COMPARATIVE STUDY ON THE VIEWS OF PARTICIPANTS FOR THE USAGE OF LEARNING TECHNOLOGIES

ÖĞRETİM TEKNOLOJİLERİNİN KULLANILABİLİRLİĞİNE YÖNELİK GÖRÜŞLERİN KARŞILAŞTIRMALI DURUM ÇALIŞMASI

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ABSTRACT: Since the importance of the usage of educational technologies is increasing day by day, teachers need to save the lessons from traditionality and let the students gain their own technological literacy. The aim of this study here is to maintain the thoughts of the teachers, students and school administrators on the issue of using learning technologies based on constructivist approach at the primary school level with comparisons and then trying to improve the educational quality of our country in order to catch up with the world wide reforms done in this field. Interview and observation techniques, as the methods of qualitative research, are used in this study. As a result of this study it is found that the teachers are not capable of using the whole capacity of the learning technologies. That is why there should be an increase in the number of in-house education seminars. Not only the contents of those seminars should be designed for effective usage of technological tools but also there should be exercises for teachers to have active role during those seminars and teachers should be informed with the concept of constructivist education.

Keywords: Education, Tecnology, Teacher, Student, Constructivist

ÖZET: Öğretim teknolojilerinin derste kullanımı önem arz etmesi nedeniyle öğretmenlerin dersleri geleneksellikten kurtarmaları ve öğrencilere teknoloji okur-yazarlığı kazandırmaları için öğretim teknolojileri konularında gerekli bilgilere sahip olmaları ve onları öğretim esnasında etkili bir şekilde kullanmaları gerekmektedir. Bu çalışmanın amacı, ilköğretim okullarında derslerde yapılandırmacı yaklaşıma dayalı etkinliklerde öğretim teknolojilerinin kullanılabilirliğine ilişkin öğretmenlerin, öğrencilerin ve okul yöneticilerinin düşüncelerini belirleyerek karşılaştırma yapmak ve ülkemizde eğitimin kalitesini artırmaya çalışarak dünyada yapılan reformlara ayak uydurmaktır. Yapılan bu araştırmada nitel araştırma yöntemlerinden görüşme ve gözlem tekniği kullanılmıştır. Araştırmada öğretmenlere verilen hizmet içi eğitim seminerlerinin sayısının artırılması ve verilecek seminerlerin içeriğinde teknolojik araçların etkili kullanımına yönelik olarak düzenlenmesi, öğretmenlerin aktif rol alacağı uygulamaların yer alması ve yapılandırmacı eğitim konsepti hakkında öğretmenlerin bilgilendirilmeleri önerilmiştir.

Anahtar Sözcükler : Eğitim, Teknoloji, Öğretmen, Öğrenci, Yapılandırmacı

1.INTRODUCTION

In our age, fast developments in the areas of science and technology are not only affecting the economic system but also affecting the educational and social systems as well. Today, information is the key of economical development for the developed countries. On the other hand, technology is playing an important role in building up the education process. The fast development of information technologies path the way for information communities to emerge and became a necessity for the communuties to follow and adapt the changes of these technologies to themselves. (Keser,1998) Clark (2000) stressed on the importance of technology for education by stating that the role of the student is to learn the data given by the technology.(İpek, 2001)

For today's communities there is no suspect that economic and social systems are day by day changed related with the developments in information technologies which are changing our daily work lives too. The easier and faster reach to wider dimentional information with the help of globalization together, lead the way to the improvement of the circulation of information technologies. (Kartal, 2000, Şahan, 2005).

A country needs enough number of qualified people to become developed. This is related to that country's efficient work of educationary system. However education systems are lack of raising individuals that the community needs. For the last years, technological developments in every aspect of life inevitably show that education has to be associated with the technology. Therefore, increasing the efficiency of the teaching – learning process or having a qualified individual catching up with the other developed country's depend on the combination/unification of education and technology. Technology is not the only solution for every educational problem but there is no doubt that the usage of technology in the name of learning facilities plays an important role for improvement of education. (Akkoyunlu, 2002a)

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Using of learning technologies in the teaching – learning processes helps to the concretization of the transcendental concepts and also enables effective presentation of the topic. Besides learning becomes meaningful and more enjoyable(Demirel, 2002). Educational technologies are able to create this opportunity but the main role still remains on the shoulders of the teachers. Researchers are proving that the teachers are not able to use these educational technologies in the teaching – learning environments due to various factors. (Kaya, 2001 Hunt & Bohlin, 1993; Marcinkiewicz, 1993). In the literature, It is stated that the effective usage of educational technologies has a positive effect on educaiton systems and teachers at least have to have technological literacy in order to use it effectively in classes. (Jonassen and Reeves, 1996; Means, 1994; Baggot and Wright, 1996; Norton and Gonzales, 1998; Ely vd., 1996; Leask and Pachler, 1999) Since the learning technologies are important to use, the teachers need to save the lesson from traditionalism and make the students technology literate, in addition it is necessary for them to use it effectively during the lesson. In this context, it is again important to discover to what extend do the teachers utilize constructivist approach methods in those learning technologies.

