Turkish Online Journal of Distance Education-TOJDE October 2008 ISSN 1302-6488 Volume: 9 Number: 4 Article 13

OPEN PRIMARY EDUCATION SCHOOL STUDENTS' OPINIONS ABOUT MATHEMATICS TELEVISION PROGRAMMES

Kursat YENILMEZ
Faculty of Education
Department of Elementary Education
Eskisehir Osmangazi University
Eskisehir, TURKEY

ABSTRACT

The purpose of this study was to determine open primary education school students' opinions about mathematics television programmes. This study indicated that to determine differences among open primary education school students' opinions about mathematics television programmes point of view students' characteristics like gender, age, grade, frequency of watching mathematics television programmes and living place. The sample consists of 99 students which were selected randomly from open primary school students in Eskisehir in 2005-2006 education years. Data were collected by a questionnaire which consists of 15 items and a demographical information form. Frequency tables, t-test and one-way analysis of variance (ANOVA) were employed to analyze data.

According to the results of the study, open primary education school students have some negative opinions about language, terms, suitability for learning levels, expression speed, number of repeating broadcast and summaries of mathematics television programmes.

Keywords: Distance Education, Mathematics Teacher Candidate, Faculty of Education

INTRODUCTION

Rapid development in information and computer technologies changes persons' and community live. This situation creates an absolute necessity for clear and permanent information in a short time for everyone. Education, legal condition behinds the learning, requires a place in this development, too. And this is related to the importance that given for "distance education". Distance education can make learning easy by isolating time and place from it. Distance education is different from traditional education by its nature (Toprakcı & Ersoy, 2008).

At its most basic level, *distance education takes place when a teacher and student(s) are separated by physical distance, and technology (i.e.,voice, video, data, and print), often in concert with face-to-face communication, is used to bridge the instructional gap.*

These types of programs can provide adults with a second chance at a college education, reach those disadvantaged by limited time, distance or physical disability, and update the knowledge base of workers at their places of employment.

Many educators ask if distant students learn as much as students receiving traditional face-to-face instruction.

Research comparing distance education to traditional face-to-face instruction indicates that teaching and studying at a distance can be as effective as traditional instruction, when the method and technologies used are appropriate to the instructional tasks, there is student-to-student interaction, and when there is timely teacher-to- student feedback (Moore & Thompson, 1990; Verduin & Clark, 1991).

A wide range of technological options are available to the distance educator. They fall into four major categories:

Voice - Instructional audio tools include the interactive technologies of telephone, audioconferencing, and short-wave radio. Passive (i.e., one-way) audio tools include tapes and radio.

Video - Instructional video tools include stil images such as slides, pre-produced moving images (e.g., film, videotape), and real-time moving images combined with audioconferencing (one-way or twoway video with two-way audio).

Data - Computers send and receive information electronically. For this reason, the term "data" is used to describe this broad category of instructional tools. Computer applications for distance education are varied and include:

Computer-assisted instruction (CAI) – uses the computer as a self-contained teaching machine to present individual lessons.

Computer-managed instruction (CMI) – uses the computer to organize instruction and track student records and progress. The instruction itself need not be delivered via a computer, although CAI is often combined with CMI.

Computer-mediated education (CME) - describes computer applications that facilitate the delivery of instruction. Examples include electronic mail, fax, real-time computer conferencing, and World-Wide Web applications.

Print - is a foundational element of distance education programs and the basis from which all other delivery systems have evolved. Various print formats are available including: textbooks, study guides, workbooks, course syllabi, and case studies (Willis, 1994).

The history of distance education could be tracked back to the early 1700s in the form of correspondence education, but technology-based distance education might be best linked to the introduction of audiovisual devices into the schools in the early 1900s.

In tracing the history of distance education, the introduction of television as an instructional medium appears as an important entry point for theorists and practitioners outside of the correspondence education tradition, and marks parallel paths for correspondence study and instructional media.

Early studies by educators tended to show that student achievement from classroom television was as successful as from traditional face-to-face instruction. In one of the earliest education vs. media studies, Childs concluded that television is not an instructional method, but an instrument for transmitting instruction (Jeffries, 2008).

