

AN ANALYSIS OF CANDIDATE TEACHERS' VIEWS ON THE EFFECT OF TECHNOLOGY USE IN EDUCATION OVER CLASSROOM MANAGEMENT

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ABSTRACT

Technology has been developing rapidly in our age and it has influenced every aspect of our lives as well as education and teaching. In our country, the use of technology for education is considered to be the means of catching up with developed countries by improving quality and a great deal of investment is made on this field.

The purpose of this research is to determine the perspectives of candidate teachers towards how educational technology affects classroom management, what its advantages and disadvantages are, what sort of classroom management challenges they may encounter, and so on.. The research was conducted on 336 students from the Department of Primary Education at Hasan Ali Yücel Faculty of Education. The personal information form and the questionnaire form prepared by the researcher were used in this study as data collection tools. According to the research, candidate teachers support the use of technology in education; they think that the use of technology affects classroom management, the use of technology is a factor that incurs concerns and the use of technology must be very well known to achieve good classroom management. Additionally, they state that the use of technology for education influences the communication and the atmosphere in the class, it partially obstructs classroom control, undesired behaviors may vary between classrooms where technology is used or not used, and the number of students referred to the disciplinary committee will increase.

Keywords: *classroom management, educational technologies, the use of technology for education.*

ÖĞRETMEN ADAYLARININ EĞİTİMDE KULLANILAN TEKNOLOJİNİN SINIF YÖNETİMİNE ETKİSİNE İLİŞKİN GÖRÜŞLERİNİN İNCELENMESİ

ÖZ

Günümüzde teknoloji hızla gelişmekte ve yaşamın her alanını olduğu gibi eğitim-öğretimi de etkilemektedir. Ülkemizde teknolojiyi eğitimde kullanmak, kaliteyi artırarak gelişmiş ülkeler düzeyine ulaşmanın aracı olarak düşünülmekte ve bu alanda büyük yatırımlar yapılmaktadır.

Bu araştırmanın amacı öğretmen adaylarının eğitimde kullanılan teknolojinin sınıf yönetimini nasıl etkilediğine, avantaj ve dezavantajların neler olduğuna, sınıf yönetiminde ne gibi zorluklarla karşılaşabileceklerine vs. ilişkin düşüncelerini belirlemektir. Araştırma, İstanbul Üniversitesi Hasan Ali Yücel Eğitim Fakültesi İlköğretim Bölümü'nde öğrenim gören toplam 336 öğrenci ile gerçekleştirilmiştir.

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Araştırmada veri toplama aracı olarak, araştırmacı tarafından geliştirilen, kişisel bilgi formu ve anket kullanılmıştır. Araştırmanın sonucunda öğretmen adaylarının eğitimde teknoloji kullanımını destekledikleri, teknoloji kullanımının sınıf yönetimini etkileyeceğini, teknoloji kullanımının kaygı yaratan bir faktör olduğunu ve iyi bir sınıf yönetimi için teknoloji kullanımının çok iyi bilinmesi gerektiğini belirtmişlerdir. Araştırmada ayrıca, eğitimde teknoloji kullanımının iletişimi ve sınıf iklimini etkileyeceğini, sınıfın kontrolünü kısmen zorlaştıracağını, istenmeyen davranışların teknoloji kullanılan ve kullanılmayan sınıf ve okullarda farklılaşacağını, disipline verilen öğrenci sayısında artış olacağını düşündüklerini ifade etmişlerdir.

Anahtar Kelimeler: sınıf yönetimi, eğitim teknolojileri, eğitimde teknoloji kullanımı.

1. INTRODUCTION

Technology has been developing rapidly in our age and it has influenced every aspect of our lives as well as education and teaching. In our country, the use of technology for education is considered to be the means of catching up with developed countries by improving quality and a great deal of investment is made on this field.