In our country certain changes in different periods are done to improve the education quality for catching up the reforms done in the world. Lastly the learning programs at the primary level are modernized between the years of 2003-2005. These changes not only look similar to the learning methods, contents and measurement – evaluation approaches spreaded in other countries together with their programs having constructivist philosophy, but also bases on the constructivist approach itself. (Özsevgeç, 2006) The significance of gathering information by the student in Ausubel's understanding of learning constitutes the basis of constructivist approach. (Appleton, 1997; Hand & Treagust, 1991; Turgut, Baker, Cunningham, & Piburn, 1997). According to this thinking, student configure and contrast the newly learned information in his/her mind with the ones he already learned before. (Çepni, Ayas, Akdeniz, Özmen, Yiğit & Ayvacı, 2005; Gürol, 2005; Özmen, 2004) Constructivist approach based on active learning involves deliberate teacher in the process of student's active participation and his/her help to associate the earlier information learned before with the newly acquired ones. (Copley,1992) Leading this process correctly and having the maximum efficiency from it depends on understanding of the constructivist approach and the application level of it by the teacher. Teacher needs to guide the student towards building up their own information, using learning materials and technological tools in an active fashion, organize the needed materials in such a way that students could easily follow or reach. (Çepni, Küçük ve Bacanak, 2004). However as I mentioned before in our country the traditionalist learning methods are still widely used. What's more lots of research proves that these older methods are failing to improve the student success. (Şahin & Parim, 2002; Mc Donald, 2003; Güvener, 2005) For these reasons again constructivist approach putting the student into the centre is one of the most valid methods in learning technologies and it has the positive effect on student success.

Education is ongoing a frequent change all around the world. In our age, rapid change in the access of information, using of it and the ability to produce it, will maintain a community's future. Obtaining these abilities and contemporarily producing the information instead of memorizing is essential. Therefore the T.R.N.C National Ministry of Education went to the rearrangement of all course programs in accordance with the constructivist approach. (M.E.B, 2004) In these newly arranged programs the main aim is to raise investigative, creative and critical generations. According to this constructivist approach, the responsibility passes from teacher to student and teacher mainly has the guidance role. (Yıldırım, 2006) Usage of the learning technologies is important in the application of this new programs. Therefore teachers should get the courses rid of the traditionality and should have the required information about about learning technologies in order to lead the students gain scientific and technological literacy. In this context, problem that the teachers face while using the tools of technology and facilities associated with this constructivist approach has to be determined.

1.2. Aim

The aim of this study is to maintain the thoughts of the teachers, students and school administrators on the issue of using learning technologies based on constructivist approach at the primary school level with comparisons and then trying to improve the educational quality of our country in order to catch up with the world wide reforms done in this field. Several questions are asked below related to this aim.

1) What is the suitability of the teachers for the constructivist teacher role in the context of utilizing the learning technologies?

2) What is the suitability of the placement order of these learning technologies to the constructivist learning ?

3) How is the relationship between teacher & student during the courses ?

4) What are the rules of the learners using learning technologies in constructivist classes?

5) What are the problems that teachers face for the concept of constructivist learning in the lectures?

6) Are the learning technologies internalized by the class teacher ?

2.METHODOLOGY

In this study, interview and observation technique from the qualitative methods are used. Interview technique is categorized as the structured, semi-structured and unstructured interviews. Semi-structured interviews determine the questions beforehand and tries to collect data through them. (Karasar, 1998) This method is neither as rigid as the structured interviews nor as flexible as the unstructured ones, it is in-between. Since it enables this pliant advantage to the researcher, this semi-structured interview method is chosen. In addition to that observation technique is used to verify the correctness of the data found.

2.1.Working Group

In this research targeted sampling is followed and the working group is formed with the snowball sampling. In this sample the most data to be collected is foreseen to be coming from the teachers, schools administrators and students, therefore, they are thought to be the most suitable ones for the sample. (Tavşancıl ve Aslan, 2001) 5 primary schools, each of them are the biggest in their regions around North Cyprus are chosen for this study. These 5 primary schools include 15 school administrator, 50 teacher and 50 student (115 participants altogether) are shown in table 1.