Using television in distance education in Turkey started at first Open Education Faculty of Anadolu University.

Established with the intention to provide university degree opportunities for the majority of the society, Anadolu University can be referred to as belonging to the eastern models. Its "Open Educational Faculty" has been providing education in many subjects through printed materials, television programs and academic counseling.

When it was first established, it only had 29 479 students (Odabaşı and Kaya,1998), today the registered number of students reached 600 000. It is offering 34 different programs (Ural, 2007). Television has been using in distance education secondly in Open Primary Education School in Turkey.

Open Primary Education School in Turkey

Open Primary Education School was established in 12.09.1997 by Ministry of National Education (MNE) in Turkey which affiliated to Presidential of Education with Film, Radio and Television. Open Primary Education School was started to education in 1998-1999 education years at first within the scope of General Directorate of Educational Technologies. Open Primary Education School gives distance education by television service for primary education 6^{th}, 7^{th} and 8^{th} grades.

The purposes of the Open Primary Education School are to provide adults with a second chance at a primary education, to grow societys' education and culture levels, to make easy acquire a profession, to provide they contribute for economic development and to prepare them to secondary and higher education.

At the end of the August–2006, there were totaly 163.171 students graduated from Open Primary Education School.

Primary education curriculums have applied in Open Primary Education School. Every education year consists two semesters. At the end of the every semester average of all examination scores determines the final score. The students, which unsuccessful in some lectures, goes in for groving score examination at the end of related semester. Current lectures in Open Primary Education School are shown in Table 1.

Table: 1
Lectures in Open Primary Education School

6^{th} Grade	7^{th} Grade	8^{th} Grade
Turkish	Turkish	Turkish
Mathematics	Mathematics	Mathematics
Science	Science	Science
Social Studies	Social Studies	Citizenship and Human
Foreign Language	Citizenship and Human Rights	Turkish Rebuplic
Religious Culture and Moral	Foreign Language	Foreign Language
Traffic and First Aid	Religious Culture and Moral	Religious Culture and
Speaking and Writing	Speaking and Writing	Traffic and First Aid
Tourism (Elective)	Tourism (Elective)	Speaking and Writing
		Tourism (Elective)

There are 15 minute's programmes for each Mathematics–6, Mathematics–7 and Mathematics–8 per week.

Since August–2006, television and radio programmes have been issued via internet by Internet-RadioTV of Open Primary Education School (http://aio.meb.gov.tr).

There are many studies about determination of the opinions and attitudes of the key players in distance education (students, faculty, facilitators, support staff, administrators etc.) in literature. Some of these studies are the following.

In Kurubacak et al. (2008) study it is aimed to determine academics' opinions related to distance education. Opinions related to distance education were taken from the lecturers who work as designer, class manager, evaluation expert and etc. in the field of communication, education and distance education in a state university in Central Anatolia Region in Turkey. According to results of that study, there were no differences among the lecturers who work as designer, class manager, and evaluation experts' opinions related to distance education.

The views of the doctoral students at traditional universities on the use of distance education systems and technologies and independent learning were determined in Ural's (2007) study. Findings of that study indicated that doctoral students do not have a positive attitude towards the use of distance education systems and technologies, and they do not agree with the idea that distance education systems can support independent learning.

In Gujjar et al. (2007) study was undertaken to measure the attitude of the students towards teacher training programmes through Distance Education offered by an open university in Pakistan. It was found that majority of the students appreciated the overall input of the programme though a few eyebrows were raised concerning the assessment of the assignments.

Nasser & Abouchedid's (2000) study investigates the attitudes of schoolteachers and directors towards the worth and value of implementing a distance education program in Lebanon. The study surveys 7 school directors and 112 schoolteachers unequally divided among fourteen urban and rural schools. School directors were negative about the possibilty of distance education meeting the training needs of schoolteachers.

In addition, they reported costly training and the purchase of technologies for distance education as inconceivable. On the other hand, teachers held a more positive view of distance education. Though more than half of the teachers reported little acquaintance with the specifics of distance education, they reported willingness to put forth the effort needed to familiarize themselves with the new technologies and practices.

