



The Effect of School Administrators' Information Technology Use Competencies on their Management Skills

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SUMMARY

In this study, the effect of school administrators' information technology usage competencies on their management skills was examined. The research was conducted as a qualitative research using the interview method in the phenomenological model. The population of the research is school administrators working in Başiskele district of Kocaeli district. A semi-structured interview form containing 5 questions was used with a total of 12 participants, 6 of whom were school principals and 6 of whom were assistant school principals, who constituted the sample. The data obtained was analyzed using the content analysis method. Participants were determined by purposeful sampling method to ensure that the most suitable participants were included.

School administrators expressed positive opinions about using information technologies in education and training processes. It was understood that the school administrators, whose branch was information technology teaching, were significantly more advanced than the other participants in terms of their competence in using information technologies. According to their seniority in the profession, it has been observed that as the age of the participants decreases, their competence in using information technologies also increases.

Although the participants were interested in the use of information technology, it was generally observed that they did not have sufficient knowledge and skills. It has been observed that they have a desire to improve themselves both through in-service training and through different courses. Participants need teachers in the institutions where they work, whose field is information technology teaching, who can guide them. It has been concluded that managerial skills increase with the use of technology, especially in the field of technical skills. It was observed that human relations skills increased with the effective and efficient use of information technologies by all participants. It has been determined that conceptual skills increase positively in school administrators with higher seniority and more experience in the profession. It has been observed that administrators have different forms and levels of managerial skills during the school management process. It can be said that this result is related to the proficiency in using information technologies.

Keywords: School Administrator, Information Technologies, Management Skills

1. INTRODUCTION

The fastest change in the education system throughout history has occurred in the current era. The most distinctive feature of this process, also called the "Information Age", is that information is included among the existing production elements. Although knowledge has always existed from the oldest communities until now, the most obvious reason why it has come to the fore in this period is that the production and consumption process of knowledge has accelerated and its speed has increased over time. Since the 2000s, information has begun to be transmitted more easily and quickly thanks to technology. This research aims to reveal how school administrators' ability to use information not only through computers but also with different technologies will affect their skills in the management process. There are also different studies on the extent to which information technologies, which have found a place in the literature as a result of the blending of information and communication technologies, are used by school administrators and to what extent they are included in the education and training system, which is a multidimensional system (Görgülü et al., 2013; Topçu and Ersoy, 2020). In the examinations, the concept of technology use comes to the fore, and information technologies are considered as a subgroup of this field. The determination of this subject for the study is the increasing use of information technologies in the field of education and training, as in every field, all over the world. Since the use of information technologies requires many different skills, it has been questioned whether it has an impact on the management skills of school administrators.

The aim of the study is to determine the level of information technologies actively used today among school administrators, in which areas they are used, and whether they contribute to their managerial skills. Of course, the study does not cover all schools in our country. According to the official statistics of the Ministry of National Education, there are 24519 public and private primary schools in our country as of the 2021-2022 academic year; There are a total of 43455 basic education (primary and secondary school) schools, including 18936 public and private secondary schools (Ministry of National Education, 2022). As can be seen, this study was conducted under limited conditions with 12 participants in an environment where there were tens of

thousands of school administrators. The results of the research were limited to the amount of data obtained from the questions asked to the participants and the number of participants determined from the Başiskele district of Kocaeli province. The findings and evaluations made were discussed within this framework.

With the transition to the information society, the rate of use of hardware and software containing information technologies in our schools has increased rapidly (Parlak, 2017). School administrators use these technologies extensively in student transactions, personnel transactions, expenditure transactions, official correspondence transactions, communication, planning and programming processes (Görgülü et al., 2016). School administrators who can use it effectively are both highly respected by other employees in their institutions and receive positive feedback in the management process as the speed and quality of work and transactions increase.

At this point today, information technologies have become an indispensable building block of education and training processes. The Ministry of National Education has used information and communication technologies as one of the alternative teaching processes, especially from the beginning of the Covid-19 pandemic process. Our education system has moved to a different dimension with the concept of distance education, and although there have been minor problems in this transition, it has generally been carried out successfully. It was carried out in synchronous or asynchronous environments, regardless of location, in which school administrators, teachers, students and parents, the main stakeholders of the education system, were involved in the process. Training was provided through different channels such as television (EBA TV), computer, tablet and mobile phone. During this time period, the information technology competence of school administrators came to the fore in carrying out the process smoothly and successfully, and those with higher qualifications used their managerial skills more effectively and increased the service quality of the institutions they worked for.