Table 1: Participant Situation

School Name	School administrator	Teacher	Student	Total
Polatpaşa Primary School	3	10	10	23
Mehmetçik Primary School	3	10	10	23
Şehit Ertuğrul Primary School	3	10	10	23
23 Nisan Primary School	3	10	10	23
Kurtuluş Primary School	3	10	10	23
Total	15	50	50	115

2.2.Data Collection Process

The resrarch data is collected through the interviews done at the appropriate times of the participants between the dates of 15 October - 05 December 2011 and through the observations made in schools. The thoughts and the views of the teachers, school administrators and students on the availability of these learning technologies in lectures are tried to be detected by this research. Interview questions are prepared in parallel with the constructivist approach applied in interview format for collecting the data. The interview format is given to 3 professionals to seek the internal validity and to be examined for unlisting the similar questions. Some of the questions are unified with the others due to this problem and some of them are reshaped to make the question easier to understand. Two school administrators and two teachers are interviewed as a sample to make sure that the questions are open and understandable. Voices are recorded and turned into the written format in order to clarify the neatness of the answers. Two other specialists examined the documents and conrolled whether the questions are clear and neat or encompassing the subject with the desired information. It is observed that these two specialists are thinking %90 parallel with each other. The validity of the question blots are calculated (detected) at the end of the study. It is believed that (Yıldırım & Şimşek,2005) the interview questions are providing the needed data so that the study passed directly on to the data collection process.

2.3.Analysis of The Data

Data is analysed through the content analysis in this study. 4 different steps are followed for the content analysis. (Yıldırım & Şimşek, 2005)

a) Codification of the data: This includes the analysis of the CDs recorded (taped) during the interviews. Interview document is arranged through giving a number to every line. Interview documents and the tapes are given to another specialist check and control whether the parts are missing or faulty. After the interview data taken from the participants examined and separated into meaningful parts and these parts are codified and given names. A code list is sustained after the codification of all the data and then it became a key list for examination and arrangement of it. Later on coding keys and interview documents are separately read by the researchers and the required arrangements are done after the discussion of "For" and "Against" arguments. Huberman's (1994) reliability formula is used for calculation and the mean value is found as %94. Since reliability calculations need to be above %70 for a research to be accepted as reliable, our result here is said to be reliable.

b) Finding the themes: This step consists of thematical coding process that are categorized under the first step of codification of data.

c) <u>Arrangement of the data according to the codes and the themes:</u> In this step, participant views are explained in an easy language and the views are given to the reader from the first hand. Footnotes are used to maintain which interview note is belonging to whom. The interview notes are shown between aposthrope signs and then the participant's interview is indicated within parantheses. Codification system is shown as below,

   EXAMPLE 1: "................" (I:SA(B(2)))

   I: Interview; SA: School Administrator; ST; School Teacher   A,B,C,D,E: School Name

d) Interpretation of the findings: The interpretation of the presented findings in detail and explanation of some results take place in this last step. Collected data is interpreted after the qualitative steps done and some results emerged after having support of the literature.

3.FINDINGS

Our comparative study on the views of school administrators, teachers and students for the usability of learning technologies following the constructivist paradigm has the evaluation derived from the participant interviews in this part.

3.1. I. Dimension : Convenience of teachers to teacher roles in constructivist learning and their level of benefit from the learning technologies.

The views of 115 participants (involved in research group questioning) is presented below on table 2 as with the topics and ratios. These views are asked towards a change in the content of couses which sought to be in accordance with the constructivist approach towards the realization of the aim of T.R.N.C National Ministry of Education at the primary level vision, mission and goal perspectives.

Table 2 : Convenience of teachers to teacher roles in constructivist learning and their level of benefit from the learning technologies.

I. Dimension	School Admin.			Teacher			Student		
	Agree Amount	Disagree Amount	Partici-pation (%)	Agree Amount	Disagree Amount	Partici-pation (%)	Agree Amount	Disagree Amount	Partic-ipation (%)
Using of learning technologies in accordance with constructivist approach concept by the teachers	10	5	% 66	14	36	% 28	8	42	% 16

The views of the schools administrators, teachers and students are taken about the teachers' usage of learning technologies in accordance with constructivist approach. % 66 of the school administrators agreed that the teachers are convenient to the constructivist concept. In this context, School administrator B shared his/her views like *" I sometimes personally observe that the teachers are using the learning technologies in accordance with the constructivist concept. This new approach is really internalized by our teachers and our school". (I:SA(B)(2)))."* Likely % 36 of the teachers and % 16 of the students are agreed with their school administrator, however, the bigger majority of them shared different views and disagreed with the school administrator's thinking. A teacher from the school C says that *" Within this context, I can clearly say that, most of our teachers are not using learning technologies. We are even scared of it because we do not want to show an effort to learn or to use them. We choose the traditionalist methods that we already know before so it is easier to deal with. (I:ST(D)(27)))".* This phrases summarize the insufficiency and the effortless mentality behind not to choose the learning technologies. A student from the school B on the other hand asserted the failure of the teachers on learning technologies that *" Neither we have seen those technologies, nor we heard about it. When teachers come to the classes, they either use the board or sometimes bring a few brochures and hang them up somewhere in the class. (I:S(E)(34)))."* When we look at the ratios, we can say that teachers and students are thinking parallel but the school administrators have different views on the issue.