Using technology to enable learning through creation and communication of information is a time-honored tradition. More than 5,000 years ago, the invention of writing spurred the first information revolution, making it possible for one generation to accumulate information and communicate with the generations that followed it. When printing was invented about 500 years ago, the second information revolution began, marked by mass distribution of the printed word. Just 50 years ago, the invention of computers ushered in the third information revolution, making it possible to transform raw data into structured information, to transform that information into knowledge, and to transform knowledge into action using intelligent software agents and robots (Reddy & Goodman, 2002, p. 3). The developing process of technology has affected each part of our lives including daily life equipment, economy, education, entertainment etc. Education, which is the most important aspect of societies, makes direct changes into people's lives. Because of this, we cannot examine the improvements in education by ignoring the improvements in technology. They are bounded strictly.

Technology is a greater force in our lives than it was 10 years ago, and this force is likely to accelerate. The increase is partly driven by the inherent value of technology. It is also driven by a set of powerful economic and institutional processes. It is difficult to be exposed to any of today's media without also being exposed to technology. Across the many forms of formal and informal communications that affect our lives, there is a constant message about the benefits of technology (Goodman, 2002, p. 290). As it is mentioned above, the force of technology has accelerated educational improvements. When the historical process of technology is studied carefully, the benefits of using technology in education have become the most important step in education. The development of electronic technology has been lasting since it started years ago. As Schwartz and Beichner (1999, p. 7) stated, the world of electronic technology was developing at breakneck speed. Three areas of technology that directly affect education were developing rapidly: computers, multimedia, and the information infrastructure. For many years, the effects of these technologies on the classroom were marginal. However, in recent years, due to the combination of developing information infrastructure and development of standards-based curricula, the impact of technology is beginning to have a profound effect on schooling.

Every country's educational system has shaped by this profound effect. In order to see the effects and the process of these changes in education, the changes in educational materials in Turkey can be exemplified. According to Usun, (2004) in the 1930s, Turkish schools had teaching materials such as maps, laboratory equipment, and film-strip projectors for instructional use. Until the 1940s, mostly printed instructional materials were used in schools. Between 1950 and 1970, schools had technologies such as audio cassettes and overhead projectors. Distance education was first introduced to students in Turkey in 1974. During the 1970s, several new teaching materials were provided for schools and introduced to teachers. In addition, some big universities started to offer graduate programs aimed at training professionals in the field of educational technology. Though some of these traditional technologies are still in use to prepare students, educational policy makers in Turkey believe that schools must give students the knowledge and the skills they will need in the future. Because of this, computers have gained more importance than any other educational technology.

In today's conception, educational technology can be defined as an abstract concept or as a field of practice. First, the definition of the concept is as follows: Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources (Januszewski & Molenda, 2008, p. 1).

The end purpose of educational technology is using, putting learners into contact with appropriate technological resources under conditions conducive to learning. Before using can take place, the resources must be selected and evaluated by an instructor and a plan must be made for utilization (Molenda, 2008, p. 168).

According to Baker, (2001, 78-79) what the technology is intended to do is:

1. Technology aims to meet existing requirements more efficiently
2. Technology may address learning goals that cannot be met in other ways
3. Technology offers adaptive approaches to the acquisition of knowledge and skills

Educational technology can claim to improve the performance of individual learners, teachers and designers, and organizations as a whole (Molenda & Pershing, 2008, p. 76). As it can be seen, when the definition and the purpose of educational technology are studied, it is clear that teacher's role is the most important and the most critical one. Because of this, in this part it will be focused on the role of teacher in the using of educational technology. Teachers employ a range of instructional strategies and resources to match the variety of student skills and to provide each student with several ways of exploring important ideas, skills, and concepts. They understand how to work as facilitators, coaches, models, evaluators, managers, and advocates. They know how to utilize various forms of play, different strategies for grouping students, and different types of media and materials (Callahan & Switzer, 2001, p. 231). For that reason, as a teacher, following and using educational technology is inevitable.

