of variance (ANOVA) was used. For this purpose, a statistical process was applied by taking the mean difference of pretest and posttest points of social studies pre-service teachers in jigsaw and STAD groups.

Table 2. Analysis of variance results regarding the effects of Jigsaw and STAD methods on academic achievement.

Group	SS	df	MS	F	p	Significant Difference
Between groups	140.62	1	140.62	12.19	0.001	Jigsaw-pretest-
Within groups	438.35	38	11.53			posttest< STAD-
Total	578.97	39				pretest-posttest

As seen in Table 2, at the end of the ANOVA it is determined that there is significant difference regarding the mean difference of jigsaw and STAD groups' academic achievement pretest and posttest points ( $F_{(1, 38)} = 12.19$ ,  $p < .005$ ).

The study reached to the conclusion that using jigsaw and STAD is effective on pre-service teachers' academic achievement. To understand that which group was more effective, Tukey test, which is one of the PostHoc test, was done. At the end of the analysis, jigsaw group's pretest-posttest mean difference ( $X=1.10$ ,  $Ss=3.66$ ) was found lower than STAD group's pretest-posttest mean difference ( $X=4.85$ ,  $Ss=3.09$ ), ( $p<0,05$ ).

### **Discussion, Conclusion and Implications**

Academic achievement which is the dependent variable of the study was increased in STAD group significantly at the end of the study. This situation verifies Slavin's (1991, p. 90) statement that "STAD are most appropriate for teaching well-defined objectives with single right answers. Because, both Academic Achievement Test that was applied pretest and posttest in teaching principles and methods course the experimental process applied in, and the quizzes are consisted of single answer, multiple choice questions.

The results of this study that compares jigsaw and STAD in terms of their effects on academic achievement overlaps with Slavin's (1980) results he reached with six different studies that to improve the basic skills in mathematics and language lessons STAD is more effective than jigsaw. In another study (Zetty, 1992) that compares jigsaw and STAD different results were found. In that study jigsaw was found more effective than STAD.

This study that shows the positive effects of STAD, gave similar results with Tiantong & Teemuangsai (2013), Jalilifar (2010) and Brooks's (2009) studies that conducted with university students. Also Slagle's (2009) study, which done by trying STAD in secondary school social studies course, has similar results overlap the results with this study. The results of this study, support the results of the studies (Amornsinlaphachai, 2014; İbraheem, 2011; Efe, 2011; Gençosman, 2011; Conring, 2009; Özşarı, 2009; Tarım & Akdeniz, 2008; Alkaya, 2006; Bilgin, 2004; Vaughan, 2002) that tried STAD in elementary and secondary schools. But they do not support the results of Erdoğan (2008), Gelici & Bilgin (2007), Ergin (2007); Yıldırım-Kayabaş (2007) and Slavin (2007)' studies.

On the other hand, jigsaw is less effective than STAD on pre-service teachers' academic achievement and this situation is consistent with the studies (Arslan, 2012; Fies, 2008; Ross, Seaborn, & Wilson, 2002; Holliday, 1995; Webb, 1992) in the area that jigsaw was compared with and could not found any significant effect. But in the literature there are also studies (Şimşek, Örtten, Topkaya, & Yılar, 2014; Huang, Liao, Huang, & Chen, 2014; Evcim & İpek, 2013; Jurhill, 2011; Öner, 2007; Avşar & Alkış, 2007; Şimşek, 2007; Acar, 2006; Wang, 2006; Sönmez, 2005) that jigsaw is more effective than the methods compared with in terms of academic achievement and their results are not consistent with this study. With its results the research suggests to prepare curriculums that would pave the way for cooperative methods to take places in schools and teacher education adequately.

## References

- Acar, A. (2006). *İşbirliğine dayalı öğrenme yönteminin ortaöğretim coğrafya dersi yerleşme konusunun öğretilmesinde başarıya etkisi* (master's thesis). Gazi Üniversitesi. Eğitim Bilimleri Enstitüsü, Ankara.
- Alkaya, F. (2006). *Eleştirel düşünme becerilerini temel alan fen bilgisi öğretiminin öğrencilerin akademik başarılarına etkisi* (master's thesis). Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü, Hatay.
- Amornsinlaphachai, P. (2014). Designing a learning model using the STAD technique with a suggestion system to decrease learners' weakness. *Procedia-Social and Behavioral Sciences*, 116, 431-435.
- Arslan, A. (2012). Sözcük türleri öğretminde Jigsaw tekniğinin etkisi. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, 32 (1), 157-168.
- Ascher, C. (1986). *Cooperative Learning in the Urban Classroom*. Clearinghouse on Urban Education, New York.
- Avşar, Z., & Alkış, S. (2007). The effect of cooperative learning "Jigsaw I" technique on student success in social studies course. *Elementary Education Online*, 6 (2), 197-203.

- Bayrakeken, S., Doymuř, K., & Doęan, A. (2013). İřbirlikli ğrenme modeli ve uygulanması. Ankara: Pegem Akademi Yayınları.
- Bilgin, T. (2004). İlkğretim yedinci sınıf matematik dersinde (okgenler konusunda) ğrenci takımları başarı bölümleri teknięinin kullanımı ve uygulama sonuçları. *Uludaę Üniversitesi Eğitim Fakóltesi Dergisi*, 17 (1), 19-28.
- Brooks, A. (2009). *Regular college preparatory students' perceptions of the student teams achievement divisions approach in an academic college preparatory biology class* (Doctoral dissertation). Walden University, Minneapolis.
- Cohen, L., Manion, L., & Morrison, K. (2000). *Research methods in education*. London and New York: Falmer.
- Coke, P. K. (2005). " Practicing what we preach: An Argument for Cooperative Learning Opportunities for Elementary and Secondary Educators". *Education*, 126 (2), 392-398.
- Conring, J. M. (2009). *The effects of cooperative learning on mathematic achievement in second graders*. (Doctoral Thesis). Walden University, Minneapolis.
- Efe, M. (2011). *İřbirlikli ğrenme yönteminin, ğrenci takımları başarı bölümleri ve küme destekli bireyselleřtirme tekniklerinin ilkğretim 7. sınıf ğrencilerinin matematik dersi "istatistik ve olasılık" ünitesindeki başarılarına, tutumlarına ve motivasyonlarına etkisi* (master's thesis). Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü, Hatay.
- Ergin, M. (2007). *İlkğretim fen ve teknoloji konularının ğretiminde işbirlikli ğrenme yönteminin ğrenci başarı ve tutumlarına etkisi* (master's thesis). Seluk Üniversitesi Fen Bilimleri Enstitüsü, Konya.
- Evcim, H., & İpek, Ö. F. (2013). Effects of jigsaw II on academic achievement in English prep classes. *Procedia-Social and Behavioral Sciences*, 70, 1651-1659.
- Fies, C. (2008). Online jigsaw science inquiry for preservice teachers. *Journal of Computing in Teacher Education*, 24 (3), 85-92.

- Gelici, Ö., & Bilgin, İ. (2007). İşbirlikli öğrenme tekniklerinin öğrencilerin cebir öğrenme alanındaki başarı, tutum ve eleştirel düşünme becerilerine etkileri. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 12 (1), 9-32.
- Gençosman, T. (2011). *Fen ve teknoloji öğretiminde kullanılan öğrenci takımları başarı bölümleri tekniğinin öğrencilerin öz-yeterlilik, sınav kaygısı, akademik başarı ve hatırd tutma düzeylerine etkisi* (master's thesis). Akdeniz Üniversitesi Sosyal Bilimler Enstitüsü, Antalya.
- Hannafin, M. J., & Land, S. M. (1997). The foundations and assumptions of technology-enhanced student-centered learning environments. *Instructional science*, 25 (3), 167-202.
- Holliday, D. C. (1995). *The effects of the cooperative learning strategy jigsaw II on academic achievement and cross-race relationships in a secondary social studies classroom* (Doctoral dissertation). The University of Southern Mississippi.
- Huang, Y. M., Liao, Y. W., Huang, S. H., & Chen, H. C. (2014). Jigsaw-based cooperative learning approach to improve learning outcomes for mobile situated learning. *Journal of Educational Technology & Society*, 17 (1), 128-140.
- Ibraheem, T. L. (2011). Effects of two modes of student teams–achievement division strategies on senior secondary school students' learning outcomes in chemical kinetics. *Asia-Pacific Forum on Science Learning and Teaching* 12(2), 1-21.
- Jalilifar, A. (2010). The effect of cooperative learning techniques on college students' reading comprehension. *System*, 38(1), 96-108.
- Johnson, D. W., Johnson, R. T., Holubee, E. J., & Roy, P. (1984). *Circles of learning. Cooperation in the classroom*. Association for Supervision and Curriculum Development, St., Alexandria.
- Jurhill, D. A. (2011). *Propelling students into active grammar participation*. US Department of Education Educational Resources Information Center.
- Kagan, S. (1989). The structural approach to cooperative learning. *Educational Leadership*, 47 (4), 12-15.

Karasar, N. (2005). Bilimsel araştırma yöntemi. Ankara: Nobel Yayın Dağıtım.

Leming, J. S., (1985) Cooperative Learning in Social Studies Education: What Does the Research Say?, US Department of Education Educational Resources Information Center.

Muhammad, Z. (2010). *Effects of cooperative learning intervention on mathematics achievement outcomes and attitudes of non-science college majors*. Doctoral dissertation. Southern University and A & M College.

Neuman, W. L. (2013). *Toplumsal araştırma yöntemleri*. (Çev. S. Özge). Ankara: Yayın Odası.

Öner, Ü. (2007). *İlköğretim 7. sınıf sosyal bilgiler dersi tarih konularının öğretiminde işbirlikli öğrenme yönteminin öğrenci başarısına etkisi*. (master's thesis). Fırat Üniversitesi Sosyal Bilimler Enstitüsü, Elazığ.

Özsarı, T. (2009). *İlköğretim 4. sınıf öğrencileri üzerinde işbirlikli öğrenmenin matematik başarısı üzerine etkisi: Probleme dayalı öğrenme (PDÖ) ve öğrenci takımları-başarı bölümleri (ÖTBB)*. (master's thesis). Ege Üniversitesi Sosyal Bilimler Enstitüsü, İzmir.

Ross, M. C., Seaborn, A. W., & Wilson, E. K. (2002). *Is cooperative learning a valuable instructional method for teaching social studies to urban african american students?* Paper presented at the National Association of African American Studies, Baton Rouge, LA.

Sherman, L. W. (1991). *Cooperative Learning in Post Secondary Education: Implications from Social Psychology for Active Learning Experiences*. American Educational Research Association, Chicago.

Slagle, D. R. (2009). *The Use of the Cooperative Learning Strategy STAD to Promote Academic Achievement In a High School Social Studies Class*. Master thesis. Defiance College.

- Slavin, R. E. (1977). *Student Teams and Achievement Divisions: Effects on Academic Performance, Mutual Attraction, and Attitudes*. Johns Hopkins University.
- Slavin, R. E. (1978). Using Student Team Learning. *The Johns Hopkins Team Learning Project*. Johns Hopkins University.
- Slavin, R., & Karweit, N.L. (1979). *An extended cooperative learning experience in elementary school*. US Department of Education Educational Resources Information Center.
- Slavin, R. E. (1980). *Student Team Learning*. US Department of Education Educational Resources Information Center.
- Slavin, R. E. (1988). *Student team learning: An overview and practical guide*. US Department of Education Educational Resources Information Center.
- Slavin, R. (1991). Group rewards make groupwork work. *Educational Leadership*, 5, 89-91.
- Sönmez, S. (2005). *İşbirliğine dayalı öğrenme yöntemi, birleştirme tekniği ile bilgisayar okur-yazarlığı öğretiminin akademik başarıya ve kalıcılığa etkisi*. (master's thesis). Çukurova Üniversitesi Sosyal Bilimler Enstitüsü, Adana.
- Sönmez, V. & Alacapınar, F. G. (2011). *Örneklendirilmiş bilimsel araştırma yöntemleri*. Ankara: Anı Yayıncılık.
- Şimşek, U., Örtten, H., Topkaya, Y., & Yılar, B. (2014). Sosyal bilgiler öğretmen adaylarının işbirlikli öğrenme teknikleri hakkındaki görüşleri, *Turkish Journal of Social Research* 18 (1), 231-257.
- Şimşek, Ü. (2007). *Çözeltiler ve kimyasal denge konularında uygulanan Jigsaw ve birlikte öğrenme tekniklerinin öğrencilerin maddenin tanecikli yapıda öğrenmeleri ve akademik başarıları üzerine etkisi*. (Doctoral dissertation). Atatürk Üniversitesi Fen Bilimleri Enstitüsü, Erzurum.