More significantly, the exceptionally high level of unawareness between the two groups points to the need to organize workshops and technology seminars so that schools can better understand the structural, curricular, and pedagogical practices needed for full blown distance education programs in Lebanon.

Eleven community college instructors and the 334 students in their distance learning classes were surveyed in Inman et al. (1999) study. Data showed instructors had conflicting attitudes about distance education. They were willing to teach a distance learning class again, but they rated the quality of the courses as equal or lower quality than other classes taught on campus.

Their students, on the other hand, were highly satisfied with these instructors and the courses.

But the critical factor in much of traditional classroom instruction, direct interaction with instructors, played no role in determining students' satisfaction in these courses. This difference in the nature of student-teacher interaction in distance learning classes may explain instructors' conflicting attitudes.

Siaciwena (1989) elicits lecturers' opinions on various aspects of distance education at the University of Zambia. Some of the main findings were that lecturers did not have enough time to carry out their correspondence teaching responsibilities and that distance teaching was an extra burden which was not sufficiently rewarding.

However, distance teaching per se was not resented, and a small but significant proportion of the respondents found it enjoyable. Also the majority thought it was fair for them to teach both internal and external students.

All researches above indicate that the determination of the opinions and attitudes of the key players in distance education (students, faculty, facilitators, support staff, administrators etc.) is important and necessary.

IMPORTANCE OF THE STUDY

Distance education systems are being used in along with the traditional education systems in order to respond to the demand for higher education. Technological advancements, interactive learning possibilities are forcing the traditional universities to make more use of the distance education systems and technologies.

Most of the traditional universities to create the opportunity for their students to be independent learners and learners who can organize their learning processes by using distance education systems and technologies. It is thought that students who can learn on their own and who can organize their learning processes will be more likely to use lifelong learning opportunities.

In Turkey where there is a great demand for higher education, the use of distance education systems and technologies in traditional universities is not common. These traditional universities can make use of the distance education systems and technologies in certain lectures and cope with the pressure of the increasing number of students.

Successful implementation of the distance education applications in traditional universities will affect the mega Turkish education system in a positive way (Ural, 2007).

For this reason, more scientific studies and applications about distance education are required for integrating new technologies and curriculums to the system. To this end, it is important to determine opinions and attitudes of distance learners towards current distance education technologies as television.

PURPOSE OF THE STUDY

The purpose of this study was to determine open primary education school students' opinions about mathematics television programmes. The question "How are open primary education school students' opinions about mathematics in a television programmes?" was tried to answer in the study with dependence to purpose.

METHOD

This study is basicly a descriptive research and includes a methodology based upon descriptive case study model. This model is based on an approach purposing to describe a situation in the same way that has happened in the past or is happening now (Karasar, 1999).

The sample of the study consists of 99 students which were selected randomly from open primary school students in Eskisehir in the first semester of 2005-2006 educational years. Table: 2 shows characteristical information about the sample:

Table: 2
Characteristical Information about the Sample

	f	%		f	%
Gender			**Age**		
Female	54	54,5	11-15	16	16,2
Male	45	45,5	16-20	38	38,4
Grade			21-30	29	29,2
6	31	31,4	31-?	16	16,2
7	34	34,3	**Living Place**		
8	34	34,3	City	41	41,4
Frequency of Watching Mathematics Television			Town	40	40,4
Every Day	22	22,2	Village	18	18,2
Sometimes In a Week	44	44,4			
Once a Week	33	33,4			

According to Table: 2, female percentage is more than male percentage, most of the students (%81,8) live in city or town. Students distributed homogeniusly points of views grade, frequency of watching mathematics television programmes and age.

Data were collected by a questionnaire which was designed by the researcher. A questionnaire with two sections, formed by questions about personal information and mathematics television programmes was prepared and used.

A total of 20 questions with the following distribution of topics were asked: 5 questions were about the personal information section (gender, age, grade, frequency of watching mathematics television programmes, living place) and 15 questions were about mathematics television programmes.

With the consistency test questionnaire was made ready to use for the sample. In questioannaire, there were five choices as "strongly agree", "agree", "neutral", "disagree" and "strongly disagree". These choices had values from 5 to 1. The findings of the study have been evaluated within mean of every item with dependence to the descriptive case study model.

