

SCHOOL PRINCIPALS' VIEWS ABOUT THEIR ROLES IN TECHNOLOGY PLANNING: A CASE IN ESKİŞEHİR

Gürkay Birinci, Işıl Kabakçı
Anadolu University, Eskişehir, TURKEY
gbirinci@anadolu.edu.tr, silk@anadolu.edu.tr

ABSTRACT

Technology, one of the important factors that influence success in schools, should be planned and used effectively in schools. Technology planning is significant because it gives information about the current situation and of the target future goals as well as because the present technology should be used effectively. This study focuses on the roles of school principals who have the leading position in technology planning, its preparation and in its implementation, discusses whether their roles are efficient and investigates the inefficient points. This study was carried out with qualitative technique depending on the survey model. The study was carried out by interviewing a total of 5 coordinator school principals from 11 educational areas in Eskişehir. As a consequence of the study, it was revealed that the school principals were not authorized for technology purchase, that there is a need for a trainer teacher who will be made responsible for teacher training activities about technology, and that students are able to use technology.

Keywords: Technology planning, principal roles, principal views

INTRODUCTION

Developments in information and communication technologies (ICT) have influenced not only all the sub-systems in the society but also the education system. In order to keep up with the time and to prepare better educational environments, great emphasis has started to be given to the attempts of integrating technology into education in several countries all around the world. While researchers and educators try to set up certain standards by revising the current education programs, countries allocate high amounts of funds for technology integration so as to implement these standards.

In the world, some institutions have developed certain standards related to the integration of information and communication technologies. One of these institutions is the International Society for Technology in Education (ISTE). These standards cover 3 dimensions, such as students, teachers and administrators (ISTE, 2002).

In Turkey, the Ministry of National Education (MNE) introduced computers to the schools for the first time in 1984. Later in 1991, CBT (Computer-Based Teaching) became a national policy. More recently, in 1998, MNE received the financial support of the World Bank to apply the two-phase Basic Education Program (BEP). Among the goals of BEP, which is quite a comprehensive educational investment project, are such points as establishing information and communication technology (ICT) classrooms to increase the quality of basic education and as having students and teachers become knowledgeable and literate about the issue of ICT (MEB, 2006).

For more than about 20 years, a great amount of money has been spent on equipping schools with the recent technology. However, in general, there is not any regular and proper planning in relation with how these technologies will affect the learning and teaching process. Investments on technology to use it only as a product in the integration of information and communication technologies are not enough. It is also important to carry out technology planning which helps technology be used effectively in the process.

The guiding question technology leaders must keep in mind as they develop their plan is, "Are students using technology in ways that deepen their understanding of academic content and advance their knowledge of the world around them?" (Barnett, 2001).

Definition of Technology Planning

Technology planning can be defined at broadest as follows: A technology plan serves as a bridge between established standards and classroom practice. It articulates, organizes, and integrates the content and processes of education in a particular discipline with integration of appropriate technologies. It facilitates multiple levels of policy and curriculum decision making, especially in school districts, schools, and educational organizations that allow for supportive resource allocations (Knuth and Hopey, 1996).

Technology planning is a dynamic, flexible and open-ended process that reveals the current situation of an institution, that gives information about the future position of this institution and that aims at helping the institution develop a mission and vision effective enough to provoke collaborative working and to increase the effective use of technology (Gürbüz & Yıldırım, 2001).

Anderson (1999) associates technology planning with a planning such as the one done before going on a trip and explains it as follows: Maps show, quite effectively, the distances from one place to another, the type and form of infrastructure

available for traversing those distances, the direction in which one is traveling, various points along the path a person would take in getting from one point to another, and a variety of other descriptive, informative matter. So, we can make very good use of this map, as a tool of beneficial information—and a much-needed aid in our navigation to our desired destination.

In general, planning is an ongoing process that translates organizational, public policy, and technology needs into concrete actions. It allows educational organizations to take advantage of technology innovations while minimizing the negative impact of unexpected challenges. Planning provides a road map for the implementation of technology and can result in more efficient expenditure of limited resources and an improvement in student achievement (Knuth and Hopey, 1996).