- Tarım, K., & Akdeniz, F. (2008). The effects of cooperative learning on Turkish elementary students' mathematics achievement and attitude towards mathematics using TAI and STAD methods. *Educational studies in Mathematics*, 67 (1), 77-91.
- Tiantong, M., & Teemuangsai, S. (2013). Student team achievement divisions (STAD) technique through the moodle to enhance learning achievement. *International Education Studies*, 6(4), p85.
- Turgut, M. F., & Baykul, Y. (2012). *Eğitimde ölçme ve değerlendirme*. Ankara: Pegem Akademi Yayınları.
- Vaughan, W. (2002). Effects of Cooperative Learning on Achievement and Attitude Among Students of Color. *The Journal of Educational Research*, 95 (6) 359-364.
- Wang, R. S. (2006). *The effects of Jigsaw cooperative learning on motivation to learn English at Chung-wa Institute of Technology, Taiwan*. Doctoral dissertation. Florida International University, Miami.
- Webb, M. D. (1992). *The effects of the Jigsaw cooperative learning technique on racial attitudes and academic achievement* (master's thesis). California State University, Fresno.
- Yıldırım-Kayabaş, S. G. (2007). *İşbirliğine dayalı ve bireysel bilgisayar destekli öğretimin öğrencilerin başarısına ve öğrenilenlerin kalıcılığına etkisinin karşılaştırılması*. (master's thesis). Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Zakaria, E. & Iksan, Z. (2007). Promoting cooperative learning in science and mathematics education: A Malaysian perspective. *Eurasia Journal of Mathematics, Science & Technology Education*, 3 (1), 35-39.
- Zetty, N. (1992). *A comparison of the STAD and Jigsaw cooperative learning methods in a college-level microcomputer applications course* (Doctoral dissertation). West Virginia University, Morgantown.

# SERD | Understanding interaction between reading performance and message awareness, lexical awareness, and phonological awareness

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## Abstract

This research seeks to understand the interaction between reading performance and awareness of message, lexical, and phonological among seven years old children. The present research was designed in case-study, one of the qualitative research traditions. The research sample consisted of 22 seven-year-old children. The participant children's performances were observed and written-up notes were kept. Data were inductively analyzed. As a result of the data analysis, it was discovered that the children had a slight difficulty with recognizing larger structural units (sentences and words) but had considerable difficulty with smaller units (phonemes, syllables, and letters). Qualitative findings of the study were dealt with the Piagetian Theory and the Gestalt Theory. Findings of the research can be interpreted as that lexical and phonological awareness is more influenced by reading performance under Turkish language teaching context.

**Keywords:** Early literacy instruction, phonological awareness, lexical awareness, message awareness

## Introduction

Reading can be described as the process of translation of visual codes into meaningful language and aspect of language acquisition (Whitehurst & Lonigan, 1998). In other words, reading can be defined as a connection-forming process in which children link written words to their pronunciations and meanings (Ehri, 1991;

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1995). Reading is one of the components of language development. Therefore, reading is closely related to development.

Learning to read and write is such the most abstract aspect of the language acquisition that formal reading instruction begins in the concrete operational period in which children should reach necessary development stage to learn to read and write. Although there is a strong consensus among the academics when the formal reading instruction must commence, there is no consensus about how children are taught learning to read. In other words, reading instruction is too controversial. There are two main approaches in reading instruction. These are Phonetic Based Reading Instruction (PBRI) and Whole Language Approach (WLA). The PBRI claims that printed characters (graphemes) correspond to phonemes (sounds) so reading instruction must depend on direct instruction for the letters and sound (Adams & Osborn, 2006). According to the PBRI, there are two crucial elements in learning to read: understanding of spoken words' properties (phonology) and their written form (orthography) (Talcott, McLean, Rees, Green, & Stein, 2000). In the PBRI, it is considered that phonological awareness is so important for learning to read.

Phonological awareness is defined as the skill to be aware of the sound structure of the spoken language. Phonological awareness encompasses analysis (segmenting a word into its units) and synthesis (combining the constituent segments into the whole word) (Schneider & Naslund, 1992). Phonological awareness helps children to segment word into different parts. There are two ways in helping children to acquire phonological awareness. First one is the synthetic phonics approach. It teaches students to sound out and blend letters to form words. The latter one is the analytic approach that teaches children to divide words into their constituent letters and sounds (Crowley, 2014; Ehri, 2006). Phonological awareness can be measured and defined several different ways. Tasks designed to measure the construct range from recognition of rhyme (Does *fish* rhyme with *dish*?), sound--word matching (Does *fish* begin with /f/? ) and to isolation of single sounds from words (What is the first sound in *fish*?), blending (What does /f-i-sh/say?), deleting phonemes (Say *fish* without /f/), and other even more complex manipulations, such as children's secret languages (Stahl & Murray, 1994). Because of the fact that phonological awareness entails manipulating spoken words, the alphabetic principle is crucial to have efficient

phonological awareness. Alphabetic principle is the notion that letters stand for specific sounds. (Ehri, 1995; Stahl, Hester, & Stahl, 1998).

The alphabetic principle has crucial roles for phonological awareness. Because, it is impossible to distinguish sound-letter relationship without alphabetic principle. Development of alphabetic principle consists of four stages. The pre-alphabetic stage is the first stage. Children use cues to recognize words but can't use letters and sounds. The partial alphabetic stage is the second phase. It refers to that children acquire some phonologic awareness and knowledge of letter names and can match initial and final sounds to read or spell words. Even though they lack adequate knowledge of letter names to decode new words, they can remember how to read words by connecting some of the letters and sounds. Children can learn to read words through cues of an initial and final letter at the partial alphabetic stage. For example, reading the word "pencil" by identifying the /p/ and /l/ sounds in its spoken language and linking these to the letters /p/ and /l/ in its written language, just as paying no attention to /e/, /n/, /c/, and /i/ letters (Ehri, 1995). However, children may confuse similarly spelled words such as towel and tower (Ehri & Wilce, 1987). The full alphabetic stage is the stage at which children develop automatic word recognition. When children achieve automatic word recognition, they don't think about words in a text, just concentrate on the meaning of the text in the full alphabetic stage indicates that children have learned the major grapheme-phoneme correspondences. They have already acquired the ability to divide words into constituent units and blend them. At the full alphabetic stage, they can decode familiar words efficiently and establish complete connections between written forms of the letters and the phonemes in their spoken language. In addition to that, the full alphabetic readers learn the skills that help them recognize and sound out the words that they previously could not read. The consolidated phase emerges after children have retained full alphabetic stage completely. As they are familiar with letter patterns that recur in the different words, grapheme-letter connections are consolidated into larger units. This consolidation makes children more adept to more accurately decode and function morphemes and syllables that are multi-letter units (Ehri, 1995; 2003; 2005; Juel, 1983; Stahl, Hester, & Stahl, 1998; Stahl & Murray, 1994).

Phonetic skills are very important because of the fact that it improves phonological recoding which helps children to recognize sounds represented by the letters in the written word and blend them. A large body of research proved that phonological awareness and alphabetic principle have a positive impact on reading success, and predict children's later reading and comprehension skills. In addition to that, phonetic skills in the pre-school period are more predictive word recognition skills in the first-grade year. Therefore, it can be concluded that phonetic skills and alphabetic skills are the precursor of acquisition of the reading skill in the primary school period (Adams, 1990; Brown & Deavers, 1999; Caravolas, Hulme, & Snowling, 2001; Cardoso-Martins, 1995; Hatcher, Hulme, & Ellis, 1994; Hulme, Snowling, & Stevenson, 2004; Muter, Hulme, Snowling, & Taylor, 1998; Wagner, Torgesen, & Rashotte, 1994).

Whole Language Approach (WLA) is another instructional way to teach children to read. The WLA can be based on Gestalt theory and Piagetian part and whole perception. Gestalt theory claims that whole is different from its components and sum of components is not equal to the whole. In other words, the perception of the whole is radically different from the perception of its components (Rock & Palmer, 1990). Furthermore, it suggests that perceptual system ignores details of the parts, focuses on the larger units because the whole is more predictable than the detail. Word and letter relationship is an excellent proof of the Gestalt theory (Navon, 1977). Gestaltist researchers observed that readers are not affected by omission of the letter in texts or words that they read (Johnson, 1975; Warren, 1978). Piaget's idea that whole precedes the parts, is another contributor to the WLA. The children, who have already begun the formal reading instruction, are in the concrete operational period. In this period children use such general schemas because of the syncretistic understanding that they first perceive and understand the whole without analysis of the parts. This non-analytical habit stems from ego-centrism. When a child confronts an unfamiliar word, he assimilates the unknown word as a function of the general schemas that precludes him to analyze the word syllable by syllable or letter by letter (Piaget, 2005). Piaget's theory of the cognitive development indicates that children will only perceive the word as a whole that is compatible to the general schemas, not focus on the letters when they try reading an unfamiliar word whose one letter is missing.

The WLA stresses the importance of focusing on the meaningfulness of language. In other words, the WLA doesn't suggest that individual sound-letter relationship is taught initially. It advocates refuse to give individual sound-letter relationship in isolation initially (Stahl & Miller, 1989). They also believe that acquisition of reading as written language and acquisition of oral language break out and develop concurrently. Therefore, they note that acquisition of reading occurs as easily and naturally as the acquisition of language (Whitehurst & Lonigan, 1998). According to WLA speaking, writing, listening and reading are interdependent and interrelated.

The main aim of the WLA is to bring children into literacy through natural ways by removing the gap between children's own language competencies and written language (Stahl & Miller, 1989). In the WLA, skilled reading is a psycholinguistic guessing game in which reader deduces unfamiliar words from their contexts. Instruction in reading begins when children have adequate ability to think with words (Whitehurst & Lonigan, 1998). Because of the fact that children can more accurately identify words in context than isolated sound-letter relationship context (Goodman, 2005). For instance, in reading a text "*the cowboy rode a ...*" the reader can predict that the next word is "*horse*" and notice initial "*h*" to confirm his prediction. Therefore, teachers must encourage their students to make word-level predictions and use context aids (McKenna & Piccard, 2006).

If the WLA is implemented thoroughly, it instills love of literature, problem-solving and critical thinking skills. It has some advantages compared to the PBRI. These advantages include creating strong-concept of print, more positive attitude toward reading and word recognition. In addition, the fact that the WLA exposes readers to rich texts read aloud by teachers increases vocabulary growth (Stahl & Kuhn, 1995).

Teaching to read is a very controversial issue but there is a general rule that children first recognize larger and more obvious units such as messages, words, and syllables as they develop, they will notice smaller, more abstract units such as onsets, rimes, and phonemes (Murray, 2006). This rule roughly displays what method must be employed in teaching to read initially. Reading instruction begins to influence children's awareness of larger units within two years of reading instruction. After two years children develop sensitivity to the consistencies within the grapheme-phoneme system (Treiman & Kessler, 2005).

Learning to read depends on language characteristics. There are two types of language: transparent language and opaque language. There is always one to one correspondence between letters and sounds in transparent languages. In other words, every letter represents only one sound. Therefore, it is so easy to decode that it is easier to learn to read in transparent languages than in opaque languages. Contrary to the transparent languages there is not one to one correspondence between letters and sounds in opaque languages (Snowling & Gobel, 2011; Stahl, Hester & Stahl, 1998). Turkish is a transparent language in which every sound is represented by one specific letter.