This study was prepared to develop a different perspective on management skills and the use of information technologies in the literature. In effective schools, school administrators should be able to actively use educational technologies and lead at this point (Karşlı, 2006). It has been tried to emphasize to what extent the skills required for a leading school administrator are developed through the use of technology. Information technologies, which are frequently used in educational environments, have not been used at a sufficient level in the field of educational management. In educational management, unlike education, actions such as problem solving, programming, organizing and planning have not been used sufficiently in digital environments (Karşlı et al., 2002). In this context, the importance of using information technologies for effective school management is increasing day by day, and school administrators, who are a link in the chain of education and training, will be able to improve their management skills with this competence.

2. THEORETICAL FRAMEWORK

This section consists of research in the literature related to the theoretical framework. Information is given under the subheadings of Information Technologies in Education and Training, School Administrators' Use of Information Technologies and Management Skills-Information Technologies Relationship .

Rapid advances and developments have recently emerged regarding information technologies. There are different definitions and explanations in the literature regarding information technologies that enable accurate and rapid access to information. The word informatics is defined in the dictionary as "informatics, the science of processing information, which is the basis of science and used by human beings in their communication in technical, economic and social fields, in an orderly and reasonable manner, especially through electronic machines" (Turkish Language Association, 2022). Ince et al. According to (2010), information technology is a technology that includes the processes of arranging, storing and organizing information or data and communication through computers, television, the web and digital phones. In today's world, the fastest and easiest way to access information is information technologies (Şahin, 2003). In the adventure of accessing information, information technologies are a technology that provides innovations in the field of computers and communication, the existence of an enormous pool of information as a result of the constant renewal of the existing communication infrastructure, and the storage and transmission of this information (İraz, 2004).

The human being, who is the starting point of education, has a structure that constantly renews and improves itself from birth to death. At this point, technology has a facilitating effect on the process. Alkan (1996) discussed education as an element that enables people to reveal their innate skills and abilities and use them for useful purposes, and information technologies as a concept that helps individuals use the knowledge and skills they have acquired through education efficiently and effectively.

With the advancement of technology, personal computers, tablets and smartphones have become an integral part of our daily lives (Altun, 2005). This rapid progress has naturally shown its reflections in the education system. The use of information technologies has increased both in school management processes and in classroom environments. With the FATİH project implemented by the Ministry of National Education, as shown in Figure 2.1, a total of 522691 interactive boards were installed in 27198 schools from 2012 to June 2022 at the primary and secondary education levels, and the schools were equipped with fiber internet infrastructure. (Ministry of National Education, 2022). With this technology move of the Ministry, equality of opportunity has been achieved, school administrators have been able to carry out school-related planning, monitoring and control operations thanks to many web-based applications, and teachers and students have been able to carry out their teaching activities through interactive methods.