As schools introduce new technologies, teachers must learn how to use and apply them. Since hardware and software are changing more rapidly than ever before, there will be no point at which teachers can say that they know everything necessary. New software and upgrades of older programs are released continuously, and frequently the new capabilities and features are of real importance to students and teachers. As schools become wired and

acquire a range of equipment, teachers will have to be able to make good use of e-mail, Web browsers, databases, digital cameras, video cameras, digital video editors, and much more. Teachers must keep upgrading their skills, and expanding their awareness of new technologies (Tiene & Ingram, 2001, p. 254). As it is stated above, being innovative, answering the modern life's necessities in schools and fulfilling the students' needs to use technology in each parts of their lives are the most important responsibilities of teachers in modern education system. With the modern education system, teachers' role in classes has started to change. As it was stated by Mendicino, Razzaq and Heffernan (2009) with recent advancements in educational technology, teachers now have a multitude of tools to assist and enhance student learning and motivation. New intelligent tutoring systems that guide students through math problems much the same way human tutors do have been successful in helping students learn math in the classroom. Some systems attempt to imitate a human tutor by reproducing the interactive dialogue patterns and strategies that were likely to be used by a human tutor, whereas others provide immediate feedback by highlighting each step attempted in either red or green to indicate a right or wrong answer. They may also provide hint sequences to students asking for help.

It is clear that the rate of success in modern education system is related to integration of technology into classroom. This encumbers teachers another outstanding responsibility. According to Hofer and Swan (2008-2009) technology integration is a very personal and situated undertaking for teachers. According to Overbaugh and Lu, (2008) in response to the need to train teachers to effectively integrate technology into elementary and secondary education, a teacher professional development program funded by a federal grant provided a selection of instructional technology integration courses to K-12 teachers.

The integration of information and communication technologies can help revitalize teachers and students. This can help to improve and develop the quality of education by providing curricular support in difficult subject areas. To achieve these objectives, teachers need to be involved in collaborative projects and development of intervention change strategies, which would include teaching partnerships with ICT as a tool. Teachers' attitudes are major predictors of the use of new technologies in instructional settings. Teachers' attitudes toward ICT shape not only their own ICT experiences, but also the experiences of the students they teach (Gulbahar & Guven, 2008).

The teacher's role as a principal gateway to knowledge for the learner has been in progressive decline. Far more information than school students' need is now being rapidly made accessible through ICT, much of it is presented in a form that is attractive and easily assimilated. Thus, the role of the teacher changes to helping students to find / access what they need, to evaluate its source, relevance, and quality. Beyond these skills and capacities, the challenge for teachers will be in enabling students to construct and apply knowledge in ways that are accurate and valuable (Bentley & Hargreaves, 2003, p. 346-347).

Classroom management is the orchestration of classroom life: planning curriculum, organizing procedures and resources, arranging the environment to maximize efficiency, monitoring student progress, anticipating potential problems (Lemlech, 1988, p. 3). To manage a classroom means accepting differences in class and advancing them and also making a harmony of different sounds in such a way that an orchestra conductor does; that is, making it possible to reach these aims.

Technology playing a very efficient role in today's world naturally affects education, too.

As science and technology is the most evident feature of modern society, it is apparently necessary to bring education a scientific and technological attribute. Therefore, it is more compulsory than ever to utilize technological resources and facility in teaching–learning process. Resolving the issues in our education system is only possible with education technology that provides us with a wide benefit from technological possibilities (Keser, 1995). In today’s world, as a result of rapid development and change in technology, the structure of society changes rapidly, too; and in accordance with this, there comes out some differences in educational purposes, methods and teachers’ roles (Cetin & Cetin, 2000).

Using teaching technologies effectively in school and class environment and conveniently for educational purposes contributes to enriching teaching aims. A teacher can increase the interest in a class using different materials and teaching techniques. Regarding this, multi-media and the Internet systems that have been generated as appropriate to educational purposes get more and more widespread in schools (Yalcinkaya, 2005, p. 92).