In the Former Turkish Literacy Curriculum, reading instruction depends on the sentence analysis. First, children read aloud the sentences with the teacher. Second, the sentences used to be segmented into constituent words and the words were divided into their syllables and letters. After the students have come to notice the letters in the sentence, they construct different words with the same letters. This application depended on the WLA. This instructional application, based on the WLA, was rescinded in 2005 and the PBRI has been employed to teach reading. In the New Turkish Literacy Curriculum, phonemes of the letter are taught, and orthographic representations of the letters are introduced with various activities. The children's initial attempts of reading consist of two or three letters. As classroom teachers teach more phonemes with their letters, children can combine more letters to form words. While teachers are teaching the phonemes, they care to connect the phonemes and their letters with children's daily life and pre-existing knowledge. In the PBRI, children are expected to build up new words by combining the letters (Akyol & Temur, 2008; Bilir, 2005).

#### *The objective of the Research*

In the relevant literature it is emphasized that phonological awareness is a better indicator of reading performance, comprehension, and fluency. Demont & Gombert (1996) concluded that phonological skill improves recoding and decoding skills among primary school children. Suggate (2016) reported that training of phonological awareness improves comprehension skill of primary school children. De Jong & Van Der Leij (2002) found that phonological awareness is associated with word decoding in first grade. Cain, Oakhill, & Bryant (2000) concluded that

phonological awareness developed children's reading performance. Bus & Ijzendor (1999) found that phonologic awareness is an important skill in early reading as result of the meta-analysis. Stanovich & Siegel (1994), Wolf & Bowers (1999) emphasized that reading disabilities are related to phonologic awareness and processing. Moreover, Hogan, Catts, & Little (2005) found that phonologic awareness in kindergarten predicts word reading performance in 2<sup>nd</sup> grade of primary school. Hulme, Hatcher Nation, Brown, Adams, & Stuart (2002) concluded that phonological awareness is a good indicator of reading in kindergarten and primary school period. The present research aims to understand the influence of reading performance on message awareness, lexical awareness, phonological awareness, and explain through the Piagetian Theory and the Gestalt Theory.

## **Method**

### *Design of the Study*

Research in the social sciences aim to predict and control variables (1), understanding and interpreting a phenomenon under its natural settings (2), emancipating human beings (3) (Habermas, 1972). While predicting and controlling emphasizes quantitative research tradition, understanding and interpreting highlight qualitative research tradition. Purpose of the present study is understanding and interpreting participant children's letter recognition so qualitative research tradition was employed to design the study. Case study, one of the qualitative research traditions was employed in the study. Case study enables the researcher to investigate a bounded system (a case) over time through detailed in-depth data collection. Furthermore, the case study is very convenient for the researchers to use multiple sources of data collection such as observation, audio-visual materials, interview (Bassey, 1999; Creswell, 2007). Performance patterns of the participant children were sought to reveal in the present study. Therefore, participant observation was used to collect data.



### *Selection of the Participants*

In the study, the purposeful sampling strategy was used to include the participant children. Selection criterion depends on the criteria of learning the number of letters according to the National Turkish Literacy Curriculum within 5 months. Before the data collection, primary schools were visited, and class teachers were met in order to get approval and decide classroom case met the criterion. Therefore, 22 children who had received kindergarten instruction were included in the sample. All of them were seven years old and native Turkish speakers. After consent from the participant children's family was provided, the study was commenced. In addition, pseudonyms such as "*Participant Children 1, Participant Child 2*" were given to all of the participant children to keep their names secret and obey the ethical rules.

### *Development of Tasks as Data Collection Instrument*

Before tasks were determined the relevant literature was reviewed to decide what to ask the participant primary school children (Ehri, 2003; Metsala & Walley, 1998; Seidenberg & McClelland, 1989; Stanovich, Cunningham & Cramer, 1984). As a result of the literature review, it was decided that the task form consists of message awareness, lexical awareness, and phonological awareness. The task form was developed and designed by the researchers. The task form was investigated by experts of Turkish language, primary school teachers. The task form was revised along with the expert review. Finally, the task form includes 3 items for message awareness, lexical awareness, and phonological awareness. These components are concerning with message awareness, lexical awareness, and phoneme awareness. In other words, these components were arranged from larger units to smaller units. The teacher taught e, l, t, i, n, r, m, u, k, ı, y, s, d, ö, b. Therefore, in each of the parts, the researchers cared to use the letters, words, phonemes that the children had been familiar with.

In the first task, the participant was asked to read the text and match the text to the relevant picture. The researchers demanded that the children read the words and correspond to the relevant pictures in the second component. Finally, the children were asked to read and complete the missing letters (sounds) within the five selected words.

### *Entering into the Field*

After official permission from local authorities, necessary approval from participant children's parents, teacher was taken, the study was launched. The children were such the first graders who have started formal literacy instruction for about five months that walls of the classroom were decorated with letters, previously learned words, numbers. When all structured interviews with the participant children were conducted, all observation and field notes were displayed to the teacher of the participant children in order to comply with ethics rules.

### *Implementation of Data Collection Tools*

The researchers divided the children into five groups. Each group consisted of 4-5 children. The task form was implemented individually not whole. The tasks were asked in order from larger units to smaller units. Just as the participants were doing the tasks in the components, the researchers kept the notes through their observations. The researchers observed the participant children while they were fulfilling the tasks. Participant children's individual performances were observed; written-up notes were taken. Observations were analyzed according to results of the tasks in each part.

### *Data Analysis*

Written-up field notes of the observers about the participant children's responses to the tasks were analyzed inductively. Each researcher's written-up field notes were read iteratively, and codes were identified and clustered into categories, which is the larger concept.

## **Findings**

Findings of the research based on inductive data analysis were indicated below.

### Message Awareness

Written-up field notes were read, and codes were identified as “Word Awareness Within the Text”, “Adequate Awareness of the Task”, and “Adequate Awareness of the Task with Slight Spelling Difficulty”. Those codes were clustered into “Message Awareness” category.



Figure 1. The participant student 10's performance on the task

*“The Participant Child 22 read the text very fluently. In addition, she managed to find the animals name within the text then matched the relevant picture.”* This finding was coded as Awareness within the Text.



Figure 2. The participant student 7's performance on the task

*"The Participant Child 7 read the text fluently and matched the relevant picture without focusing smaller units such as words, syllable."* This observation note was dimensionalized as Adequate Awareness of the Task.



Figure 3. The participant student 11's performance on the task

*"The Participant Child 11 did not read very fluently and had a difficulty with spelling three words. Although he did not manage to perform the task very well, he seemed to understand the text then marked the relevant picture."* This written-up filed note was coded as Adequate "Awareness of the Task with Slight Spelling Difficulty"

Findings related to *Message Awareness Category* was interpreted as that all of the participant children could understand what the reading text implies although a few of them had difficulty with reading. Moreover, lack of phonetic skills did not impede poor performers to understand the text's meaning so findings related to *"Message Awareness Category"* can be explained that reading difficulty is not a barrier in understanding the text.

#### *Lexical Awareness*

The Participant Children were demanded to read the words and match the relevant pictures in this task. Codes were extracted from the observation and the Participant Children' performance on the task.

Codes were extracted from the observation notes and determined as “*Adequate Word Awareness*”, “*Adequate Word Awareness with Slight Spelling Difficulty*”, “*Deficient Awareness of Word*”. The tasks are about lexical performance so those codes were grouped into “*Lexical Awareness*” category.

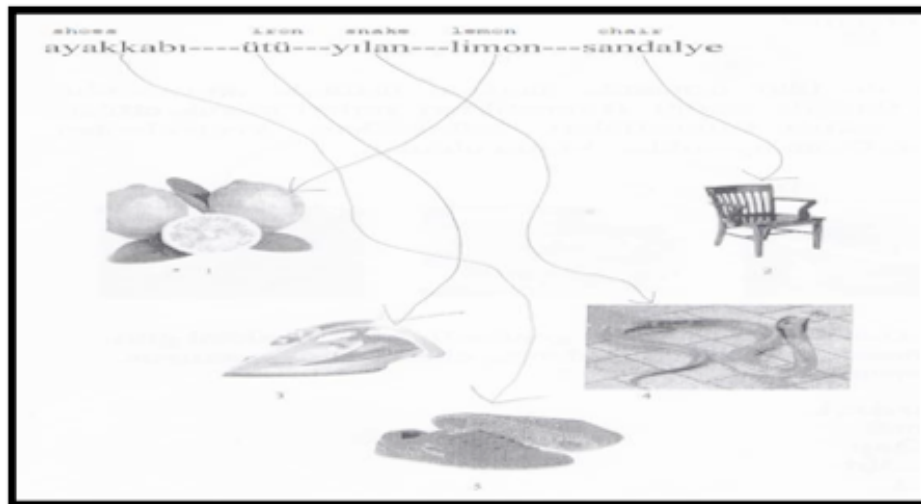


Figure 4. The participant student 20's performance on the task

*“The Participant Child 20 read the words without any difficulty and matched the words to their relevant pictures very easily”*. It was coded as “*Adequate Word Awareness*”

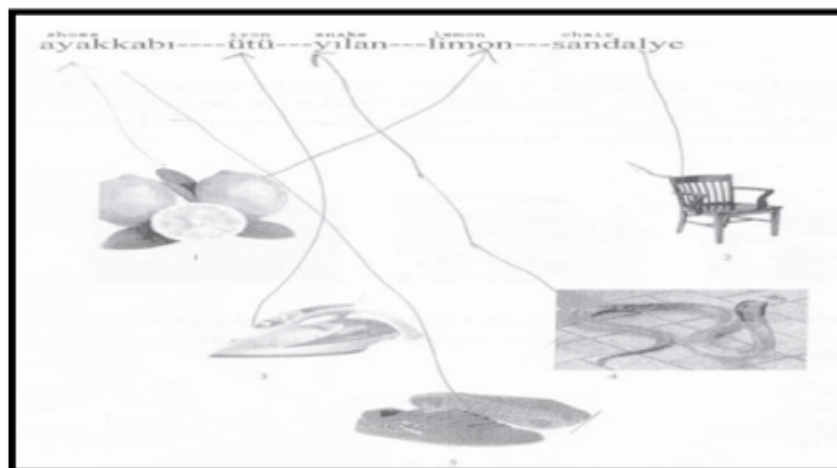


Figure 5. The participant student 17's performance on the task

*“The Participant Child 17 performed the task with slight difficulty with spelling ayakkabı (shoes) and sandalye (chair). However, he could match the words to their relevant pictures with little hesitation”. This finding was dimensionalized as “Adequate Word Awareness with Slight Spelling Difficulty”*



Figure 6. The participant student 3's performance on the task

*“The Participant Child 3 read the words with poor performance because of the spelling error. The Child may have been distracted due to the spelling error and difficulty. As a result, he did not manage to match the words to their relevant pictures.” This observation note was coded as “Deficient Awareness of Word”*

Findings of lexical awareness can be interpreted as poor reading performance prevented the participant children to understand the meaning of the words. Therefore, fluent reading is more critical in understanding word meaning.