In interpretation of means, it has been accepted that; means in 1.00-1.80 signs "strongly disagree", means in 1.81-2.60 signs "disagree", means in 2.61-3.40 signs "neutral", means in 3.41-4.20 signs "agree" and means in 4.21-5.00 signs "strongly agree".

The Cronbach-Alpha coefficient related to reliability analysis of the questioannaire has been determined as 0.70 and this value make the questionnaire reliable.

FINDINGS

In this section, there are findings and remarks with respect to open primary education school students' opinions about mathematics television programmes.

Distributions of students' opinions about broadcast quality of mathematics television programmes were presented in Table: 3.

Table: 3
Distributions of students' opinions about broadcast quality

	f	%	$\overline{X}$
strongly disagree	8	8,1	
disagree	24	24,2	
neutral	14	14,1	3,44
agree	22	22,2	
strongly agree	31	31,3	

According to Table: 3 students' opinions about broadcast quality of mathematics television programmes are "agree" level. That is, students think mathematics television programmes were sufficient for sound, light, picture etc. Distributions of students' opinions about explanations about what to teach at the beginning of mathematics television programmes were presented in Table: 4.

Table: 4
Distributions of students' opinions about explanations at the beginning

	f	%	$\overline{X}$
strongly disagree	4	4,0	
disagree	13	13,1	
neutral	17	17,2	3,69
agree	41	41,4	
strongly agree	24	24,2	

Table: 4 shows that, students' opinions about explanations about what to teach at the beginning of mathematics television programmes were "agree" level. Therefore, it can be said that students found adequate the explanations about what to teach at the beginning of mathematics television programmes.

Distributions of students' opinions about remindings about the previous subject in mathematics television programmes were presented in Table: 5.

Table: 5
Distributions of students' opinions about remindings about the previous subject

	f	%	$\overline{X}$
strongly disagree		6	
disagree	2	25	
neutral	1	16	3,42
agree	2	25	
strongly agree	2	27	

Students' opinions about remindings about the previous subject in mathematics television programmes are "agree" level (Table: 5). This means, students find adequate the remindings about the previous subject in mathematics television programmes.

Distributions of students' opinions about visual items used in mathematics television programmes were presented in Table: 6.

Table: 6
Distributions of students' opinions about visual items

	f	%	$\overline{X}$
strongly disagree	8	8,1	
disagree	19	19,2	
neutral	23	23,2	**3,46**
agree	17	17,2	
strongly agree	32	32,3	

According to Table: 6, students' opinions about visual items used in mathematics television programmes are "agree" level. That is, students think visual items used in mathematics television programmes were sufficient.

Distributions of students' opinions about examples used in mathematics television programmes were presented in Table: 7.

Table: 7
Distributions of students' opinions about examples

	f	%	$\overline{X}$
strongly disagree	6	6,1	
disagree	19	19,2	
neutral	19	19,2	**3,42**
agree	38	38,4	
strongly agree	17	17,2	

Table: 7 shows that, students' opinions about examples used in mathematics television programmes were "agree" level. Therefore, it can be said that students found adequate the examples used in mathematics television programmes.

Distributions of students' opinions about broadcast times of mathematics television programmes were presented in Table: 8.

TABLE: 8
Distributions of students' opinions about broadcast times

	f	%	$\overline{X}$
strongly disagree	5	5,1	
disagree	25	25,3	
neutral	15	15,2	**3,44**
agree	29	29,3	
strongly agree	25	25,3	

Students' opinions about broadcast times of mathematics television programmes are "agree" level (Table: 8). This means, students think broadcast times of mathematics television programmes were suitable.

Distributions of students' opinions about language used in mathematics television programmes were presented in Table: 9.

Table: 9
Distributions of students' opinions about language

	f	%	$\overline{X}$
strongly disagree	6	6,1	
disagree	24	24,2	
neutral	17	17,2	**3,37**
agree	31	31,3	
strongly agree	21	21,2	

According to Table: 9, students' opinions about language used in mathematics television programmes are "neutral" level. That is, while some students think language used in mathematics television programmes was clear and understandable, some students don't think so. Distributions of students' opinions about terms used in mathematics television programmes were presented in Table: 10.