The Importance Of Technology Planning

Investments on technology to use it only as a product in the integration of information and communication technologies are not enough. It is also important to carry out technology planning which helps technology be used effectively in the process. Technology planning helps to educational institutions benefit from technology as a product and a process. A technology plan is a bridge between the developed standards and classroom applications. In other words, technology planning is a kind of tool that creates, organizes and integrates the content and process of education within a certain discipline with the help of the present technology.

Technology planning not only diminishes the negative effects of the possible unexpected situations that educational institutions are likely to meet but also helps them take advantage of the technological renovations. Planning presents a rote to the application of technology and helps the limited sources be used more fruitfully and thus increases the student success. For these reasons, the successful integration of information and communication technologies requires technology planning to be executed systematically.

Technology planning is developed and executed by a team of the principal, teachers, students, parents, the school staff and a technology expert.

The Roles of Principals In Technology Planning

Principals who are in the executive and leadership position have one of the most important roles of technology planning. Leithwood (2005) analyzed the researches which were about education leadership and has found that leadership is the most effective in-school variable on student's education after teacher's instructions in class. Technology is getting more and more developed in these days, and it should be provided that students can keep up with this development. In the technology planning prepared for fulfilling this purpose in schools, the principals' efficient leadership qualities and their receptivity to technology are the most important things.

The principals' authority to change the mission, culture, and construction of school is a subject which is considered a matter frequently. It is possible to provide a strong and successful learning environment. If the school personnel work in cooperation with each other. The principals' leadership in teachers' professional growth is very important for the success of school-learning societies. Anderson and Dexter (2005) used an information poll which was practiced on approximately 400 teachers, 800 technology coordinators, and 867 principals in 1150 schools. Researchers agree that there is an important and positive relation between the principal's interests in technology and the teachers' and students' using technology in their classes, and they proved that the principal's this interest is much more important than the substructure of technology, and it shows that technology leadership is much more effective than the substructure and the expenses of technology at the usage of technology in schools. As a consequence of it, the roles which the principals should have can be arranged as this row:

1. Principals should be well-informed about technology for preparing the school budget.
2. Principals should have an active role in preparing and putting technology into practice.
3. They should provide professional growth opportunities for teachers.
4. They should view technology as a tool which increases the success of teacher and students.
5. They should be flexible about technology's active usage in schools.

The Purpose of the study

The main purpose of this study is to determine the principals' opinions about technology planning. The questions which answers were searched in this research scope are these:

1. What are the opinions of principals about their roles in technology planning?
2. What are the opinions of principals about their roles which they should have in technology planning?

METHOD

This study was carried out with qualitative technique depending on the survey model. The qualitative research method is used in the research.

Subjects

Eskişehir was divided into 11 education districts in the direction of ministry of education, education district, and education committee's directive. The coordinator schools had been determined for each education district, and these schools' principals were assigned as a coordinator principal. Participants who participated in this research were chosen from Eskişehir education district's 11 coordinator principals in 2006-2007 education terms. It was hoped to talk with all of the 11 coordinator principals, but only with 5 of them they were able to talk because 6 principals had not wanted to participate in the research.

Data Collection And Analyses

Semi-structured interview method was used for collecting data in the direction of the research's purpose. Semi-structured interview form was prepared by researchers. They applied to 5 experts for acceptability of conversation from and finished them with experts' views. The principals of coordinator schools decided when and where the meeting would be. By getting written or spoken permission from the principals who participated in research, the meetings were held, and the data were collected.

The analyze of qualitative data which were collected was carried out with descriptive analyze method. For the descriptive analyze of data, at first in the direction of data which were gotten, a thematic frame was formed by keeping the literature and conceptual frame in mind. The data were read and arranged by the researchers. At this stage, they applied to 2 expert's opinions that have the qualitative research's and field information for the reliability of thematic frames and data which were formed. By comparing the experts' and researchers' marks and designating disagreement and agreement, the reliability of research was estimated as %78. Because this degree is enough near to %80, the reliability of research was proved. By shaping the qualitative data and thematic frame which were arranged as a consequence of acceptability and reliability study into their last condition, the data were defined. The data were supported by quoting from raw data which were gotten at the end of conversation, and the findings were performed.