To make lessons more effective and consistent, a teacher needs to support a class with various materials and also create a positive atmosphere (Cafoglu, 1992) Teachers’ being able to use technology easily and productively affects students in a positive way; it sets an example as to being able to use technology (Ozer, 1997). The more sense organs are included in learning, the better we learn and the more slowly we forget (Ozdemir, Yalin, & Sezgin, 2004, p. 179). When materials are chosen properly, they make teaching techniques faster and easier and more individual (Yalcinkaya, 2005, p. 92).

According to Carroll (2001, p. 5) in networked schools and classrooms, students can acquire knowledge on a schedule determined by their own learning needs. Networked learning communities will replace our producer driven model of education with a “consumer driven” model in which learners play a very active role in shaping the content, process and pace of their education. Net-worked computers give educators and students their first real opportunity to tailor educational experiences to specific learning needs.

One compelling way teachers can support such possibilities is to have students use computer technologies as tools to generate, share, and argue about ideas. Consider, for example, a student-run newspaper. Word processors and desktop publishing tools support students’ writing. Spelling checkers help the presentation. Spreadsheets can help students to manage the financial aspects of running the newspaper, and databases to organize and access relevant information. Thus, students learn not only how to use a wide range of computer applications but that, as students, they control computer technology and are responsible for the consequences of their computer-mediated action: namely, for their published ideas (Kahn & Friedman, 1998, p. 167).

Many of us expect that using technology wisely and effectively in education can lead, over time, to a real revolution in how teachers teach and students learn. It will not happen quickly or easily, but it could happen. It will not happen if we simply use technology to continue our old ways of teaching. We all need to learn new ways to teach that take advantage of what the various technologies do best. Learning how to use new instructional strategies is likely to be a more challenging task than learning the technology itself (Tiene & Ingram, 2001, p. 257). By the help of these determinations, principles of class management must be regarded as a new field in technological education and it must be improved according to the needs of new networked classes and the students members of technological world. As Simon stated (2002, p. 63), design of technology must follow, not precede, the task

analysis. It is wholly inefficient and ineffective to begin with a favorite technology-whether it be television films, computer displays of virtual reality, World Wide Webs, or any other-and then seek out possible applications to educational tasks. That is like buying twelve dozen hammers, then searching for nails to pound. Instead, we must first discover which nails need pounding, and then what hammers can drive them home effectively. Technology must be the servant, not the master.

1.1. Aims and Significance

Aims: The aims of this research is to determine the perspective of candidate teachers towards how educational technology affects classroom management, what its advantages and disadvantages are, what sort of classroom management challenges they may encounter, etc. In accordance with this basic objective, this study attempts to seek solutions for the following questions:

1. How do candidate teachers assess themselves regarding using technology?
2. To what extent can they keep up with new technology?
3. What are the ways that they follow to learn to use technology?
4. Which technological components do they use? At what level do they use them?
5. To what extent do they support the utilization of technology for education?
6. What are their opinions about whether the use of technology for education is a factor that incurs concerns or not?
7. What do they think of the idea that good classroom management requires a very good command of technology?
8. What are their opinions about the way the utilization of technology for education influences classroom management?

Significance: When the literature is reviewed, it can be seen that there are not many studies aiming to determine the opinions of candidate teachers regarding the influence of the use of technology on classroom management. The findings to be obtained at the end of this research are expected to contribute to education and educational practices in various aspects. The identification of prospective teachers' self-evaluation regarding the use of technology, the technological components they utilize, the level at which they utilize these components as well as their views on how educational technology influences classroom management is considered to be important in the sense that it may provide the authorities with ideas on what to do at a teacher training institution in order to overcome the deficiencies that candidate teachers might have during undergraduate education. Additionally, the responsibilities of teacher training institutions for developing the education will be emphasized in this study. The data obtained through the research will also pave the way for more realistic and consistent judgments regarding classroom management and the use of technology in education.