3.2. II.Dimension: Student-teacher interaction during the use of educational technologies in constructivist classrooms

The views of 115 participants on the questions related to student-teacher interaction in class activities (learning technologies weighted ones) are shown in table 4 with the ratios and topics.

Table 3: Student-teacher interaction during the use of learning technologies in constructivist classrooms

II. Dimension	School Administrator			Teacher			Student		
	Agree Amnt.	Disagree Amount	Partici pation (%)	Agree Amount	Disagree Amount	Partici pation (%)	Agree Amount	Disagree Amount	Partici pation (%)
Student-teacher interaction during the use of learning technologies in constructivist classes	11	4	% 73	22	28	% 44	11	39	% 22

The views of the school administrator, teacher and student's are taken out to find the student – teacher interaction during the use of learning technologies in constructivist classes. % 73 of the school administrator's mentioned a positive, convenient interact between the student and the teacher.One school administrator from the school A says that *"I sometimes visit the classes in this context of using the learning technologies and what I see there is the student's virtuallly being in the centre of the lecture and becoming active and active by getting away from the memorizing mentality. They also guide the student instead of just transfering the information. I become happy to see that self-accumulation of students. (I:SA(A(7)))."* He underlined the guidance, getting rid of the memorizing, self accumulation and active student concepts in the light of student-teacher interaction for constructivist classes. %44 of the teachers and %22 of the students are agreeing with the views of school administrators but the rest doesn't. An example to that is seen on school C, teacher says that *"In our school most of the teachers are still using the classical methods, that is to say teachers are the info-transmitters and the students are the receivers with the same standard.We present the ready made materials prevent them from self-learning. We should activate them and stop caring only about ourselves (I:(ST(21)))".* These sentences indicate the insufficient efforts for student-teacher interaction. The reason behind that is given as the undesire and unwillingness of teachers to adopt the constructivist approach since it needs showing effort to learn. Classical methods that they only know, is believed to be the easiest one and the excuse of the problem. A student from B admits that *"I can easily say that student-teacher interaction is quite low for our class. Teacher lectures, at the same time we listen and try to memorize. She gives infromation and if she let us ask then we ask questions other than that no room for intervention. Computers in class are staying there without any use (I:S(B(48)))".* When we look at the ratios and interviews in the light of constructivist student – teacher interaction, we can see that again teacher and students share parallel views on the issue, however, it is difficult to find similarity between the views of them and the school administrator.

3.3. III.Dimension: Learner roles at the learning technologies used in the consructivist classes.

The views of the 115 participants on the question related with learner roles at the learning technologies used in constructivist classes.

Table 4: Learner roles at the learning technologies used in the consructivist classes

III. Dimension	School Administrator			Teacher			Student		
	Agree Amount	Disagree Amount	Partici pation (%)	Agree Amount	Disagree Amount	Partici pation (%)	Agree Amount	Disagree Amount	Partici pation (%)
Learner roles at the learning technologies used in the constructivist classes	8	7	% 53	11	39	% 22	09	41	% 18

Thoughts of the student, teacher and student administrators are asked in the context of learner roles at the learning technologies used in the consructivist classes. %53 of the school administrators indicated the pleasing appropriateness of learner roles in learning technologies. In this context, E school's administrator states *"Students are taking active roles with the help of technology and make additions to their knowledge. This also helps them to be in the centre of the study (I:SA(E(4)))"*. This view shows us that the roles are activated by using the learning technologies, and give the capacity to direct the lesson by the student with improving the existing knowledge. %22 of the teachers and %18 of the students agree on this point with the school administrators but the others think dissimilar. For example one teacher in school A asserts that *"In the light of constructivist learning technologies, I can say that our students are severely avoiding from taking the desired roles in class. Not only they reject involving in learning roles but also they prefer no questions to be asked. So there is a massive group of individuals who ignore the knowledge and the active roles. We, teachers, should encourage them to active learning and to technological use (I:ST(A(14)))."* This teacher underlined the avoid of students from the mentioned roles and their unwillingness which needs the courage to break it. She adviced pumping the encourgement and upraising the will towards constructivist paradigm. A student from school B comments on the issue that *"We, students, do not take active role in classes. There is no student using the technology to directing himself/herself or capable of directing the lesson. Our role in class is quite far away from the technology. Our most important roles in class are to look at the board and note what is written there, not to make noise and being silent(I:S(B(26)))"*. Here it is understood that the necessary roles are not taken granted in class and the student are only appear as the listeners of the lessons. Overlapping and parallel views are found from the expressions of teachers and students in this context of learner roles in the consructivist classes. However, the school administrator are thinking otherwise on the issue which is set clearly on the ratios and views too.