### *Phonological Awareness*

There are five words that have a missing vowel, in the last part of the task form. After a short story was explained to the participant children by the researchers, they were asked to read the words and find the right letters. Regularities were identified among written-up field notes through iterative reading and codes were found. Codes as *“Adequate Phonological awareness”, “The Ability to Read the Words but not to Find*

*Correct Letter*", and *"Deficient Phonological awareness"* were identified among the written-up field notes. The task entailed the participant children to recognize such letter and sound matching that the codes were clustered into *"Phonological awareness."*

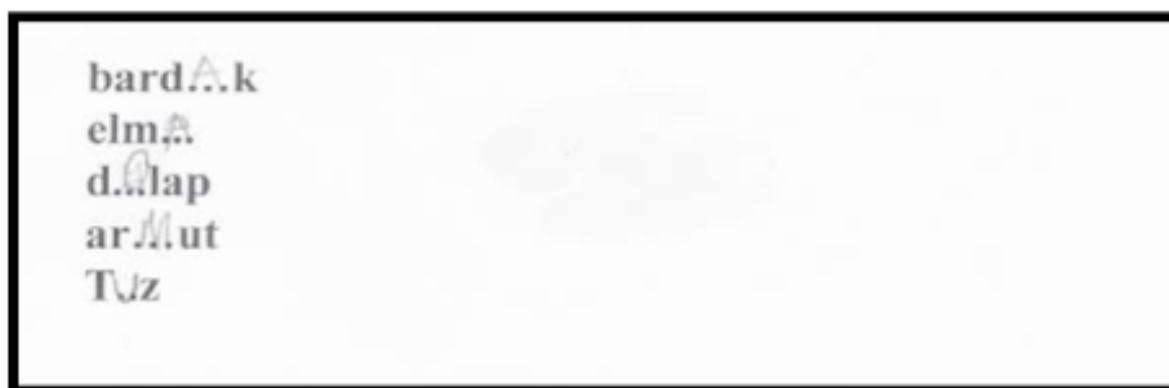


Figure 7. The participant student 22's performance on the task

*"The Participant Child 22 predicted the words correctly, read fluently and put the correct letters into the blanks. Because of the appropriate orthographic representation and word recognition ability she appeared to have adequate phonological awareness".* This data was coded as *"Adequate Phonological Awareness"*.

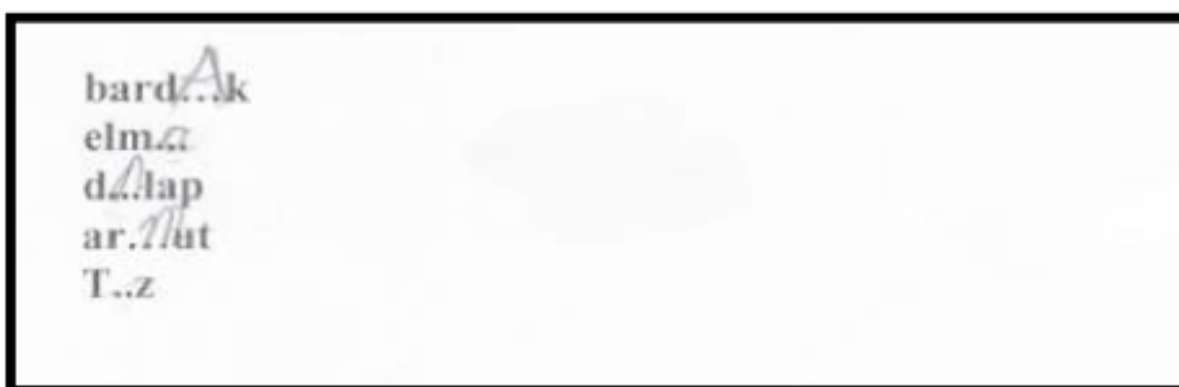


Figure 8. The participant student 17's performance on the task

*"The Participant Child 17 was able to read the first, second and fourth words and find the correct letters. Although he could read third and fifth words, he didn't write the correct letters"*

*into the blanks. This fault may have stemmed from the insufficient orthographic representation.” “The Ability to Read the Words but not to Find Correct Letter”*



Figure 9. The participant student 9's performance on the task

*“The Participant Child 9 neither could predict the words nor he was able to read the words and find the correct letters. He has lack of word recognition skills and orthographic representation. His phonemic awareness and word recognition skills need developing.”* This data was dimensionalized as “Deficient Phonological awareness”

Findings on “*Phonological awareness*” indicated that poor orthographic representation leads to insufficient phonological awareness. On the other hand, insufficient phonological awareness impeded poor performers to recognize, decode words and find correct letters. Lack of phonologic awareness leads to insufficient decoding skills.

## Discussion

The present study's main purpose is to understand the interaction between reading performance and message awareness, lexical awareness, and phonological awareness among Turkish first-grade primary school children. In the research, it was observed that the participant children with better phonological awareness performed the tasks on the message awareness, lexical awareness, and phonological awareness. It was also determined that the participant children who have less phonological awareness



responded the task on message awareness satisfactorily, while they had poor performance on lexical awareness and phonological awareness. Therefore, findings of the research can be interpreted as that deficient phonological awareness did not prevent the participant children to understand what the text means whereas the participant children with deficient phonological awareness are vulnerable to poorly perform smaller units such as words, syllables, and letters.

The poor performance of the participant children on lexical awareness and phonological awareness tasks can be dealt with through the explanation how a child gains phonological awareness developed by Stahl, Osborn, & Lehr (1990). According to this idea, child first realizes and recognize larger and obvious units such as messages and words. As children go on the formal reading instruction, they come to notice smaller units from onsets and rimes to phonemes (Stahl, Osborn, & Lehr, 1990). Furthermore, they can't recognize smaller and abstract units unless they receive two years formal reading instruction (Treiman & Kessler, 2005). Findings of the present study confirm both of the results. In the study, the participant children who had five months formal reading instruction were good at recognizing messages and words that were rather obvious and concrete. In contrast to the findings in message awareness and lexical awareness, very few the participant children were successful to accurately recognize and find the missing letters which were more abstract and smaller units. It can be predicted that they will be able to notice smaller units when they are instructed on learning to read for over two years. In addition to that, the idea of gaining phonemic awareness and longitudinal effects of formal reading instruction is valid for Turkish, which is a transparent language. Moreover, four of them were able to recognize the relevant animals name and find within the text. This finding can be an indicator of efficient word recognition skills and reading comprehension.

The last task on the form was for alphabetic principle, grapheme and phoneme correspondences. Findings of the research related to grapheme and phoneme correspondences can be explained through alphabetic principle and phonological awareness developed by Ehri (1999). Alphabetic principle and phonological awareness play very crucial role in learning to read. Development of alphabetic principle has four stages. These are the pre-alphabetic stage, partial alphabetic stage,

and full alphabetic stage, consolidate alphabetic stage. At the stage of the pre-alphabetic stage, children use cues to recognize words but can't use letters and sounds. At the partial stage, children can develop phonologic awareness but they lack adequate knowledge of letter names. They remember how to read words by connecting some of the letters and sounds and match initial and final sounds to read. Children have adequate phonological awareness and ability to recognize words automatically at the full alphabetic stage (Ehri, 1991; 1995; Stahl et al., 1998; Stahl & Murray, 1994). The participant children could read and recognize words not the letters and very few of them could recognize letters and their sounds. In other words, they did not learn grapheme-phoneme correspondences, although formal reading instruction was based on phoneme and letter correspondences. This finding indicates that the participant children could reach partial-alphabetic stage within five months of formal reading instruction under Turkish language contexts.

The findings in the last part of the form yielded very important results. 15 of the participant children managed to read the words whose one letter is missing but did not manage to find and recognize the missing letters. 5 of them neither read the word correctly nor recognize the missing letters. Besides the majority of them could know single letters and their sounds but did not manage to know how to use them in the words. This result confirms several studies' results in the literature (Johnson, 1975; Palmer, 1975; Warren, 1978). The result can be explained through the Cognitive Development Theory by Piaget and the Gestalt Theory. The Gestalt Theory puts forward that whole is so predictable that omission of the letters can't prevent the readers to read the word whose letters are deleted. In fact, a great number of the participant child could read the words that had one missing letter. This result also can be related to the Cognitive Development Theory developed by Piaget. In the tasks, the participant children confronted five familiar words that had missing one letter. Although there were missing letters, they could read very easily. Because the participants who are in the concrete operational period, read the words by using the general schemas. Usage of general schemas prevented them to focus on the missing letter but helped them to predict and read the words. However, their natural inclination to syncretistic thought precluded them to concentrate on the missing letters and find them. In addition, their syncretistic thought may prevent the development of alphabetic principle and phonological awareness on them. Therefore,

the WLA seems to be a suitable way of teaching to read for the children who are the concrete operational period.

Phonological awareness and alphabetic principle are so crucial for children's achievement in reading because of the fact that both of the concepts enable children to read recognize and manipulate words and read independently (Adam, 1990). Therefore, reading instruction must be based on the correspondences between sounds and letters. On the other hand, general sensitivity to grapheme-phoneme and smaller units don't break out within two years of the formal reading instruction (Caravolas et al., 2001). It revealed that the participant children were at the stage of the partial alphabetic stage and did not develop any sensitivity to the grapheme-phoneme consistencies although their teacher was teaching to read through PBRI. It is advisable for the case that the teacher first starts teaching to read by employing the WLA without excluding the PBRI principles until they acquire the necessary abilities for the full alphabetic stage such as letter knowledge, grapheme-phoneme sensitivity.

In sum, this case study reveals that awareness of larger units such as sentences, word occur earlier than phonological awareness and the participant's developmental characteristics (syncretistic thought and lack of analysis skills) prevent them to recognize letters even if they are taught to read through the PBRI.

## **Conclusion**

The study was conducted under Turkish Language context on the children received literacy instruction through the PBRI. The findings of the study are not convenient to generalize because of the nature of qualitative case study inquiry. In the present research main aim is not to reveal the children's longitudinal development of reading acquisition or determine that transparent languages help the phonological awareness and alphabetic skills to break out earlier than opaque languages. The study depicted what the participant children taught reading through direct instruction of letters and sound correspondences, could do after they had been instructed for over five months. As a result of the research, it was concluded that poor reading performance more interacts with lexical awareness and phonological awareness. It was also

observed that the Turkish primary school first graders need much more time to develop sensitivity on smaller units such as words and phonemes.

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## References

- Adams, M. J. (1990). *Learning to Read: Thinking and Learning about Print*. Cambridge, MA: MIT Press.
- Adam, M.J, Osborn, J. (2006). Phonics and Phonemic Awareness. In: K.A.D. Stahl & M. McKenna (Eds) *Reading Research At Work* (pp:85-91). London: The Guilford Press.
- Akyol, H., Temur, T. (2008) Comparing reading skills of first grade students who learn reading-writing with sound-based clause method and clause method. *Mustafa Kemal University Journal of Social Sciences Institute*, 9(5), 79-95.
- Bassey, M. (1999). *Case study in educational settings*. Philadelphia: Open University Press.
- Bilir, A. (2005). Characteristics of students in the first grade of primary school and initial teaching of reading and writing. *Ankara University Journal of Faculty of Educational Sciences*, 38(1), 87-100.
- Brown, G.D.A, & Deavers, R. (1999). Units of analysis in nonword reading: Evidence from children and adults. *Journal of Experimental Child Psychology*, 73(3), 208-242. doi.org/10.1006/jecp.1999.2502.

- Bus, A. G., & Van IJzendoorn, M. H. (1999). Phonological awareness and early reading: A meta-analysis of experimental training studies. *Journal of Educational Psychology, 91*, 403-414.
- Cain, K., Oakhill, J., & Bryant, P. (2000). Phonological skills and comprehension failure: A test of the phonological processing deficit hypothesis. *Reading and Writing, 13*(1-2), 31-56.
- Caravolas, M., Hulme, C., & Snowling, M. J. (2001). The foundations of spelling ability: Evidence from a 3-year longitudinal study. *Journal of Memory and Language, 45*(4), 751-774. doi.org/10.1006/jmla.2000.2785
- Cardoso-Martins, C. (1995). Sensitivity to rhymes, syllables and phonemes in literacy acquisition in Portuguese. *Reading Research Quarterly, 30*, 808-828.
- Creswell, J.W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. London: Sage Publications
- Crowley, K. (2014) *Child development: A practical introduction*. London: Sage Publications.
- De Jong, P. F., & Van Der Leij, A. (2002). Effects of phonological abilities and linguistic comprehension on the development of reading. *Scientific Studies of Reading, 6*(1), 51-77. doi.org/10.1207/S1532799XSSR0601\_03
- Demont, E., & Gombert, J. E. (1996). Phonological awareness as a predictor of recoding skills and syntactic awareness as a predictor of comprehension skills. *British Journal of Educational Psychology, 66*(3), 315-332. doi.org/10.1111/j.2044-8279.1996.tb01200.x
- Ehri, L. C., & Wilce, L. S. (1987). Cipher versus cue reading: An experiment in decoding acquisition. *Journal of Educational Psychology, 79*(1), 3-13.
- Ehri, L.C. (1991). Development of the ability to read words. In R. Barr, M. Kamil, P. Mosenthal, and P. Pearson (Eds.), *Handbook of reading research Volume II* (pp. 383-417). New York: Longman.