FINDINGS AND DISCUSSION

In line with the goal of the study, the data obtained through the analysis of the interviews held with the coordinator school principals were gathered over 7 basic themes under 2 target questions:

- Purpose 1. What are the views of school principals about their roles in current technology planning?
 - Determining the needs in technology purchase
 - Their authorities and responsibilities in technology purchase
 - Their authorities and responsibilities in terms of teachers' use of technology.
 - Their authorities and responsibilities in terms of students' use of technology
- Purpose 2. The views of school principals about their roles that they should have technology planning?
 - The roles that they should have in the area of technology,
 - The roles that they should have in terms of teachers' use of technology,
 - The roles that they should have in terms of students' use of technology.

The Views Of School Principals About Determining The Needs In Technology Purchase

This part includes the findings and interpretations in relation to the theme of "determining the needs in technology purchase." Table 1 presents the sub-themes related to this theme.

Table1: The distribution of the theme "The views of school principals about technology purchase" with respect to the sub-themes

Theme	Sub-themes	Number
Determining the needs in technology purchase	Teachers' stating the need	3
	The projects of the Ministry of National Education	3
	The points made by the school administration	3
	In line with the demands of the parents	2
	Their determining the trainer teachers	1
	The advice of the total quality team	1

As can be seen in Table 1, in relation to determining the needs in technology purchase, 3 out of 5 coordinator school principals were observed to consider "the demands of the teachers", "The projects of the Ministry of National Education" and "The points made by the school administration." Below are some sample views obtained from the interviews about these

sub-themes:

“...We generally determine the needs as the meetings with teachers according to the needs of the teachers. Of course, the school administration has the right to do so ...”

“...Apart from this, there are sometimes certain projects of our ministry, the Ministry of National Education. And there are times when our ministry meets our needs according to these project...”

“...We meet our needs according to the needs and demands of our teacher colleague, and to the points made by our technology teachers...”

In relation to these findings, the school principals initially consider the needs of the teachers and the points made by the school administration as the very basis of determining the needs in technology purchase. It is also seen that the needs are also met through the projects of the Ministry of National Education. The advice of the total quality team and the suggestions of the trainer teachers are important in determining the needs. Moreover, the fact that the trainer teachers, also considered as technology experts at schools, have the primary responsibility for determining the needs in technology planning could be said to be a disadvantage for an effective technology planning..

Findings And Comments Related To The Theme Of “The Opinions Of The Principals Related To Technology Purchase”

In this part, the findings and comments related to the following themes were included; “authority and responsibility related to technology purchase” and “the roles which are supposed to be owned for purchasing technology”. The sub-themes related to these above mentioned themes are presented in Table2.

Table 2: The distributions of the sub-themes related to the theme of “the opinions of the principals related to technology purchase”.

Theme	Sub-themes	Number
The authority and responsibilities related to technology purchase	Financial supports of the school-parent union.	5
	Reporting the needs to the ministry of National education	4
	Not being a task which has been officially	1
The roles which are suggested to be onwed related to technology purchase	The outhority to buy the technology	3
	Assigning technology experts to schools.	2
	The ministry of National Education’s sending the needed technology	1

As can be seen in Table 2, the following findings were obtained at the end of the study; all of the 5 principals have the authority to make use of the “financial support of the school-parent union”, four of them have the responsibility to report the “needs to the ministry of national education”. Some samples from the interview conducted with the principals are presented below.

“we can just determine our own needs. They give us what we need depending on the amount of the needs and surely depending on their location, otherwise we wait for them. We have no other alternative. I mean we ourselves have no chance to buy them. We can only report them but our needs. They meet our needs if they have, otherwise we wait fort hem”.

“The principals meet their needs by themselves. It can happen depending on the conditions that we mentioned above, the school-parent union, together with the principal and also together with the school-purchase commission we meet our needs. “

When we examine the data related to technology purchase, which coordinator principals are supposed to have in Table 2, it was found that 3 principals out of 5 suggested that they have the authority “to buy the needed technology”. Some samples from the interviews related to the theme are presented below.

“..there is auctioning system, contract and also allocation, all of these means waiting for a year. I really need all of them. What is the total cost for all of them? 30 billion. I suggest that I am going to cost them all only for 10 billion. This authority should be assigned to the principals.”

“It is obvious that they are all what they need, and we need to buy the things to meet our needs in a perfect way. Otherwise ,the current conditions appear, we have to be satisfied with what they give us.”