3.4. IV.Dimension: Teacher problems with the constructivist learning concept in lectures.

The views of 115 participants on the issue of teacher problems with constructivist learning concept are shown in the following page at table 5 with the ratios and topics.

Table 5 : Teacher problems with the constructivist learning concept in lectures.

IV.Dimension	School administrator			Teacher			Student		
	Agree Amount	Disagree Amount	Partici pation (%)	Agree Amount	Görüşe Katılma- yan Miktar	Participat ion (%)	Agree Amount	Disagree Amount	Partici pation (%)
Teacher problems with the constructivist learning concept in lectures.	6	9	% 60	08	42	% 16	9	41	% 18

Thoughts of the school administrators, teachers and students on teacher problems with the constructivist learning concept are asked. % 60 of the school administrators denied that their teachers are not facing any problems with the constructivist concepts. School D's administrator *"I feel enough with the created environment suitable for constructivist learning. We supply computer and projection machines to the classes. Teachers in our school give the students presentation homeworks and try to activate the student by this way.*

Since the new programs are eliminated from the confused material, there is now much more visual material in the programs, increasing the student attention(I:SA(D(14)))." He underlines the suffcient resources and technology for their school and this is believed to lead the student and the teacher to fulfill the constructivist concept without facing any problems. Very few of the teachers (%16) and students (%18) agree on this point with the school administrators. Lets look at the views of the rest then. A teacher in school B, *"Inadequacy of the technological tools in our school limits us as well. There is not enough projections, not enough laboratories and I can confidently say that the in-house-educations in this respect are quite few and inadequate. Moreover I can not use the technological tools due to the shortness of course hours. Since the network access is slow, internet connection in classes remains as a waste of time. The facilities in the new programs takes most of the time, therefore an additional waste time for preperation of the tech. tools makes the time even more limited. That can be one of the biggest problems for the shortage of using these tools(I:ST(B(22)))".* Here we see the inadequacy of technological tools, functionless materials and limited time in the eyes of the teachers. These shortages steals the time from the course hour so there should be an arrangement for more course hours and/or in-house education for the teachers. Another teacher in school C share the view that *" There is not enough computer for every student, the slow internet pace also stops us. The tools are available only at the technology rooms so this creates a problem of coiciding with the other classes. Therefore we can not make facilities in the laboratories or classes at the same time with the other groups. It is impossible to show something in computer during an experiment since normal classes are inadequate of having both. Electricity cuts affect the lesson badly and the school does not cover the required technological tools as well and the existing ones are not working, therefore, if I want to show a picture, I use the book or try to draw it on the board. (I:ST(C(11)))".* These views clearly show that the learning technologies in classes are inadequate. Students have accessing problems to the existing tools and the already existing tools are said to be the oldest in their fashion so a reluctant use of classical methods is the case for teachers. A student in school B contribute to that with another perspective of economical difficulties. *"We,students, are keen on using internet for our studies but most of our friends neither have a computer nor internet in their homes. So they have limited technological knowledge and can not do their homework. I sometimes help them but this takes my significant amount of time that I can hardly concentrate on my work(I:S(B(14)))".* Problems that teachers face with the constructivist learning concept in lectures are showing parallel clues and sometimes overlap in teacher and student views but school administrators are again dissimilar.

3.5. V.Dimension: The adoption of learning technologies used within the scope of constructivist learning approach by class teachers.

The views of 115 participants on the issue of **"**the adoption of learning technologies used within the scope of constructivist learning approach by class teachers" are shown in the following page at table 7 with the ratios and topics.

Table 6: The adoption of learning technologies used within the scope of constructivist learning approach by class teachers.

V. Dimension	School Administrator			Teacher			Student		
	Agree Amount	Disagree Amount	Partici pation (%)	Agree Amount	Disagree Amount	Partici pation (%)	Agree Amount	Disagree Amount	Partici pation (%)
The adoption of learning technologies used within the scope of constructivist learning approach by class teachers.	12	3	% 80	16	34	% 32	13	37	% 26

For the adoption of learning technologies used, to class teachers within the scope of constructivist learning approach, student, teacher and school administrator views are asked. %80 of the school administrators stated that learning technologies are adopted by the teachers without any problem. In this respect, School administrator A says *"Teachers are easily adapted to the constructivist learning technologies. They frequently apply me to use the projections, internet, computers, TV and the other materials. This demand shows the adoption of learning technologies by our teachers(I:SA(A(9)))".* Here we see the school administrator as becoming pleased with demand for the usage of the equipment and thinking that the teachers are fully adopted to the required constructivist learning technology. %32 of the teachers and %26 of the students agree with each others' views but separate thinking come by the school administrators. A teacher from the school D mentions *"I*