Table: 10
Distributions of students' opinions about terms

	f	%	$\overline{X}$
strongly disagree	9	9,1	
disagree	21	21,2	
neutral	21	21,2	**3,30**
agree	27	27,3	
strongly agree	21	21,2	

Table: 10 shows that, students' opinions about terms used in mathematics television programmes were "neutral" level. Therefore, it can be said that some students thought terms used in mathematics television programmes were not easy and understandable.

Distributions of students' opinions about suitability for learning levels of mathematics television programmes were presented in Table: 11.

Table: 11
Distributions of students' opinions about suitability for learning levels

	f	%	$\overline{X}$
strongly disagree	7	7,1	
disagree	21	21,2	
neutral	19	19,2	**3,30**
agree	39	39,4	
strongly agree	13	13,1	

Students' opinions about suitability for learning levels of mathematics television programmes are "neutral" level Table: 11). This means, some students think mathematics television programmes were not suitable for their learning levels.

Distributions of students' opinions about expression speed in mathematics television programmes were presented in Table: 12.

Table: 12
Distributions of students' opinions about expression speed

	f	%	$\overline{X}$
strongly disagree	9	9,1	
disagree	26	26,3	
neutral	19	19,2	**3,23**
agree	23	23,2	
strongly agree	22	22,2	

According to Table: 12 students' opinions about expression speed in math television programmes are "neutral" level.

That is, while some students think expression speed in mathematics television programmes was sufficient for understand and taking notes, some students don't think so.

Distributions of students' opinions about duration of mathematics television programmes were presented in Table: 13.

Table: 13
Distributions of students' opinions about duration

	f	%	$\overline{X}$
strongly disagree	4	4,0	
disagree	24	24,2	
neutral	13	13,1	**3,48**
agree	36	36,4	
strongly agree	22	22,2	

Table: 13 shows that, students' opinions about duration of mathematics television programmes were "agree" level. Therefore, it can be said that students thought duration of mathematics television programmes were sufficient for learning subjects.

Distributions of students' opinions about number of repeating broadcast of mathematics television programmes were presented in Table: 14.

Table: 14
Distributions of students' opinions about number of repeating broadcast

	f	%	$\overline{X}$
strongly disagree	6	6,1	
disagree	32	32,3	
neutral	17	17,2	**3,26**
agree	18	18,2	
strongly agree	26	26,3	

Students' opinions about number of repeating broadcast of mathematics television programmes are "neutral" level (Table: 14). This means, some students think number of repeating broadcast of mathematics television programmes (2 times per day) were not sufficient. Distributions of students' opinions about anchor persons in mathematics television programmes were presented in Table: 15.

Table: 15
Distributions of students' opinions about anchor persons

	f	%	$\overline{X}$
strongly disagree	6	6,1	
disagree	19	19,2	
neutral	22	22,2	**3,44**
agree	29	29,3	
strongly agree	23	23,2	

According to Table: 15, students' opinions about anchor persons in mathematics television programmes are "agree" level. That is, students think anchor persons present the subjects conspicuously. Distributions of students' opinions about boringness of mathematics television programmes were presented in Table: 16.

Table: 16
Distributions of students' opinions about boringness

	f	%	$\overline{X}$
strongly disagree	4	4,0	
disagree	20	20,2	
neutral	19	19,2	**3,56**
agree	29	29,3	
strongly agree	27	27,3	

Table: 16 shows that, students' opinions about boringness of mathematics television programmes were "agree" level.

Therefore, it can be said that students thought mathematics television programmes were interesting and not boringnesss.

Distributions of students' opinions about summaries given at the end of mathematics television programmes were presented in Table: 17.

Table: 17
Distributions of students' opinions about summaries

	f	%	$\overline{X}$
strongly disagree	7	7,1	
disagree	26	26,3	
neutral	11	11,1	**3,33**
agree	37	37,4	
strongly agree	18	18,2	

Students' opinions about summaries given at the end of mathematics television programmes are "neutral" level (Table: 17). This means, some students think summaries given at the end of mathematics television programmes were not sufficient.

CONCLUSION AND RECOMMENDATIONS

In this study the opinions of open primary education school students about mathematics television programmes were determined.