2. METHOD

2.1. Research Model

The research is in scanning model. The answers provided by candidate teachers in personal information form and in the questionnaire aiming to determine the views on how the use of technology affects classroom management were analyzed and the outcomes were discussed in the light of the findings.

2.2. Population and Sample

The population of this research consists of the students of Primary School Teaching, Social Sciences Teaching and Science Teaching departments of faculties of education. The sample of the research is formed by 336 students who are studying at Primary School Teaching, Social Sciences Teaching and Science Teaching departments of Hasan Ali Yücel Faculty of Education at Istanbul University. A personal information form and a questionnaire form were given to the students constituting the sample in the second term of 2015-2016 academic year. The data obtained from 336 students, who filled the personal information form and the questionnaire completely, was taken into consideration.

2.3. Data Collection Tools

The personal information form and the questionnaire form prepared by the researcher were used in this study. The questionnaire consists of items aiming to determine the views of candidate teachers on the influence of the use of technology in education on classroom management. The questionnaire form has 12 items, each of which requires the selection of one of the following options: agree – neutral –disagree.

The personal information form was used to gather information about students' gender, the programs and the grades at which they are studying, their self-assessment regarding the use of technology, whether they follow new technologies, how they have learned to use technology, the technological components they use (computer, overhead projector, computer and projector device, video/TV (projecting onto a big screen), audio recording devices, smart board, educational tablets) and at what level they use these components.

2.4. Procedure

The data collection tools were applied at the beginning of the second term of 2015-2016 academic year. Before the application of the data collection tools, general info about personal information form and the questionnaire were given to the students. After the personal information forms and the questionnaires filled by the students were checked, those which were deficient or improper were eliminated and excluded from the evaluation process. The data obtained was analyzed in parallel with the objectives of this research.

Frequency and percentage values were used for the answers given by the candidate teachers involved in the research for the items on the personal information form and the questionnaire. The findings obtained were presented in table forms.

3. FINDINGS AND INTERPRETATION

Table 1

The Numbers and the Percentages Regarding the Genders, Programs and Grades of the Candidate Teachers Participating in the Research

		f	%
Gender	Female	228	67,9
	Male	108	32,1
	Total	336	100,0
Program	Primary School Teaching	100	29,8
	Social Sciences Teaching	121	36,0
	Science Teaching	115	34,2
	Total	336	100,0
Grade	2nd grade	111	33,0
	3rd grade	122	36,3
	4th grade	103	30,7
	Total	336	100,0

As it is seen in Table 1, 67,9% of the candidate teachers participating in the research is female, while 32,1% is male. Primary School Teaching and Secondary School Teaching professions in Turkey are mostly preferred by women.

Table 2

The Numbers and the Percentages of the Answers Given by the Participants to the Questions "How Would You Evaluate Yourself in Terms of Utilizing Technology?", "Can You Follow Newly-Developed Technologies?" and "Please Mark the Way or Ways That Helped You Learn to Use Technology".

		f	%
How would you evaluate yourself in terms of utilizing technology?	Very good	45	13,4
	Good	157	46,7
	Average	124	36,9
	Weak	10	3,0
	Total	336	100,0
Can you follow newly-developed technologies?	Yes	112	33,3
	Partially	212	63,1
	No	12	3,6
	Total	336	100,0
Please mark the way or ways that helped you learn to use technology	Through the lessons I have studied at university	55	16,4
	By attending a course	14	4,2
	On my own	267	79,5
	Total	336	100,0