can hardly say that we are fully adopted with the learning technologies because we are still technology illiterate. We can't live without classical methods; most of us are both inadequate and apathetic. Our teachers see the process of searching and using the relevant learning technology not only as a waste of time but also a needless fact. Therefore I cannot say that we are adopted with the learning technologies. (I:ST(D(36)))". Those statements indicate that in constructivist classes the teachers are inadequate to use learning technologies therefore unable to adopt it into class facilities. Teachers' view on technology, one basis of the constructivism, and seeing it as a needless point in class was important to stay on. School B's student here says the same *"our teachers have not adopted the learning technologies yet. Because they neither use computer/internet nor insert projections at the lecture. They see it as a waste of time (I:S(B(26)))".* They avoid using technology because of time wasting. Within the scope of constructivist learning approach, adoption of learning technologies by class teachers is an issue that unified the student and teacher views but created a mind gap between the school administrators and the other participants.

4. RESULTS AND SUGGESTIONS

5 parts of the research are examined after the results of interviews and observations. Suggestions and conclusions are derived within the scope of constructivist learning technologies based on students, teachers and school administrator views shown at the following part.

4.1. I.Dimension: Teacher's use of learning technologies in accordance with the constructivist concept:

The views show that the teachers are not using the educational technologies enough and they are effortless to these. Within the scope of this dimension, teachers and students share parallel views but school administrators are away from those views. In the literature, there are some findings showing resemblance to ours that the teachers are avoiding of using learning technologies. (İşman, 2002; Çağıtay, etc., 2001) Bayrakçı and Süngü's (2007) research results overlapping with ours. Here the suggestion is to increase the number of in-house-education seminars of teachers and adhering more technological material to the seminars together with active constructivist roles.

4.2. II. Dimension : Student-teacher interaction during the use of educational technologies in constructivist classrooms:

It has been understood that the student-teacher interaction is not at the desired level during the use of educational technologies in constructivist classrooms. It can also be understood that the main reasons for not achieving the desired level is due to the teachers attitude towards new technologies where they prefer the already known classical methods instead of spending effort to adapt to a new method.

Regarding the constructivist paradigm, it has been observed from the comments of the participants and the poll results that the views of students and teachers are parallel where the opinions of the administrators are opposed. In this aspect, according to Brooks and Brooks (1993), for constructivist student-teacher interaction, it is advised that the constructivist student-teacher interaction due to the teachers' encouragement of the participation of the student and more frequent use of the physical and technological material by the teachers must be accomplished.

4.3. III. Dimension: Students role in educational technologies in constructivist classrooms:

According to students and teachers, students are avoiding assuming their roles and teachers do not encourage students to assume roles for the constructivist educational paradigm. Also, it has been understood that students are only a good listener during use of educational technologies in constructivist course applications. Regarding the constructivist paradigm, it has been observed from the comments of the participants and the poll results that the views of students and teachers are parallel where the opinions of the administrators are opposed. However, according to Brooks and Brooks (1999), in order for the students to assume their roles in a constructivist environment, the teacher must ask challenging questions and encourage the students to research and solve problems as well as guiding the students technologically instead of telling the student how to think as well.

4.4. IV.Dimension: Technological Problems faced by teachers within the constructivist learning concept:

According to the administrators, the technologies used in the constructivist classrooms are sufficient, the teachers and the students are using such technologies without any problem and a new system combining new material with technology centering the students is applied. Within the same scope, 16% of the teachers and 18% of the students agreed with the opinions of the administrators whereas a large percentage disagreed and stated their opinions as the teachers do not have sufficient knowledge and the set-up of these technological tools causes a waste of time, Furthermore, suggested more frequent and effective courses for the teachers in order to better use such technologies. Also, it has been understood from the opinions that students also face troubles using the technological tools as the tools are either insufficient or very old while teachers avoid using these tools and teach with classical methods due to the same reasons.

Regarding the constructivist paradigm of the technological problems faced, it is understood based on the percentages that the opinions of the students and the teachers coincide however; oppose with the opinions of the administrators.

Kaya vd's research (2007) concluded that the current educational software is no longer up to date and the courses are not sufficient in educating the teachers to properly use the technological educational tools which also coincide with the results of this study. In this respect, the number of courses for teachers who feel insufficient for the use of tehnological tools must increase and teachers knowledged on technology should help other teachers within the same school. Additionally, the technological tools must be upgraded.

4.5. V. Dimension: The adoption of educational technologies used within the scope of constructivist learning approach by class teachers.

The use of such technologies, participants are inadequate of the proper usage, they consider it as a useless application, furthermore consider is as a waste of time, thus avoid the use of these technologies.

Regarding the constructivist paradigm, it is understood based on the percentages that the opinions of the students and the teachers coincide however; oppose with the opinions of the administrators.