According to the results of the study; open primary education school students have positive opinions about broadcast quality, explanations at the beginning, remindings about the previous subject, visual items, examples, broadcast times, duration, anchor persons and boringness of mathematics television programmes.

But students have some negative opinions about language, terms, suitability for learning levels, expression speed, number of repeating broadcast and summaries of mathematics television programmes.

The following recommendations can be presented based on the results of this study.

- **The more clear and understandable language should be used in mathematics television programmes.**
- **The easier and more understandable terms should be used in mathematics television programmes.**
- **Mathematics television programmes should be prepared as suitable for learning levels of open primary education school students.**
- **Expression speed in mathematics television programmes should be rearranged in such a way that sufficient for understand and taking notes.**
- **Number of repeating broadcast of mathematics television programmes (2 times per day) should be increased.**
- **The larger summary should be given at end of all mathematics television programmes.**

BIODATA and CONTACT ADDRESSES of AUTHOR

Kursat YENILMEZ, has been Assistant Proffessor in Eskisehir Osmangazi University Faculty of Education Department of Elemantary Education for five years.

Methods of Mathematics Teaching-I, Methods of Mathematics Teaching-II and Computer Based Mathematics Education are some of the given lectures. There are many studies about Mathematics education in primary, secondary and high schools.

Kursat YENILMEZ
Department of Elemantary Education
Faculty of Education
Eskisehir Osmangazi University, TURKEY
Phone: +90 222 239 37 50
Fax: +90 222 2293124
Email: kyenilmez@ogu.edu.tr

REFERENCES

Aio.meb.gov.tr (2008). http://aio.meb.gov.tr/tanitim.html

Gujjar, A.A., Akhlaque, M. & Hafeez, M.R. (2007). A Study of Student's Attitude towards Distance Teacher Education Programme in Pakistan. *Turkish Online Journal of Distance Education-TOJDE* October 2007 ISSN 1302-6488 Volume: 8 Number: 4 Article 12

Inman, E., Kerwin, M. & Mayes, L. (1999). Instructor and Student Attitudes toward Distance Learning. *Community College Journal of Research and Practice*, Volume 23, Number 6, pp. 581-591

Jeffries, M. (2008). The History of Distance Education. (20.07.2008) http://www.digitalschool.net/edu/DL_history_mJeffries.html

Karasar, N. (1999). *Bilimsel Araştırma Yöntemi,* Ankara: Nobel Yayıncılık.

Kurubacak, G., Aydın, A., Görü, T. & Yıldırım, H. (2008). Opinions of Academics on Distance Education. *Abstracts of International Computer and Instructional Technologies Symposium*, p.78, Ege University, 16-18 April, Kuşadası, Turkey

Moore, M. & Thompson, M. (1990). The Effects of Distance Learning: A Summary of Literature. Research Monograph #2. University Park: The Pennsylvania State University, The American Center for the Study of Distance Education. ERIC Document Reproduction Service, ED 330 321.

Nasser, R. & Abouchedid, K. (2000). Attitudes and Concerns towards Distance Education: The Case of Lebanon. *Online Journal of Distance Learning Administration,* Volume III, Number IV, Winter 2000

Odabasi, F. & Kaya, Z. (1998). Distance education in Turkey: Past, present and future. *The Journal of Distance Education*. Winter, 62-68.

Siaciwena, R.M.C. (1989). Staff Attitudes towards Distance Education at the University of Zambia. *Journal of Distance Education,* IV(2), 47-62

Toprakcı, E. & Ersoy, M. (2008). Roles of Teachers in Distance Education. *Abstracts of International Computer and Instructional Technologies Symposium*, p.53, Ege University, 16-18 April, Kusadası, Turkey

Ural, O. (2007). Attitudes of Graduate Students toward Distance Education, Educational Technologies and Independent Learning. *Turkish Online Journal of Distance Education-TOJDE* October 2007 ISSN 1302-6488 Volume: 8 Number: 4 Article 3

Verduin, J.R. & Clark, T.A. (1991). *Distance Education.* San Francisco: Jossey-Bass.

Willis, B.D. (1994). *Distance Education: A Practical Guide.* Educational Technology Publications.