- Ehri, L.C. (1995). Phases of development in learning to read words by sight. *Journal of Research in Reading*, 18(2), 116–125. doi.org/10.1111/j.1467-9817.1995.tb00077.x
- Ehri, L.C. (2003). Phases of acquisition in learning to read words and implications for teaching. In R. Stainthorp & P. Tomlinson, *Learning teaching reading British journal of educational monograph series II* (pp. 7 – 28). Leicester: British Psychological Society.
- Ehri, L.C. (2005). Learning to read words. *Scientific Studies of Reading*, 9(2), 167-188. doi.org/10.1207/s1532799xssr0902\_4.
- Ehri, L.C. (2006). More About Phonics. In: K.A.D. Stahl & M. McKenna (Eds.), *Reading research at work* (pp: 155-168). London: The Guilford Press.
- Goodman, K. (2005). *What is whole in whole language? A parent teacher guide to children's learning*. Brighton: Heinemann Publishing.
- Habermas, J. (1972). *Knowledge and human interests*. MA: Beacon Press.
- Hatcher, P. J., Hulme, C., & Ellis, A. W. (1994). Ameliorating early reading failure by integrating the teaching of reading and phonological skills: The phonological linkage hypothesis. *Child Development*, 65(1), 41–57. doi.org/10.1111/j.1467-8624.1994.tb00733.x
- Hogan, T. P., Catts, H. W., & Little, T. D. (2005). The relationship between phonological awareness and reading: Implications for the assessment of phonological awareness. *Language, Speech, and Hearing Services in Schools*, 36(4), 285-293. doi:10.1044/0161-1461.
- Hulme, C., Hatcher, P. J., Nation, K., Brown, A., Adams, J., & Stuart, G. (2002). Phoneme awareness is a better predictor of early reading skill than onset-rime awareness. *Journal of Experimental Child Psychology*, 82(1), 2-28. doi.org/10.1006/jecp.2002.2670
- Johnson, N.F. (1975). On the functions of letters in word identification: Some data and preliminary model. *Journal of Verbal Learning and Verbal Behaviour*, 14(1), 17-29. doi.org/10.1016/S0022-5371(75)80003-X

- Juel, C. (1983). The development and use of mediated word identification. *Reading Research Quarterly*, 18(3), 83-96.
- McKenna, M.C., & Picard, M.C. (2006). Revisiting the role of miscue analysis in effective teaching. *The Reading Teacher*, 60(4), 378–380. <https://doi.org/10.1598/RT.60.4.8>
- Metsala, J. L., & Walley, A. C. (1998). Spoken vocabulary growth and the segmental restructuring of lexical representations: Precursors to phonemic awareness and early reading ability. In J. L. Metsala & L. C. Ehri (Eds.), *Word recognition in beginning literacy* (pp. 89-120). Mahwah, NJ: Lawrence Erlbaum Associates.
- Murray, B.A. (2006). Hunting the elusive phoneme. In: K.A.D. Stahl & M. McKenna (Eds) *Reading Research At Work* (pp: 114-125). London: The Guilford Press.
- Muter, V., Hulme, C., Snowling, M., & Taylor, S. (1998). Segmentation, not rhyming, predicts early progress in learning to read. *Journal of Experimental Child Psychology*, 71(1), 3-27. [doi.org/10.1006/jecp.1998.2453](https://doi.org/10.1006/jecp.1998.2453)
- Muter, V., Hulme, C., Snowling, M.J., Stevenson, J. (2004). Phonemes, rimes, vocabulary, and grammatical skills as foundations of early reading development: evidence from a longitudinal study. *Developmental Psychology*, 40(5), 665-681. [doi.org/10.1037/0012-1649.40.5.665](https://doi.org/10.1037/0012-1649.40.5.665)
- Navon, D. (1977). Forest before trees: the precedence of global features in visual perception. *Cognitive Psychology*, 9(3), 353-383.
- Palmer, S. E. (1975). Visual perception and world knowledge: Notes on a model of sensory-cognitive interaction. *Explorations in Cognition*, 279-307.
- Palmer, S. (1975). The Effects of contextual scenes on the identification of the objects. *Memory & Cognition*, 3(5), 519-526
- Piaget, J. (2005). *The language and thought of the child*. London: Routledge.
- Rock, I., Palmer, S. (1990). Legacy of the Gestalt psychology. *Scientific American*, 263, 84-90.

- Schneider, W., Naslund, J.C. (1992). Cognitive Prerequisites of Reading and Spelling: A Longitudinal Approach. In: A. Demetriou, M. Shayer & A. Efklides (Eds), *Neo-Piagetian Theories of Cognitive Development: Applications and Implications for Education* (pp: 256-274) London: Routledge.
- Seidenberg, M. S., & McClelland, J. L. (1989). A distributed, developmental model of word recognition and naming. *Psychological Review*, 96(4), 523-568.
- Snowling, M.J., Gobel, S. (2011) Reading Development and Dyslexia. In U. Goswami (Eds) *The wiley-blackwell handbook of child cognitive development* (pp:524-548). Sussex: Wiley-Blackwell.
- Stahl, S.A., Miller, P.D (1989). Whole language and language experience approaches for beginning reading: A quantitative research synthesis. *Review of Educational Research*, 59(1), 87-116.
- Stahl, S. A., Osborn, J., & Lehr, F. (1990). *Beginning to read: Thinking and learning about print: A summary*. Urbana-Champaign: Center for the Study of Reading, University of Illinois.
- Stahl, S. A & Kuhn, M.R. (1995). Does whole language or instruction matched to learning styles help children learn to read?. *School Psychology Review*, 24(3), 393-404.
- Stahl, A.S., Murray, B.A. (1994). Defining phonological awareness and its relationship to early reading. *Journal of Educational Psychology*, 86(2), 221-234.
- Stahl, A. S., Hester, A.M.D., Stahl, K.A.D.(1998). Everything you wanted to know about phonics. *Reading Research Quarterly*, 33(3), 338-355. doi.org/10.1598/RRQ.33.3.5
- Stanovich, K. E., Cunningham, A. E., & Cramer, B. B. (1984). Assessing phonological awareness in kindergarten children: Issues of task comparability. *Journal of Experimental Child Psychology*, 38(2), 175-190.



- Stanovich, K. E., & Siegel, L. S. (1994). The phenotypic performance profile of reading-disabled children: A regression based test of the phonological-core variable-difference model. *Journal of Educational Psychology*, 86, 24–53.
- Suggate, S. P. (2016). A meta-analysis of the long-term effects of phonemic awareness, phonics, fluency, and reading comprehension interventions. *Journal of Learning Disabilities*, 49(1), 77-96. doi: 10.1177/0022219414528540
- Talcott, B., Witton, C., Mclean, F.M., Hansen, P-C, Rees, A., Green, G.G.R., Stein, J.F. (2000). Dynamic sensory sensitivity and children's word decoding skills. *Proceedings of National Academy of the Sciences of United States of America*, 97(6), 2952-2957. doi.org/10.1073/pnas.040546597.
- Treiman, R., & Kessler, B. (2005). Writing systems and spelling development. In M. J. Snowling & C. Hulme (Eds.), *The science of reading: A handbook* (pp: 120-134). Oxford: Blackwell Publishing.
- Warren, R.M. (1970) Perceptual restoration of missing speech. *Science*, 167 (3917), 392-393.
- Wagner, R. K., Torgesen, J. K., & Rashotte, C. A. (1994). Development of reading-related phonological processing abilities: New evidence of bidirectional causality from a latent variable longitudinal study. *Developmental Psychology*, 30(1), 73-87. doi.org/10.1037/0012-1649.30.1.73
- Whitehurst, G., Lonigan, C. (1998) Child development and emergent literacy. *Child Development*, 69(3), 848-872. doi.org/10.1111/j.1467-8624.1998.tb06247.x
- Wolf, M., & Bowers, P. G. (1999). The double deficit hypothesis for the developmental dyslexias. *Journal of Educational Psychology*, 91, 415–438. doi.org/10.1037/0022-0663.91.3.415.

# SERD | Kuantum öğrenme modeline göre tasarlanmış İngilizce öğretim programı: Örnek bir uygulama\*

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## Öz

Ülkemizde yabancı dil öğrenimine önem verilmekte, etkili bir öğrenim için büyük bir emek harcanmaktadır (dynEd, Fatih projesi, dil laboratuvarları); ancak yabancı dil olarak İngilizce öğreniminde kazanımlara ulaşmak için çaba sarfedilmektedir. İngilizce öğrenimi ile ilgili birçok çalışma yapılmakta ve sınıfta uygulanabilecek birçok model, yöntem ve teknik önerilmektedir (suggestopedia, TPR, iletişimsel dil öğretimi vs.). Bu modellerden biri de kuantum öğrenme modelidir. Bu çalışmada kuantum öğrenme modelinin açıklanması ve modele göre tasarlanmış İngilizce öğretim programının uygulanıp uygulama önerilerinin verilmesi amaçlanmaktadır. Öğretim programının kazanımlarına uygun biçimde 7. sınıf İngilizce dersine yönelik 12 ders saatlik bir program geliştirilmiştir. Kuantum öğrenme modeline uygun olarak geliştirilen program iki program geliştirme uzmanının görüşüne sunulmuştur. Alınan dönütler ile revize edilen program orta sosyo-ekonomik düzeydeki bir ortaokulun 7. sınıfında 12 ders saati süresince uygulanmıştır. Uygulama esnasında öğrencilerin genel anlamda eğlendikleri ve etkinliklere katılmaya istek gösterdikleri sonucuna ulaşılmıştır. Bunun yanı sıra, öğrenci-öğrenci ve öğrenci-öğretmen etkileşimleri olumlu olmuştur.

**Anahtar Kelimeler:** İngilizce öğretimi, kuantum öğrenme

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**Abstract**

We pay much attention to foreign language learning in our country; a great deal of effort is spent on effective learning (dynEd, Fatih project, language laboratories). However, the level required to attain the achievements in learning English as a foreign language is not reached. There are many studies about learning English, and there are many models, methods and techniques that can be implemented to the class (suggestopedia, TPR, communicative language teaching). One of these models is the quantum learning model. In this study, it is aimed to explain the quantum learning model and to give implementation suggestions by implementing the English curriculum designed according to the models. A 12-hour program was developed for the 7th grade English lesson in accordance with the achievements of the curriculum. The developed curriculum is presented to two curriculum scientists for their suggestions. The curriculum revised after the feedbacks was implemented in the seventh grade of a secondary school in the middle socio-economic level during 12 lesson hour. It was concluded that students had great fun and were willing to participate in the activities during the practice. In addition, student-student and student-teacher interactions were positive.

**Keywords:** English teaching, quantum learning

**Giriş**

Türkiye’de yabancı dil olarak İngilizce öğrenimine büyük önem verilmektedir (Demirel, 2012). Eğitim programlarındaki yeri sürekli artırılmakta, dil öğreniminin etkinliği için çok fazla vakit ve para harcanmaktadır (dynEd, Fatih projesi, dil laboratuvarları). Han ve Okatan (2016), gerçekleştirdikleri çalışmada lise öğrencilerinin Fatih projesi kapsamında sınıflara öğrenimi desteklemek amaçlı kurulan akıllı tahtaları İngilizce öğreniminde nasıl kullanacaklarını bilmedikleri sonucuna ulaşmışlardır. Ülkemizde İngilizce eğitimine ilkökul 2. sınıftan itibaren başlayan bir öğrenci üniversite ilk yıllarında aldığı temel İngilizce dersleri de göz önünde bulundurulduğunda öğrencilik yıllarında yaklaşık 13 yıl İngilizce öğrenimi görmektedir; ancak bu yılların sonunda istenilen İngilizce düzeyine öğrencilerin ulaşamadığı görülmektedir (Koru ve Akesson, 2011). İngilizce öğrenimi ile ilgili

sınıfta uygulanabilecek suggestopedia, TPR, iletişimsel dil öğretimi gibi birçok model, yöntem ve teknik önerilmektedir (Larsen-Freeman, 2000). Yabancı dil eğitiminde farklı eğitim kademelerinde uygulanabileceği önerilen modellerden biri kuantum öğrenme modelidir (Hanbay, 2009).