These findings suggest that the principals have no responsibility related to technology purchase, apart from the authority to use the financial supports of school-parent union and reporting the list showing what they need. As a consequence of these, they all agree that they should be assigned the authority to buy the needed technology. It was seen that, after reporting what they need at schools to the ministry of national education, it takes along time for their needs to be met. This also causes the schools to go behind the quickly developing Technologies at technology era. It is also considered that the technologic tools and equipments purchased through auctioning cost more. They suggest that if the authority to buy the needed technology is assigned to the principals, they could cost them less.

The Findings And Discussions Related To The Theme Of “ The Opinions Of The Principals Related To Teachers’ Utilizing Technology”

In this part, the findings and discussions related to the themes of “ the authorities and responsibilities related to teachers’ using technology”, and “ the roles which are suggested to have by the teachers in the use of technology”. The sub-themes related to this theme are presented in Table 3.

Table 3: The distributions of the theme of “opinions of the principals related to teachers’ using technology” depending on sub-themes.

Theme	Sub-themes	Number
The authority and responsibility of the teachers in using technology	Arranging educational activities.	4
	Reporting the teachers who have never taken any in-service training	2
	Informing about the in-service training facilities of the ministry of national education.	1
The roles which are suggested to own by teachers to use the needed technology	Arranging training activities for teachers.	3
	Assigning formator teachers.	2

As can be seen in Table 3, 4 principals out of 5 suggested that they had the authority to “arrange educational activities”.

“we can carry out training sessions with our teachers at our school in a voluntary based way. We encourage our teachers to participate in such trainings, through conferences and seminars inviting instructors both from Anadolu and Osmangazi university thanks to our personal contacts.”

When we examine the data related to the roles that teachers are supposed to have for the use of technology in Table 3, as suggested by coordinator principals, three principals out of 5 suggested that they wish to have the authority “to arrange training sessions for teachers”, 2 principals out of 5 suggested that they wish to have the authority to assign “formator teacher responsibility” Some samples related to these interviews are presented below.

“choosing the teachers and giving a training seminar to them, even on weekends, we would consider giving them a training seminar again, without delaying the teaching, if we were assigned with the authority.”

“tome, this issues should be handled through the help of formatoring. Each should have a formator teacher; If so, we can both compensate for the shortcoming of the education and also help the teachers with the issues that teacher consider to be a shortcoming.”

“if principal have a broad-vision and foresee the future, they can also guide teacher depending on these. I should be the first to know, then the people around me. Therefore you should be leader, also you should make teacher feel the sense of thrust. If you can do all these, then teachers get something from you.”

Depending on the findings obtained in this study, it was observed that principal are for having a formator teacher at their schools so that they can benefit from them when they need to organize a teacher training conference rather than inviting an expert out of their schools. These teachers are equipped with the skills to use the needed technology. It was also highlighted that the leadership of principals has a great significance in making teachers willing to use technology.

The Findings And Discussions Related To The Theme Of “The Opinions Of The Principals Related To Students’ Using Technology

In this part, the following findings and discussions related to the themes of “ the responsibilities and authorities of the students in using technology” and “the roles that students are supposed to have in using technology”. The sub-themes related to this theme are presented in Table 4.

Table 4: The distributions of the sub-themes of the theme “the opinions of the principals related to students’ using technology”.

Theme	Sub-theme	Number
The authorities and responsibilities of the students in using technology	Opening the BTS to students’ access	5
	arranging training activities.	4
The roles that students are supposed to have to be able to use technology	Not to lack of authority.	5

As can be seen in Table 4, principals, all of the 5 principals stated that they were given the responsibility to “establish information technology classes. 4 of them stated that they had the authority to organize “educational activities”. Some samples related to these sub-themes are presented below:

“we open the computer laboratory at 3 o’clock for student access. We also open the “information technology classes. Our students can have access there and study very comfortably”.

“we organize Intel courses for teachers. We completed the first stage. After that, I give students in the second term. Students give presentations in certain field, in certain classes. We should look for the ways both in-class and out of class to help student gain these skills.”

When we examine the roles that students are supposed to have in using the technology in Table 4, all of the 5 principals agreed on that they “lacked on authority”. Some samples related to these sub-themes are presented below.