When Table 2 is analyzed, it is seen that only 3% of the candidate teachers participating in the research consider themselves to be “weak” at using technology, that 63,1% of the participants can partially follow newly-developed technologies, that 79,5% of the participants answered the question “please mark the way or ways that helped you learn to use technology” by choosing “on my own” option, whereas 16,4% chose the option “through the lessons I have studied at university”. All these results indicate that the members of the newer generation of teaching (candidate teachers) consider themselves to be good at using technology. Today, almost everyone, individuals from all socio-economic layers, meet and start to use technology at an early age. 63,1% of the participants answered the question “Can you follow newly-developed technologies?” by choosing the option “partially”. Today, technology is developing at a stunning speed; it is almost impossible to keep up with technological developments. The item “please mark the way or ways that helped you learn to use technology” was marked by 79,5 % of the participants with the option “on my own”, while 16,4% of the participants stated that they learned to use it through the lessons they studied at university. This result suggests that Teaching Technologies and Material Design class, which is a 3-credit compulsory class given at faculties of education, affects the process of learning how to use technology only insignificantly.

Table 3

The Numbers and the Percentages of the Answers Given by the Participants to the Question “Which Technological Components Do You Use and at What Level Do You Use Them?”

	Very good		Good		Average		Weak		Total	
	f	%	f	%	f	%	f	%	f	%
Computer	60	17,9	208	61,9	60	17,9	8	2,4	336	100,0
Overhead projector	22	6,5	76	22,6	119	35,4	119	35,4	336	100,0
Computer & projector	45	13,4	148	44,0	109	32,4	34	10,1	336	100,0
Video/TV	70	20,8	151	44,9	87	25,9	28	8,3	336	100,0
Audio recording tools	70	20,8	157	46,7	86	25,6	23	6,8	336	100,0
Smart board	17	5,1	89	26,5	107	31,8	123	36,6	336	100,0
Educational Tablets	29	8,6	97	28,9	114	33,9	96	28,6	336	100,0

When Table 3 is analyzed, as for the technological means used by the candidate teachers involved in the research and their levels of using those means, it is seen that the majority (61,9%) of the participants can use the computer “well”, whereas the rate of those who consider themselves to be “weak” at using the computer is 2%. The majority (35,4%) regards themselves to be “weak” at using the overhead projector. It is seen that 10,1% of the participants consider themselves to be “weak” at using the computer and the projector together. 44,9% of the participants regard themselves as “good” at using Video/TV (projecting onto a big screen). 46,7% of the participants regard themselves as “good” at

using audio recording tools. 36,6% of the participants consider themselves to be “weak” at using smart boards, which have become commonly used at Turkish schools in recent years. Similarly, 28,6% of the participants regard themselves as “weak” at using an educational tablet, another means of technology introduced to Turkish educational institutions as well as our daily lives lately. Particularly, the high number of participants who consider themselves to be inefficient in using smart boards and educational tablets indicates that Educational Technologies and Material Design classes lack the emphasis on the use of these modern educational technologies. This result suggests that prospective teachers will most probably have difficulties when they meet smart boards and educational tablets.

Table 4

The Number and the Percentages of the Answers Provided to the Questions in the Questionnaire about the Influence of the Use of Technology on Classroom Management

Items	Agree		Neutral		Dis-agree	
	f	%	f	%	f	%
1- I support the use of technology for education.	312	92,9	21	6,3	3	0,9
2- I have sufficient information about how to use technology for education.	175	52,1	120	35,7	41	12,2
3- I think that educational technology has a positive effect on classroom management.	276	82,1	46	13,7	14	4,2
4- The use of technology in education is a factor that increases teachers' concerns.	59	17,6	116	34,5	161	47,9
5- To achieve good classroom management, a teacher must know how to use technology very well.	295	87,8	34	10,1	7	2,1
6- The use of technology for education affects teacher-student communication positively.	262	78,0	60	17,9	14	4,2
7- The use of technology for education affects the communication among students positively.	234	69,6	87	25,9	15	4,5
8- The use of technology for education affects the classroom atmosphere positively.	251	74,7	67	19,9	18	5,4
9- The use of technology for education brings along the increase of undesired behaviors in the class.	48	14,3	122	36,3	166	49,4
10- The use of technology for education provides an environment for the disruption of the lesson flow.	85	25,3	120	35,7	131	39,0
11- The use of technology for education results in the increase of the number of students who are referred to disciplinary committee.	76	22,6	130	38,7	130	38,7
12- The introduction of technology into classroom environment has caused changes in the nature of undesired student behaviors.	145	43,2	143	42,6	48	14,3