### **Kuantum fiziği**

Kuantum kelimesinin kökeni, aslen İngilizce’de “quantity” kelimesidir. “Kuantum” kavramı ilk kez Max Planck 1900 yılında siyah cisim ışıması üzerinde gerçekleştirdiği araştırmada ortaya çıkmıştır. “Kuantum” aslen “enerji paketi/öbeği” demektir. Hayatımızda bizi çevreleyen birçok paket/öbek mevcuttur. Peynir kalıpları, litrelik sular, arabalar vs. Ancak bunların hiçbirinin ne büyüklükte olacağına dair doğal bir kanun yoktur. Usta peyniri istediği büyüklükte yapıp şekillendirebilir; sucu, sularını istediği hacimdeki şişelere yerleştirebilir; mühendisler arabaları farklı büyüklüklerde, ağırlıklarda ve modellerde tasarlayabilirler (Deporter ve Hernacki, 1992).

Kuantum fiziği her yerde karşımıza çıkmaktadır. Çakıllı bir nehir yatağında, kumlu bir sahilde ya da yumuşak çamurlu bir yüzeyde yürürken atomların veya moleküllerin farkında olamayız; ancak atom ve moleküllerin öbekleşmiş hali olan çakılların, kumların ve çamurun farkına varabiliriz. Bir başka örnek ise suyu oluşturan H<sub>2</sub>O molekülleridir. Her ne kadar H<sub>2</sub>O molekülünün farkında olamasak da sürahidenden bardağa suyu boşaltırken suyun akışkanlığını, havuza girdiğimizde suyun basıncını hissedebiliyoruz (Ford, 2016). Her paradigmada olduğu gibi kuantum fiziğinin de dayalı olduğu temel yasalar vardır (Ekici, 2013; Ford, 2016); nedensellik, olasılık-belirsizlik, bütüncül mantık, Schröder’in kedisi, kaos teorisi, kelebek etkisi, kuantum tünelleri.

Farklı alanlarda meydana gelen gelişimler diğer alanları etkilemektedir. Fizik alanında ortaya çıkan kuantum paradigması da eğitim alanını farklı yönlerden etkilemektedir. Ayvaz Tuncel (2011) çalışmasında fizik alanındaki bu paradigmanın eğitime yansımalarını açıklamıştır. Öncelikle bireylerin farklı düşünceleri desteklenmeli ve bu düşüncelerini ifade edebilmeleri için teşvik edilmelidir. Olaylar,

gerçekleştiği ortamlarda ve koşullarda ele alınmalıdır. Her olay karşısında bireylerin neler hissettiği ve düşündüğü farklılık göstermektedir. Her his ve düşünceye saygı ve hoşgörü gösterilmelidir. Bir olayın gerçekleşmesinde birçok etkenin rolü vardır. Bu etkenlerin gerçekleşme nedenleri ortaya konularak bireyde düşünme becerileri geliştirilebilir. Kuantum paradigmasında merkezde birey vardır. Süreç yaşantılarla zenginleştirilir ve bireyin etkin katılımı önemlidir. Öğrenenlerin, bilgileri eleştirel düşünme becerisiyle bilimsel açıdan ele alınması sağlanmalı; buna olanak veren yaşantılar düzenlenmelidir.

### **Kuantum öğrenme**

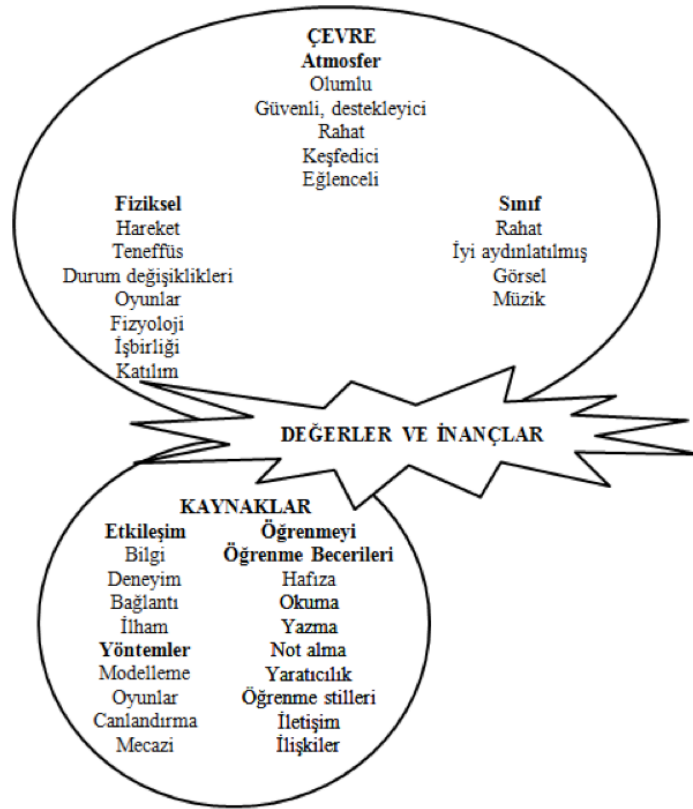
1901 yılında ortaya atılan Kuantum teorisinden esinlenen Amerikalı Bobbi DePorter 1980'li yıllarda Kuantum öğrenme modelini geliştirilmiş ve uygulanmasını gerçekleştirmiştir. Kuantum öğrenme, enerjiyi ışığa çeviren etkileşim olarak tanımlanmaktadır. Bütün yaşam bir enerjidir. Kuantum fiziğinde iyi bilinen formüllerden biri, “madde” çarpı “ışık hızı kare” eşittir “enerji”dir,  $E=mc^2$ . Kuantumu, “enerjiyi ışığa çeviren etkileşim” olarak tanımlayan DePorter, kuantum öğrenme modelini faaliyeti eğitimde kanıtlanmış öğrenme felsefe ve yöntem bileşiminin etkileşimi olarak tanımlamaktadır. Ayrıca Kuantum öğrenmenin her öğrenme stiline sahip her yaş grubundaki öğrenenlere ideal bir model olduğunu ifade etmektedir (DePorter ve Hernacki, 1992).

Kuantum temelli bir öğretim programında izlenecek yol; önceden belirlenmemekte, bireylerin ihtiyaçlarına, ilgilerine ve öğrenme biçimlerine göre esnemektedir. Kuantum teorisini içselleştiren bir öğretim programı, zihin ve deney arasında oluşturulacak olan bir bağlantıyı temel almalıdır. Zihinsel oluşum, duygusal ve duysal oluşum sayesinde farklı zeka türlerine katkı sağlar. Bu yüzden böyle bir programda bilişin yanı sıra duyguya, düşünceye, sezgiye ve yaratıcı düşünme yer almaktadır. MEB 2004 senesinde gerçekleştirilen düzenlemelerle, bilimsel felsefe olarak Kuantum teorisini benimsemiştir. Böylelikle Kuantum teorisini temel alan yeni programla, bütüncül ve çoklu düşünceyle, esnek ve sorgulayıcı düşünce tarzındaki bireylerin yetiştirilmesi amaçlanmaktadır (Ekici, 2013).

Kuantum öğrenme, her yaştaki birey için etkisi kanıtlanmış öğrenme felsefesi ve yöntemlerine ilişkin görüşler içermektedir; suggestopedia (telkin), nlp, beyin temelli öğrenme, öğrenme stilleri, çoklu zekâ, duygusal zeka, bütüncül eğitim, hızlandırılmış öğrenme (Deporter, Reardon ve Singer-Nourie, 1999).

### Kuantum öğrenmenin bileşenleri

Kuantum öğrenme, etkililiği bütün yaşlarda kanıtlanmış öğrenme yöntem ve felsefelerinin birleşimidir.



Şekil 1. Kuantum öğrenmenin bileşenleri (Deporter ve Hernacki, 1992)

Kuantum öğrenme modeli öğreneni tüm nitelikleriyle merkeze alan, bireysel farklılıklarını dikkate alan, çok yönlü düşünebilmeyi amaçlayan ve bu süreçte öğretmenin de etkili öğretim geliştirmesini gerektiren bir anlayışla eğitim

uygulamalarının gerçekleşmesini vurgulamaktadır. Bu yönde ders programlarının hazırlanması ve uygulanması yüksek başarıyı ifade etmektedir (Deporter, 2006).

Kuantum öğrenme (Deporter ve Hernacki, 1992; Ayvaz Tuncel, 2011);

- İnançlar, prensipler, anlaşmalar ve yönergeler ilişkili sağlam “temeller”,
- Güven, kişisel hisler, samimiyet ve dürüstlüğün bulunduğu “ortam”,
- İlgi çekici ve dinamik eğitim programı “tasarım”ı,
- Öğrenmeyi artıran destekleyici “çevre” üzerinde yapılandırılmıştır.

### *Temeller*

Mükemmeliğin sekiz anahtarına odaklanır ve bu mükemmellik anahtarları bireylerin tutumlarının gelişmesinde de oldukça önemli yere sahiptir (Ayvaz Tuncel, 2011; Deporter, 2006; Ekici, 2013; Given ve Deporter, 2015). Bu sekiz anahtar; bütünlük, hatalar başarıya yol açar, güzel amaçla konuş, hedefine odaklan, kararlılık, sahiplik, esneklik ve dengedir.

### *Ortam*

Öğrenenlerin dikkatlerini çeken ve onlara güven hissi veren yaklaşımlar önemli yer tutar. Sınıfın etkili yönetimindeki başvuru yaklaşımlar, dikkat toplama teknikleri ve öğrenenlerin öğrenme etkinliklerine etkili katılımlarında motivasyonun sağlanması “ortam”da yer alan diğer değişkenlerdir. Kuantum öğrenmede ilk olarak öğrenenlerin deneyimleri ile içerik arasında bağ kurulur (Deporter ve Hernacki, 1992; Given ve Deporter, 2015).

### *Tasarım*

Dersin tasarımı, içeriğin etkili kılınmasındaki çalışmalara ve içeriğin çerçevesinin yapılandırılmasına odaklanmaktadır. Eğitim programı, öğrenenin ilgisini ve etkin katılımını desteleyecek biçimde tasarlanmalıdır. Bilginin küçük parçalara ayrılarak

öğretilmesi ve sınıfın birden fazla duyuya hitap edecek biçimde düzenlenmesini kapsamaktadır (Deporter ve Hernacki, 1992; Given ve Deporter, 2015).

### *Çevre*

Beyin, çevresinden sürekli uyaranları alır ve odaklanabilmek için sürekli farklı noktaları seçmektedir. Kuantum öğrenme, bazı faktörlere odaklanarak aktif öğrenimi destekleyen fırsatlar yaratır; oturma düzeni, merak uyandıran, içeriği güçlendiren çevre değişkenleri, aydınlatma, sıcaklık, temizlik, durum yönetimini ve odaklanmayı sağlayacak müzikten yararlanılması gibi. Çevreyle ilgili bu özellikler fiziksel, atmosfer ve sınıf olarak üç başlık altında toplanmıştır (Deporter ve Hernacki, 1992; Given ve Deporter, 2015).

### **Kuantum öğrenmenin ilkeleri**

Kuantum öğrenmede beş ana ilke vardır. Bu ilkeler, kuantum öğrenmenin gerçekleşmesinde önemli yere sahiptir (DePorter, Reardon ve Nourie, 1999):

- Dersin tasarımı, sınıf ve beden dili öğrenme ortamında yer alır. Uygun bir sınıf ortamında yeterli ışık, konuya ve öğrenen dikkatine uygun renkler, olumlu tutum geliştiren görseller, bitki ve rahatlatıcı müzik bulunur.
- Yapılacaklar, amacına uygun olmalıdır. Sınıf orkestra gibidir ve dersler uyumlu bir düzende işler.
- Bilgileri ilişkili yapılarla kavransak öğrenmede başarılı olabiliriz. Bilgiler, önceki bilgilerle ilişkilendirilirse öğrenmede kalıcılık sağlanabilir.
- Öğrenmede, her zaman risk vardır. Ancak sınıf ortamı eğlenceli hale getirilirse öğrenme daha kolay gerçekleştirilebilir. Öğrenen, bu ilkeyi takip ederse kendini güvende hisseder ve başarılı olur.
- Bir şey öğrenilecek değerdeyse kutlanılmaya da değerdir çünkü yerinde dönütler öğrenmeye yönelik olumlu tutumlar da geliştirir.