Yurdakul's research (2004) concluded that the students will be happier due to the entertaining education thus learn easily if the teachers can adobt to constructivist learning approach. Also, it has been mentioned in the same research that the most important factors creating a negative influence on teachers' adoption to this approach is that they are required to learn this technology along the way thus spend money and effort to prepare new materilas as well as the population and the physical insufficiency of the class rooms. It has been evaluated that teachers should be educated by courses in order to help the teachers adopt the constructivist learning apporach and learn the proper use of the relevant technologies.

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Genişletilmiş Özet

Öğretim teknolojilerinin derste kullanımı önem arz etmesi nedeniyle öğretmenlerin dersleri geleneksellikten kurtarmaları ve öğrencilere teknoloji okur-yazarlığı kazandırmaları için öğretim teknolojileri konularında gerekli bilgilere sahip olmaları ve onları öğretim esnasında etkili bir şekilde kullanmaları gerekmektedir. Bu bağlamda öğretmenlerin yapılandırmacı yaklaşıma dayalı etkinliklerde öğretim teknolojilerinden ne derece faydalandıkları ve teknolojik araçların kullanımında karşılaştıkları sorunların neler olduğunun tespit edilmesinin önemi ortaya çıkmakla beraber öğretmenlerin konuları ve olayları ilginç ve önemli hale getirmeleri gerekmektedir. Günümüzde yapılandırmacı sınıflarda gerçekçi etkinlikler çerçevesinde, aktif öğrenmeyi destekleyen öğretim etkinlikleri kullanılmasının önemi oldukça artmıştır. Ülkemizde genellikle geleneksel öğretim yöntemleri kullanılmaktadır. Fakat yapılan pek çok araştırma geleneksel öğretim yöntemlerinin farklı yöntemlere göre öğrenci başarısını arttırmada zayıf kaldığını ortaya koymaktadır. Bu açıdan öğrenciyi merkeze alan yapılandırcı yaklaşımın, öğretim teknolojilerinin öğretiminde kullanılması gereken en geçerli metotlardan biri olduğu ve bu yaklaşımın öğrenci başarısı üzerine olumlu etkisinin bulunduğu düşünülmektedir.

Ülkemizde eğitimin kalitesini artırmak ve dünyada yapılan reformlara ayak uydurmak için farklı dönemlerde öğretim programlarında değişikliklere gidilmiştir. Son olarak 2003–2005 yılları arasında ilköğretim düzeyinde öğretim programlarında değişiklikler yapılmıştır. Yapılan bu değişiklikler, diğer ülkelerde geliştirilen ve uygulamada olan öğretim programlarının felsefelerine, öğretim metotlarına, içeriklerine ve ölçme-değerlendirme yaklaşımlarına benzerlik göstermekle beraber yapılandırmacı yaklaşım esas alınmıştır. Yapılandırmacı yaklaşımın temelini Ausubel'in öğrenmede öğrencinin mevcut bilgi birikiminin önemi ve sonraki öğrenmelere etkisi ile ilgili düşünceleri oluşturmaktadır. Bu düşünceye göre öğrenci yeni kazandığı bilgileri daha önceden sahip olduğu bilgilerle karşılaştırarak uygun bir şekilde zihninde yapılandırır. Bu nedenle öğrenci kendisine verilen bilgileri aynen almak yerine, kendi zihin yapısına uygun olarak şekillendirir. Yapılandırmacı yaklaşım, aktif öğrenme esasına dayalı olup, bu süreçte öğretmen, bireye bilgiyi doğrudan aktaran değil, öğrencinin öğretim sürecine aktif katılımını sağlamaya yönelik etkinlikleri tasarlayarak öğrencilerin önceki bilgileri ile yeni kazandıkları bilgiler arasında bağlantı kurmasına yardımcı olan kişidir. Öğretmenin bu süreci iyi yönlendirebilmesi ve süreçten en üst düzeyde verim elde edebilmesi, yapılandırmacı öğrenme yaklaşımını anlama ve uygulama seviyesi ile doğrudan ilişkilidir.

Bu çalışmanın amacı, ilköğretim okullarında derslerde yapılandırmacı yaklaşıma dayalı etkinliklerde öğretim teknolojilerinin kullanılabilirliğine ilişkin öğretmenlerin, öğrencilerin ve okul yöneticilerinin düşüncelerini belirleyerek karşılaştırma yapmak ve ülkemizde eğitimin kalitesini artırmaya çalışarak dünyada yapılan reformlara ayak uydurmaktır. Yapılan bu araştırmada nitel araştırma yöntemlerinden görüşme ve gözlem tekniği kullanılmıştır. Bu araştırmaya Kıbrıs'ta beş bölgede faaliyet gösteren en büyük ilköğretim okullarından birer tane olmak üzere beş tane ilköğretim okulu şeçilmiştir. Bu beş tane ilköğretim okulundan toplam 15 okul yöneticisi, 50 öğretmen ve 50 öğrenci olmak üzere toplam 115 katılımcı dahil edilmiştir. Araştırma verileri 15 Ekim – 05 Aralık 2011 tarihleri arasında katılımcıların uygun oldukları saatlerde uygun ortamlarda yapılan görüşmeler ve okullarda yapılan gözlemler yoluyla veriler toplanmıştır. Araştırmada ilköğretim okullarında derslerde yapılandırmacı yaklaşıma dayalı etkinliklerde öğretim teknolojilerinin kullanılabilirliğine ilişkin öğretmenlerin, öğrencilerin ve okul yöneticilerinin düşüncelerini belirlemeye yönelik görüşler ortaya çıkarılmaya çalışılmıştır. Verilerin toplanmasında uygulanan görüşme formunda yapılandırmacı yaklaşım dikkate alınarak görüşme soruları hazırlanmıştır.