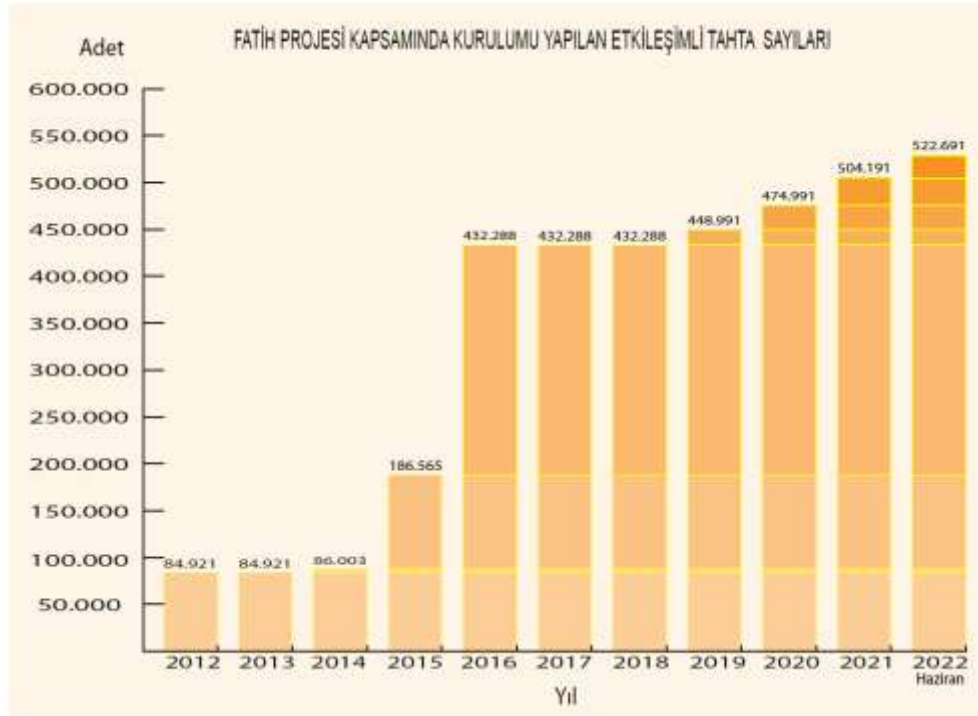


Figure 2.1. Number of interactive boards installed within the scope of Fatih Project

(Source: Ministry of National Education - <http://fatihprojesi.meb.gov.tr/etahta.html>)

Information technologies are widely used in the private sector and many public institutions to adapt to the modern age, and are also actively used in many applications affiliated with the National Education Ministry. At the point of increasing the quality of services, the use of information technologies has brought advantages such as storing big data, quick access to verified data, making analysis, and being independent of location.

The education and training system is like a unique factory where countries build the future. Considering the time period we are in, arguments involving information technologies will enable us to adapt to the times without falling behind (Kayabaşı, 2005). In order to build modern and innovative schools, it is desired that stakeholders have a high level of competence in using information technologies in all school types at every stage of the education and training processes. School administrators find computers and other communication technologies valuable both for carrying out school-related operations and for increasing school success (O'Brien and Wilde, 1996).

Information technologies are also widely used to provide communication in educational environments. It seems that communication between school administrators, teachers, students and parents has now evolved into digital communication rather than verbal communication. Versatile communication can be used thanks to many desktop applications and mobile applications (Karoğlu et al., 2020)

3. METHOD

This study was prepared by conducting interviews, which is a qualitative research method, to determine the impact of School Administrators' Information Technology Usage Competencies on their Management Skills. Interviewing is frequently used today, with the increase in both the number and quality of studies conducted in social sciences (Kocabıyık, 2016). In this method, where interaction is at the forefront, communication takes place one-on-one and synchronously. For this reason, the interview is quite different from the conversation that two people normally have in daily life (Yıldırım and Şimşek, 2008).

4. FINDINGS AND CONCLUSION

In this section, the data obtained from the interviews with the participants regarding the research are analyzed and presented. Both analyzes regarding the answers given to the 5 questions posed to the participants and quotes from their answers are given in some sections. In the quotes, M1, M2, M3, M4, M5, M6 given to school principals by the participants; MY1, MY2, MY3, MY4, MY5, MY6 codes given to school assistant principals were used.

4.1. Findings regarding the perceptions of School Administrators regarding Information Technologies

The school administrators who participated in the research were asked, "What does Information Technologies mean to you?" The question was asked and the answers obtained were analyzed and the results are shown in Table 4.1.

Table 4.1. Perceptions of school administrators towards information technologies

What does information technologies mean to you?	f (frequency)
Information Technologies is a must for me	11
Information Technologies makes my work easier	9
Information Technologies is not just computers	8
Information Technologies is software	4
Information Technologies is sometimes a waste of time	2

11 of the participants (92%) stated that information technologies are indispensable for their lives. This shows that they have a positive attitude towards information technologies. Participants see information technologies as indispensable both in terms of work and in almost all of their daily lives. They stated that not only computers but also many technological elements are included in this concept.

- **M2:** "Information technologies can be said to be indispensable since my field is also information technologies. I use it extensively in almost all areas related to school administration. Information technologies are actively involved not only at school but in all areas of my life."
- **MY1:** "Even though I met a little late, information technologies are at the center of life for me. I'm fine at school. It's not just the computer either. I use it extensively in many areas. In some cases, I sometimes waste my time. "I think it is the strongest bond between us and teachers, students and parents."
- **MY6:** "As a female school administrator, I feel like I cannot do anything without informatics in the education system. Sometimes the electricity goes out at school. When I am alone with pen and paper, I understand what this means."

9 of the participants (75%) stated that information technologies made their jobs easier. They stated that sometimes tasks that could be completed in 2-3 days using paper and pencil can be completed in minutes thanks to information and communication technologies. They stated that they had a very high workload and that the most effective way to overcome this was to do it easily and effortlessly.