### *Kuantum öğrenme düzeni*

Kuantum öğrenme ilkeleri doğrultusunda hazırlanan ve bir öğretmenin sınıfında kuantum öğrenmeyi uygularken dikkat edeceği öğrenme düzeni vardır (Ayvaz Tuncel, 2011; Deporter, Reardon ve Singer-Nourie, 1999; Ekici, 2013).

### *Yakalama*

Öğrenenlerin merak duygularını uyandırmak için dikkat çekici bir giriş yapılır ve konuya ait detaylı bilgi vermeden önce öğrenenler hedeflerden haberdar edilir.

### *İlişkilendirme*

Öğrenenlerin, önceki bilgileriyle yeni bilgileri ilişkilendirmelerine yarayacak ve konuya giriş niteliğinde bir etkinlik yaptırılır.

### *Etiketleme*

Öğrenenlerin konuya dikkatleri toplandıktan sonra öğrenenlerin yaşamlarıyla ilişkisi tartışılır. Bu aşamada öğrenenler öğrendikleri yeni bilgiyi etiketlemeye, sıralamaya, sınıflamaya ve tanımını yapmaya çalışır.

### *Gösterme*

Öğrenenlere, öğrendikleri bilgileri farklı durumlara uyarlayacakları etkinlikler sunulur. Öğrenenler, bildiklerini yeni durumlarda kullanabildiklerini gördükçe güven kazanırlar.

### *Tekrarlama*

Bilgiler, öğrenenlerin bilgiyi iyice kavramalarını sağlayacak biçimde etkinliklerle tekrarlanır. Bilgilerin tekrar edilmesi öğrenenlerdeki sinir bağlarını sağlamlaştırıp kalıcı öğrenmeyi sağlar.

### *Kutlama*

Öğrenilen bilgi değerli olduğundan öğrenme olayı kutlanır. Öğrenenin emeği, titiz çalışmaları ve başarısı ödüllendirildiğinde öğrenmeye ve öğretmene karşı olumlu bir tutum geliştirir.

## Kuantum öğrenmede beceri ve teknikler

Okullar, öğrenenlerde başarıyı artıran ama bilgi içerikli olmayan teknikler vardır. Bu teknikler, akademik beceriler ve yaşam becerileri başlıkları altında toplanabilir (Deporter ve Hernacki, 1992).

Tablo 1. Kuantum öğrenmede kullanılan beceri ve teknikler

Akademik beceriler	Yaşam becerileri
Çalışma stratejileri	
Kuantum yazma	
<i>Hızlı yazma tekniği</i>	Mükemmelliğin sekiz anahtarı
<i>Salkımlama tekniği</i>	İletişim ve arkadaşlık
Kuantum okuma	Yaratıcı problem çözme
Kuantum hafıza	Liderlik becerileri
<i>Canlandırma tekniği</i>	Kendine güven
<i>İlişkilendirme tekniği</i>	Sorumluluk
<i>Sınıflama tekniği</i>	Motivasyon
<i>Temel hafıza sistemi tekniği</i>	Açık hava dersleri
Kuantum not alma	
<i>Zihin haritası tekniği</i>	
<i>Not ay tekniği</i>	

## Örnek programın geliştirilmesi ve uygulanışı

Kuantum öğrenme modelinin daha iyi anlaşılması ve uygulama esnasındaki sıkıntıların belirlenip düzeltmelerin yapılabilmesi için örnek bir programın geliştirilmesine karar verilmiştir. Öğretim programının kazanımlarına uygun biçimde 7. sınıf İngilizce dersine yönelik 12 ders saatlik bir öğretim programı geliştirilmiştir. 2016-2017 eğitim öğretim döneminde ders kitabı olarak okulda kullanılan Birincioğlu Kaldar (2016)'ın kitabındaki okuma parçaları ve dinleme metinlerinden faydalanılmıştır. Kuantum öğrenme modeline uygun olarak

geliştirilen program iki program geliştirme uzmanının görüşlerine sunulmuştur. Alınan dönütler ile revize edilen program orta sosyo-ekonomik düzeydeki bir ortaokulun 7. sınıfında uygulanmaya başlanmıştır.

Sınıf, öğrenciler gelmeden havalandırılmış ve derse uygun aydınlatma sağlanmıştır. Sınıftaki sıralar 27 öğrencinin de öğretmeni ve dersi kolaylıkla takip edebilecekleri “U” düzenine göre düzenlenmiştir. Sıralara öğrencilerin rahat hissetmeleri için minderler yerleştirilmiştir. Sınıf kapısı ve girişi süslenmiştir. Renkli bitki ve çiçekler sınıfın farklı köşelerine konulmuştur. Sınıfın derse uygun görsellerle renklendirilmiştir. Derste kullanılacak barok müzik hazır hale getirilmiştir.

Ders öğretmenin modelini daha iyi kavrayabilmesi amacıyla programın ilk iki ders saati araştırmacı tarafından uygulanmış ve model öğretmene anlatılmıştır. Dersin öğretmeni de program geliştirmede doktora eğitimi görmekte olup hem dil eğitimi hem de öğrenme-öğretme kuramları konusunda bir uzmandır. Araştırmacı, öğretim programında kullanılması planlanan sonraki 10 saatlik dersle ilgili materyalleri, görselleri, ödülleri, görsel-işitsel araçlar vd. dersin öğretmenine dosya, kutu ve hafıza kartı ile teslim etmiştir. Dersin öğretmeni, ders esnasında ve sonunda kısa notlar alarak hem programı hem de öğrenci performanslarını değerlendirmiştir. Ayrıca öğrenciler de her dersin sonunda araştırmacı tarafından hazırlanan kendilerine ait günlüklere dersle ve kendi performansları hakkındaki görüşlerini yazmışlardır.

### **Bulgular, Sonuç, Tartışma ve Öneriler**

Örnek uygulama esnasında öğrencilerin tutmuş olduğu günlükler iki uzman tarafından içerik analiziyle incelenmiştir. Analiz sonucunda elde edilen bulgular Tablo 2’de verilmektedir:

Tablo 2. Öğrenci günlüklerinin içerik analiz sonuçları

	f	%
Eğlenceli etkinlikler	54	14,59
Katılma isteklilik	41	11,08
Renkli malzemeler	35	9,46
Güzel zaman	32	8,65
Rahatlık	27	7,30
Hoş müzik	24	6,49
Hareketli	21	5,67
Keyifli	21	5,67
Mutlu	18	4,86
Neşeli	17	4,60
Renkli sınıf	16	4,32
İyi zaman	14	3,78
Dinlendirici	13	3,51
Diğer	11	2,97
İşbirlikli çalışabilme	8	2,16
Sürprizli	7	1,89
Rahatsız edici müzik	6	1,62
İdeal sınıf	5	1,35
Toplam	370	99

Tablo 2 incelendiğinde öğrencilerin, genel anlamda eğlendikleri (%14,59) ve etkinliklere katılmaya istek gösterdikleri (%11,08) anlaşılmaktadır. Etkinliklerin çoğunlukla beğenildiği ve öğrencilerin dersten keyif aldığı anlaşılmaktadır.

Uygulama öğretmenin programın uygulanması esnasında ve sonrasında programla ilgili önerilerde bulunmuştur:

- Öğrencilere bir sonraki etkinliğin materyalleri gösterilmemeli, çünkü o anki etkinlik ve materyallere olan ilgi azalmaktadır. Öğretmen, zamanı gelince materyalleri çıkarmalıdır.

- Yönerge verilirken öğrencilerin anladıklarından emin olmak için yönerge birkaç kez tekrarlanmalıdır.

- Soru-cevap etkinliklerinde, anlamayan ve doğru yapamayan öğrenciler için cevaplar öğretmen tarafından tekrar edilebilir.

•Barok müzik akıllı tahta haricinde farklı bir cihazda çalıştırılabilir. Etkinlikler için gerekli olan diğer video ve ses dosyalarını akıllı tahtada çalışınca medya oynatıcılar sorun çıkartabilmektedir. Ayrıca ders esnasında müzikten gerildiklerini ve dikkatlerinin dağıldıklarını söyleyen birkaç öğrenci olmuştur. Ders esnasında çalınması için öğrencilerin seçeceği fon müzikler tercih edilebilir.

•Afiş, poster hazırlama, resim çizme, diyalog yazımı ve rol oynama gibi etkinlikleri tamamlamak öğrencilerin çok vaktini aldığından bu etkinliklere en az ders saati verilmelidir.

•Etkinlikler bitince konular öğretmen tarafından tekrar edilirse bilgiler daha da pekişebilir.

•Öğrencilerin oturmaları için verilen minderler ve diğer renkli araç-gereçler öğrencilerin çok hoşlarına gitmiş; ancak bu malzemelerin muhafazası sorunu ortaya çıkmıştır. Bu yüzden her dersin sonunda eşyaların yerleştirilebileceği bir dolap gerekmektedir. Ayrıca öğrencilere bu eşyaların yerleştirilmesi ve koruma görevleri paylaştırılabilir.

•Öğrenciler için hazırlanan günlüklerin pilot uygulama sonunda yıprandığı görülmüştür. Günlükler öğrencilere verilmeden önce ciltlenebilir. Ayrıca bazı günler günlüklerini evde unutan öğrenciler olduğundan günlüklerin aksamadan tutulması için günlükler her ders sonunda dağıtılıp tekrar toplanabilir.

Öğretmen ve öğrencilerin ihtiyaçlarına cevap verebilecek, öğretimde başarıyı artıracak, öğrencide öz-yeterliği geliştirecek ve kaygıyı azaltacak modellerden biri de kuantum öğrenme modelidir (Deporter ve Hernacki, 1992). Kanadlı, Ünal ve Karakuş (2015) kuantum öğrenme modeliyle yaptıkları meta-analiz çalışmada kuantum öğrenmenin başarıyı artırmada normal öğretim programlarına göre daha etkili olduğu sonucuna ulaşmışlar ve öğrenme yaşantılarının kuantum öğrenmeye göre düzenlenmesi gerektiğini belirtmişlerdir. Ayrıca aynı çalışmada, öğretmenlerin bu modeli ilk, orta ve lise kademesinde çeşitli derslerde kullanarak başarıyı artıracaklarını öne sürmüşlerdir. Demir (2006) de yaptığı çalışmada kuantum öğrenme modelinin ortaöğretim düzeyinde öğrenci başarısına olumlu yönde katkı yaptığı sonucuna ulaşmıştır.

**Kaynakça**

- Ayvaz Tuncel, Z. (2011). Kuantum Öğrenme Modeli (*Eğitimde Yeni Yönelimler içinde* 289-305). Ankara: Pegem Akademi.
- Birincioğlu Kaldar, E. (2016). *English Route 7*. Ankara: Pasifik Yayınları.
- Demir, S. (2006). *Kuantum Öğrenme Modelinin Ortaöğretim Düzeyinde Öğrenen Başarısına Etkisi (Gaziantep Örneği)*. Yayınlanmamış Doktora Tezi, Gaziantep Üniversitesi Sosyal Bilimler Enstitüsü.
- Demirel, Ö.(2012). *Yabancı Dil Öğretimi*. Ankara: Pegem Yayıncılık.
- Deporter, B. (2006). *Quantum Success*. Learning Forum Publications.
- Deporter, B. ve Hernacki, M. (1992). *Quantum Learning:Unleashing the Genius in You*. NY: Random House.
- Deporter, B., Reardon, M. ve Singer-Nourie, S.(1999). *Quantum Teaching: Orchestrating Student Success*. Allyn and Bacon, A Viacom Company.
- Ekici, G. (2013). Kuantum Öğrenme Yaklaşımı (*Yeni Öğrenme-Öğretme Yaklaşımları ve Uygulama Örnekleri içinde* 462-506). Ankara: Pegem Akademi.
- Ford, K. W. (2016). *101 Soruda Kuantum* (çev. B. Gönüleşen). İstanbul: Alfa Yayıncılık.
- Given, B. K. ve Deporter B. (2015). *Excellence in Teaching and Learning*. Learning Forum Publications.
- Han, T. ve Okatan, S. (2016). High School Students' Attitudes and Experiences in EFL Classrooms Equipped with Interactive Whiteboards. *Gist Education and Learning Research Journal*, (13), 140-165.
- Hanbay, O. (2009). Kuantum Öğrenme Temelli Öğreterek Öğrenme Yönteminin İkinci Yabancı Dil Olarak Almancanın Öğrenilmesine Etkisi. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*,1 (12), 17–27.