When Table 4 is analyzed, it is seen that the majority of candidate teachers (92,9%) involved in the research support the use of technology for education, that the rate of those saying “I have sufficient information about how to use technology for education” is low (not as high as expected or it should be) (52,1%), The rate of those who think the use of technology has a positive effect on classroom management is high (82,1%), and that the rate of those who consider technology as a factor that increases teachers’ concerns is low (17,6%). It is also seen that the rate of those saying “to achieve good classroom management, a teacher must know how to use technology very well” is quite high (87,8%). In addition, the rate of those saying “The use of technology for education affects teacher-student communication positively” is high (78,0%), similar to the rate of those saying “The use of technology for education affects the communication among students positively” (69,6%). The rate of those thinking that “the use of technology for education affects the classroom atmosphere positively” is 74,7%.

The rate of the participants saying “The use of technology for education brings along the increase of undesired behaviors in the class” is low (14,3%). 35,7% of the participants chose “neutral” option for the statement “the use of technology for education provides an environment for the disruption of the lesson flow”. The rates of those choosing “neutral” and “disagree” options for the statement “the use of technology for education results in the increase of the number of students who are referred to disciplinary committee” were found to be the same (38,7%), whereas the rate of those agreeing with this statement is 22,6%. The rate of those who disagree with the statement “the introduction of technology into classroom environment has caused changes in the nature of undesired student behaviors” is 43,2%.

When the number and the percentages of the answers provided to the questions in the questionnaire aiming at determining the influence of the use of technology on classroom management were analyzed, it is pleasing to see that the number of those who are in favor of using technology for education is quite high. The use of technology is inevitable in education, just like it is in daily life. However, the low rate of those saying “I have sufficient information about how to use technology for education”, which is 52,1%, is a worrying fact. The high rate of those thinking that the use of technology for education affects classroom management positively can be considered as a remarkable sign for the use of technology to achieve good classroom management. Similarly, the low rate of those considering the use of technology for education as a factor that increases concerns shows that teachers do not suffer from technophobia. It is quite pleasing to see the high rate of the participants saying that a teacher must know how to use technology very well to achieve good classroom management. This result demonstrates that the awareness levels of candidate teachers regarding the effects of utilizing technology in classroom management are high. Besides, the high rates of those who think that the use of technology for education affects teacher-student communication positively and that the use of technology for education affects the communication among students positively also promote the use of technology as a factor to support the establishment of a good communication in the classroom. Likewise, the high rate of those thinking that the use of technology for education affects the classroom atmosphere positively shows that candidate teachers establish a meaningful link between the use of technology and classroom management.

According to the findings of this research, it is seen that the rate of candidate teachers saying

that the use of technology for education brings along the increase of undesired behaviors in the class is low. This result indicates that the number of undesired behaviors will decrease when a good command over technology is achieved. The fact that the rate of those agreeing with the statement “the introduction of technology into classroom environment has caused changes in the nature of undesired student behaviors” is high demonstrates that candidate teachers’ need to learn how to successfully manage a class when educational technologies are used, rather than conventional classroom management skills.

4. DISCUSSION, CONCLUSION AND SUGGESTIONS

Information and communication technology includes computers, the Internet, and electronic delivery systems such as radios, televisions, and projectors among others, and is widely used in today’s education field (Fu, 2013). As a phenomenon of today, like people with different professions, teachers are also urged and even obliged to use technology. Most of the educational systems in the world necessitates technology for quality and a significant amount of financial sources is spared for technology.