- **M1:** "Because I am a little older, I no longer have the practicality I used to have. In the first years when I started working, our workload was perhaps less, but technology was not that advanced. Now we are in a busy work schedule and thanks to IT tools, I can do many things more easily."
- **MY2:** "Communication is one of the most important issues for us in school management. We are in constant communication with students, teachers, parents and district-provincial administrators. Informatics is the combination of information and communication. In our age, there are many instruments to do this easily and quickly. Both e-mail chains, social media shares and applications such as WhatsApp and Bip are very useful to us."

8 of the participants (67%) stated that information technologies are not just about computers. Today, smart phones are used in interactive boards, tablets, printers, network systems, mobile applications, projectors, smart watches, etc. installed in schools within the scope of the Fatih Project by the Ministry of National Education. Dozens of different resources serve this field. A safer and faster dissemination of information is also an indication of this.

- **M3:** "When I first started working, there was almost nothing in terms of technology in a remote corner of Anatolia. Is that so now? We achieve this through dozens of different methods in our schools. Most of the work we do is no longer solely dependent on the computer. "Sometimes, I can complete my school work on my mobile phone while sitting at home."
- **MY3:** "Since I am an Information Technologies teacher, I can say that I do not have any difficulties in school management processes. Almost all of the work and transactions of our Ministry are carried out digitally. We can do this not only with computers but also with different resources, and this provides us with great convenience."

4 of the participants (33%) stated that information technologies are based on software. Software is now present not only in a few business lines but in every aspect of our lives. Currently, schools are trying to direct children to software with a block-based coding system, starting from kindergarten. It is seen that school administrators have a low level of perception about software. Except for managers who are more in touch with technology and those whose branches are close to this field, others do not have an attitude towards software.

- **M4:** "When it comes to informatics, only computers and smartphones come to mind, but the basis of the work is to create software. Today, in order to have a strong education system and a strong country, we must attach great importance to software. An engineer like Selçuk BAYRAKTAR showed us all what can be done in software and how our country can be placed in a strategic position. "It is not possible just to produce machines; national and local software is required."

- **MY4:** “Computers are our hands and feet as a school administrator, but sometimes we cannot find suitable software. We gradually started to use products with local software in schools. The latest interactive whiteboards came with the Pardus operating system. Our own operating system.”

Although information technologies make our lives easier and save us time, 2 of the participants (17%) stated that they sometimes lead to loss of time. This situation is caused by not using the time spent in front of the computer efficiently and using smartphones more than necessary. Considering the answers given by the participants in this area, it cannot be said that this loss has a negative impact on the use of information technologies in general.

- **I6:** “Having a computer always at hand sometimes causes me to waste time on unimportant things. Of course, using time effectively is important, but there are also moments when I don't realize it. “This is partly my shortcoming.”
- **MY5:** “It cannot be said that I always use informatics efficiently in daily life. Sometimes I waste my time unnecessarily thanks to these technologies. So it's something that comes with comfort. Informatics now occupies a large part of my life. “I hope that over time I will not turn this into more harm than good.”

5. SUGGESTIONS

As a result of this research, the following points can be evaluated to give ideas for different studies that can be done on this subject.

- Since the study was conducted with 12 participants, it can be expanded to appeal to more participants and a comprehensive research can be conducted.
- The selected participants consist of school principals and deputy school principals. Research can be conducted by diversifying the type of stakeholders by including different management levels such as principal authorized teacher, deputy principal.
- The research is limited to primary and secondary school administrators. A wide pool of school types can be created, including different school types such as Kindergarten, Anatolian High School, Imam Hatip High School, Vocational and Technical Anatolian High School, Science High School, Social Sciences High School, and studies that can reach comprehensive results can be carried out.
- It is recommended that local in-service training be planned and implemented to improve school administrators' competencies in using information technologies.
- This study was conducted using the qualitative research method. Research that can yield different findings can also be carried out by using quantitative research methods.
- For effective use of information technologies, school administrators should be provided with hardware and software suitable for today's conditions.
- In order to use interactive boards and other equipment installed in schools within the scope of the Fatih project efficiently, sufficient information technology teachers must be employed.
- An evaluation method that can measure the competencies and managerial skills of school administrators in the use of information technologies can be included in the appointment process.