- Kanadlı, S., Ünal, K. ve Karakuş, F. (2015). Kuantum Öğrenme Modelinin Akademik Başarıya Etkisi: Bir Meta-Analiz Çalışması. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 12 (32), 136-157.
- Koru, S. ve Akesson, J. (2011). Türkiye'nin İngilizce Açığı. *Türkiye Ekonomi Politikaları Araştırma Vakfı Raporu*, Aralık 2011.
- Larsen-Freeman, D. (2000). *Techniques and Principles in Language Teaching*. Oxford University Press.

## Ek

### Örnek ders planı

Sınıf: 7

Ders/ünite: İngilizce/Planets (Unit 10)

Ders süresi: 40+40

Kullanılan araç-gereçler: minder, bitki, fotoğraf, akıllı tahta, video, müzik, ders kitabı (English Route 7), resim kağıdı, renkli kalem, yapıştırıcı

#### *Kazanımlar*

- Popüler bilimle ilgili yapılan konuşmaların konusunu belirler.
- Genel gerçekler üzerine sorular sorar.
- Genel gerçekler hakkında konuşur.
- Genel gerçekler konusunda kısa ve temel yazılar yazar.
- Yeni bilgileri görsellerle ilişkilendirir.
- Akranlarıyla İngilizce olarak iletişim kurmakta istekli olur.

#### *Ders öncesi hazırlık*

Sınıf, öğrenciler gelmeden havalandırılır ve derse uygun aydınlatma sağlanır. Sınıftaki sıralar öğrencilerin öğretmeni ve dersi kolaylıkla takip edebilecekleri “U” düzenine göre düzenlenir. Sınıfın kapısı ve giriş süslenir. Sıralara öğrencilerin rahat hissetmeleri için minderler yerleştirilir. Renkli bitkiler sınıf farklı köşelerine yerleştirilir. Sınıf, derse uygun görsellerle renklendirilir. Derste kullanılacak barok müzik derse hazır hale getirilir.

#### *Yakalama (10 dk)*

- Öğrencilere, konusu Mars’ta geçen bir filminden bir sahne izlettirilir. Bu filmi daha önce izleyip izlemedikleri, konusunun ne olduğu ve olayların hangi gezegende geçtiği sorulur.



*İlişkilendirme (10 dk)*

•Öğrencilere, Mars ve dünyanın görselleri gösterilir. İki görsel arasında ne gibi farklılıklar olduğu sorulur. Mars, hakkında ne bildikleri sorulur.

*Etiketleme (20 dk)*

•Öğrencilere, Mars'la ilgili bir parça dinleyecekleri söylenir. Öğrencilere, üç konu başlığı verilir ve dinledikleri parçanın konusunun hangisi olduğunu seçmeleri istenir.

*Listen to the dialogue and mark the topic of the discussion?*

- a. Life on Venus
- b. Spaceships
- c. A journey to Mars

•Öğrencilere, parçayı tekrar dinleyecekleri söylenir. Parçayla ilgili verilen ifadeleri doğru-yanlış olarak işaretlemeleri istenir. (Ders kitabı, s. 122, etkinlik 9)

*Listen again and write true (T) or false (F).*

1. The robot's name is Curiosity Rover.
2. The girl thinks humans will travel to Mars soon.
3. There is no atmosphere on Mars.
4. There is evidence of water on Mars.
5. The boy thinks saving our planet is more important than going to Mars.

•Öğrencilere parça ile ilgili sorular sorulur ve parça son kez dinletilir. İstenilen boşlukları parçaya göre doldurmaları istenir. (Ders kitabı, s. 122, etkinlik 10)

When did they launch Curiosity Rover?

..... (time)

..... (date)

When did Curiosity Rover land?

..... (time)

..... (date)

*Gösterme (10 dk)*

•Öğrencilerden ikiyeşerli olarak çalışmaları istenir. Herbir öğrenciye uzayla ilgili dört farklı görsel dağıtılır. O görsellerden yola çıkarak arkadaşına bir hikaye anlatmaları istenir.

*Tekrarlama (20 dk)*

•Öğrencilerden ikiyeşerli olarak çalışmaları istenir. Resim kağıtları ve boya kalemleri verilir. Birlikte konusu uzay olan bir film afişi hazırlamaları istenir.

*Kutlama (10 dk)*

Hazırlanan afişler, tahtaya yapıştırılır. Herbir öğrencinin hangi afişi daha çok beğendikleri konusunda oy kullanmaları istenir. En çok oy toplanan afiş alkışlanır ve sınıfın panosuna asılır.

# English curriculum designed according to quantum learning model: A sample implementation

Mehmet Altın, Asuman Seda Saracaloğlu

## Introduction

A great importance is given to English learning as a foreign language in Turkey (Demirel, 2012). The place of language learning in curriculums is constantly increased, and a lot of time and money is spent for the effectiveness of language learning. A student who started elementary school in the first year of elementary school in Turkey has been studying English for about 13 years when the student takes into consideration the basic English courses received in the first years of university; however, it seems that at the end of these years, students cannot reach the required level of English (Koru ve Akesson, 2011). Many models, methods and techniques are proposed, such as suggestopedia, TPR, communicative language teaching, which can be applied to the class of English learning (Larsen-Freeman, 2000). One of the proposed models that can be applied in different levels of education in foreign language education is the quantum learning model (Hanbay, 2009).

## *Quantum Learning*

Inspired by the quantum theory introduced in 1901, Bobbi DePorter from the United States developed and implemented the quantum learning model in the 1980s. Quantum learning is defined as the interaction that turns energy into energy. DePorter (DePorter ve Hernacki, 1992) describes the quantum learning model as the interaction of a combination of proven learning philosophy and methodology in activity education. The way to follow in a quantum-based curriculum is not determined in advance, but formed according to the needs of the individual, their memories and their learning styles. A curriculum that internalizes quantum theory should be based on a link between mind and experiment. Mental formation contributes to different kinds of intelligence through emotional and sensory formation. Therefore, in such a curriculum, emotion, thought, intuition and creative

thinking take place besides cognition. The Ministry of Education of Turkish Republic adopted the quantum theory as scientific philosophy in the arrangements realized in 2004. Thus, with the new curriculum based on quantum theory, it is aimed to train individuals with a holistic and multi-thinking, flexible and inquisitive thinking style (Ekici, 2013).

Quantum learning includes opinions about proven learning philosophy and methods influenced by individuals at all ages; suggestopedia, nlp, brain-based learning, learning styles, multiple intelligence, emotional intelligence, holistic learning, accelerated learning (Deporter, Reardon ve Singer-Nourie, 1999).

#### *Quantum learning scheme*

There is a learning scheme that is prepared in the direction of quantum learning principles and that a teacher should pay attention when applying quantum learning in his class (Ayvaz Tuncel, 2011; Deporter, Reardon ve Singer-Nourie, 1999; Ekici, 2013).

I.A remarkable introduction is made to raise the curiosity of the learners and learners are informed about the targets before giving detailed information about the subject.

II.The learners will be able to relate the new information to the previous information and have an activity to enter the topic.

III.Once the attention of the learners has been gathered, the relation of the learners to their lives is discussed. At this stage, learners try to label, sort, classify and define new knowledge they learn.

IV.Learners are presented with activities to adapt the information they learn to different situations. Learners gain confidence when they see that they can use what they know in new situations.

V.The information is repeated with activities so as to provide a thorough understanding of the learners' knowledge. Repetition of information ensures that the nervous links in learners are strengthened and learned permanently.

VI. Since the learned knowledge is valuable, the learning event is celebrated. The learning of the learners develops a positive attitude towards learning and teaching when rigorous studies and success are rewarded.

### *Development and Implementation of Sample Curriculum*

It has been decided to develop a sample program so that the quantum learning model could be better understood and the problems during implementation could be identified and corrected. A 12-hour curriculum was developed for the 7th grade English course in accordance with the achievements of the curriculum. Reading materials and reading texts in the textbook of Birincioğlu Kaldar (2016) used at schools during the education period of 2016-2017 were used. The curriculum developed in accordance with the quantum learning model was presented to two curriculum experts. The curriculum revised according to the feedbacks was implemented at the 7th grade of a secondary school at middle socio-economic level.

The class was ventilated before students arrived, and proper lighting was provided. The order in the class was arranged according to the "U" order that 27 students could easily follow the teacher and the lesson. Colourful cushions were placed to make the students feel comfortable. Class door and entrances were adorned. Colourful plants and flowers were placed on different corners of the class. The classroom was colored with appropriate visuals. Baroque music to be used was made ready.

In order that the lesson teacher could understand the model better, the first two lesson hours of the curriculum were applied by the researcher, and the model teacher was explained. The researcher delivered materials, visuals, awards, audiovisual tools etc. to teacher by file, box and memory card. During the course, the teacher took short notes during and after the lesson and evaluated both the curriculum and student performances. At the end of each lesson, the students also wrote their own diaries prepared by the researcher and wrote their opinions about their performances.

### **Conclusion, Discussion and Suggestions**

The diaries held by the students during the sample curriculum were examined by two experts with content analysis. It was understood from the findings that the

students enjoyed themselves in general terms and showed a willingness to participate in the activities. It was understood that the activities were mostly enjoyed, and students enjoyed the lesson.

The practice teacher made suggestions about the curriculum during and after the implementation of the curriculum:

- The material for the next activity should not be shown to the students because the interest in the activity and the material at that moment was diminishing. The teacher should show materials on time.
- The instruction must be repeated a number of times to make sure that students understand when the instruction was given.
- For question-and-answer activities, the answers could be repeated by the teacher for students who did not understand and cannot do right.
- Baroque music could be played on a different device rather than the smart board. Other video and audio files needed for the event could be a problem for media players when they worked on the smart board. There were also a few students who told me that they were distracted from the music during the lesson and that their attention was scattered. The background music to be selected by the students might be preferred for playing during the lesson.
- Since it took a lot of time to complete activities such as posters, posters, drawing pictures, dialogue writing and role playing, these activities should be given at least a few hours.
- Information could be further reinforced once the activities were repeated by the subject teacher.
- The students liked the cushions and other colored equipment very much; but the problem of the preservation of these materials arose. Therefore, at the end of each lesson, a cupboard was needed where the items could be placed. In addition, students might be allocated these items and their protection duties.

- The diaries prepared for the students were seen to be worn out at the end of the pilot implementation. The diaries could be bound before being given to students. Also, since some days students forgot their diaries at home, diaries could be distributed and re-collected at the end of each lesson in order to keep the diaries out of the way.

One of the models that will be able to respond to the needs of teachers and students, improve the achievement in teaching, develop self-efficacy in the student and reduce anxiety is the quantum learning model (Deporter ve Hernacki, 1992). Kanadlı, Ünal ve Karakuş (2015) reached the conclusion at the end of their meta-analysis study on the quantum learning model that quantum learning is more effective in improving the performance than in normal curriculums, they stated that learning experiences should be organized according to quantum learning. They also suggested that in the same study, teachers could increase the success of using this model in various lessons in elementary, middle and high school. Demir (2006) reached the conclusion that the quantum learning model contributes positively to the success of the student at the secondary level.