Araştırmanın sonuçları altı boyutta ele alınmıştır. Bu boyutların birincisi öğretim teknolojilerinin öğretmenler tarafından yapılandırmacı konseptine uygun olarak kullanılması kapsamında incelenmiştir. Sırasıyla diğer boyutlardan ikincisi derslerde kullanılan öğretim teknolojilerinin yerleşim düzeninin yapılandırmacı öğrenmeye uygunluğu, üçüncü boyut öğretim teknolojilerinin kullanımında yapılandırmacı ders uygulamaları esnasında sınıflarda öğretmen-öğrenen etkileşimi, dördüncü boyut yapılandırmacı sınıflarda kullanılan öğretim teknolojilerinden öğrenenlerin rolleri, beşinci boyut derslerde yapılandırmacı öğrenme konseptine göre öğretmenlerin öğretim teknolojileri ile yaşadıkları sorunlar ve altıncı ve sonuncu boyut ise yapılandırmacı öğrenme yaklaşımı kapsamında kullanılan öğretim teknolojileri sınıf öğretmenleri tarafından benimsenmesi temaları kapsamında sonuçlar ve öneriler ortaya konulmuştur. Araştırmanın sonucunda öğretmenlerin öğretim teknolojilerini tam olarak kullanamadıkları yönünde sonuçlara varılmıştır. Bu nedenle öğretmenlere verilen hizmet içi eğitim seminerlerinin sayısının artırılması ve verilecek seminerlerin içeriğinde teknolojik araçların etkili kullanımına yönelik olarak düzenlenmesi, öğretmenlerin aktif rol alacağı uygulamaların yer alması ve yapılandırmacı eğitim konsepti hakkında öğretmenlerin bilgilendirilmeleri önerilmiştir. Öğretmenlerin öğretim teknolojilerini kullanırken yapılandırmacı paradigma kapsamında sınıf içi yerleşim düzenlerini değiştirmedikleri, bu faaliyeti zaman kaybı ve kargaşa ile gereksiz bir uygulama olarak algıladıkları alınan öğretmen ve öğrenci görüşlerinden söylenebilir. Eğitim teknolojilerinin çok nadir olarak kullanılmasına rağmen sınıf içi yerleşim düzenlerini öğretmenlerin kullanmadığı yapılan görüşmelerden anlaşılmaktadır. Yapılandırmacı eğitim ve öğretim konseptinde belirlenen hedeflere ve amaçlara ulaşmada sınıf içi yerleşim düzenlerinin öğretmenlerin özellikle kullanarak öğrenci ve öğretmen etkileşimi ve iletişimininin artırılması yönünde çalışma içerisine yönelmelerinin daha uygun olacağı değerlendirilmektedir. Öğretmenlere ve öğrencilere göre öğretmenlerin yapılandırmacı sınıflarda kullanılan öğretim teknolojilerinden öğrenenlerin rollerini üstlenmelerinde öğrencilerin bu rolleri üstlenmeden kaçındıkları, aktif rol almak istemedikleri ve öğretmenlerin öğrencileri üstlenmeleri gereken roller karşısında cesaretlendirme ve teşvik etme yönünde öğrencileri yapılandırmacı paradigmaya sokmaya yönelik uğraş vermedikleri alınan ifadelerden anlaşılmaktadır.Ayrıca yapılandırmacı bir ortamda öğrencilerin rollerini tam olarak yapabilmeleri için yapılandırmacı öğretmenin, öğrencilere düşündürücü sorular yönelterek onların araştırma yapmasını ve problem çözmesini sağlaması gerektiğini, öğretmen, öğrencilerin neyi, nasıl düşüneceğini söylemeyerek öğretmenin bir kutup yıldızı gibi işlev görmesi gerektiğini, öğrencilerin nereye gideceklerini belirtmeyerek onların yollarını bulmasına hem teknolojik olarak ve hem de yol göstererek yardımcı olmaları gerektiği araştırmada önerilmektedir.