“students are given all kinds of authorities. One purpose of our Project is to0 keep the schools open for the parents with regards to technology access. They avoided at the beginning, using the technology. What happened then, schools were open to whole neighborhood. Schools have reached a level to be able to replace the internet cafes. But parents are not conscious enough yet. Primarily parents, then students. If parents cannot catch up with, do not adapt the technology themselves, they cannot reflect on students. As teachers who have adapted technology, we transfer technology to students. If we can include parents in these triple, the triangle will have been completed.”

Under the lights of the findings obtained in the study, principals suggest that they had the authority to open the information technology classes to parents. With the help of out of class activities, they can also help students in their personal development. Whereas they think that they lacked of complete authority, they think that it is not enough for students’ personal development, that technology should be open to parents’ access, that parents can only guide their children if these are made available for parents.

CONCLUSION

Nowadays, schools are expected to be updated with regards to technology to use technology effectively in teaching-training practices. In order for the technology to be used effectively, new technology planning should be done in long and short run and they should also be put into practice. In order for the new technology planning to be put into practice, the obstacles that principals experience, who have the leading roles in putting these into practice, should be removed and they should be equipped with the authority they need.

In this study, in which the authorities and responsibilities that principals are supposed to have are investigated, it was seen that principals considered teachers’ and administrative needs as a base with regards to technology purchase. However it was found that they lacked of the complete authority. Besides, another findings of the study is that principals had the authority to organize educational activities to help teachers use technology, but they did not have the authority to assign a formator teacher to these activities. Finally, it was found that principals had the authority to open the information technology classes to students’ access and to organize educational activities. An also it was found that they did not lack any authority for students’ access to technology.

The authority problems that principals experience in the purchase of technological tools and equipments caused delays in supplying and also caused a decrease in the quality of the tools and equipments. This leads schools come far behind the quickly developing technology. To abolish these problems, new regulations are needed in giving the principals the authority to buy the technology; new experts related to technology should be assigned to schools as technology consultant. Assigning new formator teachers to each school may be one of the solutions here.

The most basic cause of the problems that principals experience in technology purchase is that the experts are not available when they are needed at schools. It was also seen that principals had the authority to invite field experts and organize educational seminars and conferences at their schools so that teachers can consult them about technology. Such activities can partly meet the needs of teachers, but when they need an immediate help from an expert, they experience problems. To solve this problem, the number of the formator teachers at schools should be increased and schools should have at least one formator teacher.

Principals stated that they had no problem with students’ access to technology. However, it was found that it was not enough for principals and teacher to know the technology so that they can be effective on students success, but also parents who are one of the roles in education should know to use the technology. At some certain times, information technology classes should be kept open to parents’ access. Moreover, regular training activities and seminars will accelerate and will have positive contributions.

RESOURCES

Anderson, L.S. (1999). Technology planning: It’s more than computers. *National Center for Technology Planning*. Retrieved March 17, 2007. Available from <http://www.nctp.com/articles/tpmore.pdf>

Anderson, R.E. & Dexter, S. (2005). School technology leadership: An empirical investigation of prevalence and impact. *Educational Administration Quarterly*, 41, 49-82.

Barnett, H. (2001). Successful K-12 technology planning: Ten essential elements. *ERIC Digest ED457858*. Retrieved March

17, 2007. Available from <http://www.ericdigests.org/2002-2/ten.htm>

Gürbüz, T. & Yıldırım S. (2001). Eğitimde liderlik ve teknoloji planlaması. *BTIE 2001 Bildiriler Kitabı, Ankara:ODTÜ*, 305-311.

ISTE (2002), *State Education Standard*. Retrieved March 17, 2007. Available from <http://www.iste.org/nets>

Knuth, R. & Hopey, C. (1996). Guiding Questions for Technology Planning, Version 1.0. *ERIC Digest ED425709*. Retrieved March 17, 2007. Available from <http://www.ncrttec.org/capacity/guidewww/gqhome.htm>

Leithwood, K. (2005). *A review of the research: Educational leadership*. Retrieved March 17, 2007 Available from <http://www.temple.edu/lss/pdf/ReviewOfTheResearchLeithwood.pdf>

MEB (2006), *Temel Eğitim Projesi II.Faz İkraz Anlaşması*. Retrieved March 17, 2007. Available from http://projeler.meb.gov.tr/tr/tep_faz2.htm