The majority of the candidate teachers involved in the research considers themselves as “good” or “very good” at using technology. Russell, Bebell, O’Dwyer, and O’Connor, (2003) found that novice teachers who knew technology more than experienced teachers did not incorporate ICT in their teaching. The researchers cited two reasons: new teachers’ focus could be on how to use ICT instead of how to incorporate ICT in their teaching. Secondly, new teachers could experience some challenges in their first few years of teaching and spend most of their time in familiarizing themselves with the school’s curriculum and classroom management. Unlike the present study, the findings show that both new and older teachers believed that ICT could be used as a pedagogical tool if there is conducive learning environment.

The majority of the candidate teachers can only partially follow the newly-developed technologies. Most of the participants stated that they learned to use technology “on their own”. Only a minority of them stated that they learnt it “through the lessons they studied at university”. As for the technological means used by the candidate teachers involved in the research and their levels of using those means; it has been found that they are “good” at using the computer, and that the number of those who consider themselves to be weak at using smart boards and educational tablets is high. It is seen that a great majority of the candidate teachers participating in the research support the use of technology for education, that the rate of those saying “I have sufficient information about how to use technology for education” is low (not as high as expected or it should be), that the rate of those thinking that the use of technology has a positive effect on classroom management is high, and that the rate of those considering the use of technology for education as a factor increasing teachers’ concerns is low. According to Vosniadou and Kollias (2001) ICT causes anxiety in teachers because it introduces changes in teaching and class management practices that they feel they do not know how to control. Balanskat et al. (2006) stated that teachers’ limited knowledge about ICT makes them feel anxious about using ICT in the classroom and thus not confident to use it in their teaching. Also Russel and Bradley (1997) reported that many teachers who were not using computers were doing so because they lacked confidence with, or felt frightened by computers. It is also seen that the rate of those who think that the use of technology must be very well known to achieve good

classroom management is quite high. Edwards (2000) indicated that teachers must have a different set of management techniques for using ICT sufficiently in the classroom. The most obvious effects of ICT use for teachers is improved efficiency of management and administration of teaching, accessing resources for preparing teaching materials and presenting lessons (Lai and Pratt, 2008). These techniques consist of ways to empower students to regulate their own classroom activities responsibly. In addition, the rate of those saying that the use of technology for education affects teacher-student communication positively is high, similar to the rate of those saying that the use of technology for education affects the communication among students positively. The rate of the participants thinking that the use of technology for education has a positive effect on classroom atmosphere was found to be significantly high. According to the findings of the research, the rate of the participants saying “The use of technology for education brings along the increase of undesired behaviors in the class” is low. According to Mistler-Jackson and Songer (2000), students are often attracted by the fascinating presentations of technology-mediated course content and this makes them to concentrate on their studies. On the contrary this study result Bowman, Newman and Masterson (2001) stated that emergence of student-centered learning environments driven by technology integration has led teachers to believe that such integration could affect classroom control and student discipline. A significant number of the participants chose to stay “neutral” to the statement “the use of technology for education provides an environment for the disruption of the lesson flow”. Some teachers who participated in Smeets et al. (1999) research indicated that classroom management is more difficult when ICT is used. The number of those agreeing with the statement “the use of technology for education results in the increase of the number of students who are referred to disciplinary committee” is high. The number of the participants agreeing with the statement “The introduction of technology into classroom environment has caused changes in the nature of undesired student behaviors” was also found to be high. Based on the findings of this research, it is possible to suggest the following:

- To help candidate teachers follow newly-developed technologies, faculties or universities can procure these technologies and share them through renting, lending, etc.
- The use of modern educational technologies (particularly the use of smart boards, interactive boards and educational tablets) should be emphasized in educational technologies and material design classes. A candidate teacher should be graduated only after mastering the use of these technologies.
- In classroom management classes as well as educational technologies and material design classes, the focus should be on how to successfully manage a class when educational technologies are used, rather than conventional classroom management skills.
- The classes should be mostly practical rather than theoretical.

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