

## THE EXAMINING OF THE IMPORTANCE OF TECHNOLOGICAL KNOWLEDGE COMPETENCIES OF TEACHERS IN TERMS OF VIRTUAL CLASSROOM MANAGEMENT

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### ABSTRACT

Developments in information and communication technologies bring about changes in the field of education as well as in different areas of life. It is expected that teachers, who are a part of the education system that goes on the path of renewal in parallel with the developing technology, have knowledge and skills in the field of developing technology and use these skills in raising new generation students. Due to the global pandemic, there has been a mandatory transition in virtual classroom applications. Therefore, virtual classroom management is of great importance in terms of effective learning and teaching in virtual classrooms. The purpose of this research is to examine the importance of teachers' technological knowledge competencies in terms of virtual classroom management. In the study conducted with the document analysis method, which is one of the qualitative research methods, the relevant literature was examined and the findings were discussed. As a result of the research, the importance of teachers to have sufficient knowledge in this direction has been revealed in order to carry out the education carried to digital platforms with the pandemic effectively and efficiently. In virtual classroom management, unlike traditional classroom management, it is seen that there is a need for the development of technological infrastructure, as well as the need for teachers to be supported in order to develop their knowledge and skills through seminars and trainings in this field.

**Keywords:** Technology information, classroom management, virtual classroom management, teacher

### INTRODUCTION

Rapid advances in technology have integrated technology and human life. Today, which is called the information society and the digital age, it is seen that the role of technology in various areas of life has increased (Yılmaz & Ayaydın, 2015). Change is one of the most important features of the age we live in. The knowledge, skills and competencies needed in social life are constantly changing from an individual point of view (Gülcü, Solak, Aydın, & Koçak, 2013). Technological advances and innovations, which have become an important element of life in the world where globalization is experienced, enter different areas of life and integrate with life (Aktaş, 2016). In particular, this situation has changed the education sector by affecting social life with the development of technology in the 21st century. For example, as a result of this change, technology can be actively used in schools and school environments (Varank, 2009). As a result of these technological changes and their reflection on education, the education system and its components are also updated.

With the developing technology, the skills expected from the teacher have changed. The place of the profile of the teacher, who transfers his knowledge directly to the student and focuses on rote learning; has taken the profile of a teacher who provides information to students with guidance, teaches learning, supports and facilitates them with technology (Şimşek, 2002). In general, within the context of this innovation and development, teachers need to innovate and improve their qualifications and skills (Doğru & Aydın, 2007).

In this direction, the role of technological advances is felt significantly in the training of qualified students who will meet the requirements of the age. Today, it is educators who make information technologies effective and efficient in educational activities. It is seen in many studies that the functionality of technology depends on human power. For this reason, teachers' qualifications are important in the management of information technologies and in establishing a relationship between this technology and students (Aktepe, 2011).

The effectiveness of teaching activities in the virtual environment reveals the effective management of virtual classrooms, some basic principles and rules in this field and the studies that need to be done. The pandemic shows

that traditional classroom management principles and practices and virtual classroom management principles and practices naturally require different skills. Because teaching practice is carried out in a virtual environment where distance education opportunities are available instead of a traditional classroom. The study found that students' internet use increased the gap in the relationship between students and lecturers and experts. It can be said that this result is due to the social and physical distance between teachers and students. This will naturally be reflected in the classroom management in a virtual environment.

For teachers to successfully manage the virtual classroom, they must use the principles of virtual classroom instruction to support their students' critical thinking and higher learning development. These qualifications can be achieved through reflection, collaboration and evaluation using online tools such as asynchronous virtual classrooms, focus groups and conference rooms (Rufai, Alebiosu & Adeakin, 2015). One of the biggest challenges during the pandemic is that classroom teachers are managing the new classroom environment, which they don't fully know, in a virtual environment. This situation seems to be more difficult than traditional face-to-face teaching. In this study, it is aimed to examine the importance of teachers' technological knowledge competencies in terms of virtual classroom management.

### **Education and Technological Knowledge Competence**

Based on the definitions of technology in the literature and our experiences in our daily lives, we can say that technology is used in every aspect of our lives today. Technology is also necessary in the field of education, and education and technology affect each other (Yanpar, 2017). Educational technology in line with the definitions made; It can be defined as a dynamic process for the efficient use of tools and materials that emerged as a result of technological developments in educational environments, and their restructuring by evaluating the results (Ünal, 2010).

Today, with the developing age, knowledge, skills and attitudes related to technology have come to the fore in the teaching profession, as in all professions. At this point, the competence of teachers to use technology in educational activities becomes important, and their competence to use technology shows its effect on their own teaching success (Elif Küçük, 2016). Technological competencies are important for educators to be efficient and successful in their teaching and for the continuity of their professional development. An educator with technological competence can use different digital tools and environments to improve both their individual and professional competencies (Seferoğlu, 2004).

It is of great importance for teachers to develop themselves in terms of field, pedagogy and technology knowledge in order to be successful in their professional life. It should be ensured that teachers can use information and communication technologies at a sufficient level in order to follow the developments in their field, to add contemporary teaching models and strategies to the teaching process and to adapt to the period in which they live. Therefore, having a good knowledge of technology provides an advantage in improving the knowledge of teachers in their branches (Gündüz, 2018).

### **Classroom Management**

Students learning simultaneously in 21st century classrooms, rapid learning and continuing to improve classroom management models offer versatile activities in education. Therefore, Sugai and Horner (2002) stated that teachers should be trained very well so that they know which movements to do when and in what way. Teachers should be aware of the strategies to be chosen to address students' behavior problems, the factors that affect students' behavior, and the best classroom management. Allowing students to spend free time in class can cause students in the classroom to misbehave. In order to avoid this method, Sugai and Horner (2002) stated that teachers should create flexible environments in the classroom, use their experiences in a planned manner and provide an efficient teaching environment; He stated that the physical conditions should be adjusted conveniently and a free communication environment should be provided for all students to share their ideas.

Classroom management is not just about the behavioral dimension. It consists of processes such as organizing the life in the classroom, organizing the teaching process, using resources efficiently, making positive use of the environment, guiding the student in the process, and preventing possible problems that may arise. Classroom management includes improving teaching conditions, making physical arrangements, using time effectively, drawing and arranging the field in relationships, establishing positive communication and supporting students throughout the process (Karip, 2002). Classroom management focuses on a teacher's teaching and promoting

learning to attract students' attention (Wolff, Jarodzka, & Boshuizen, 2017). Classroom management and behavior management are viewed differently by new teachers and by different teacher levels. Students have off-task and discipline problems; focused on eliminating this problem by teachers in the highly effective learning process of students (Wolff et al., 2015). Regardless of teacher level, a successful classroom management system starts on the first day of school and is crucial for success throughout this term (Bohn, Roehrig, & Pressley, 2004). From the first day, teachers should use detailed instructions to avoid confusion when it comes to rules and tactics to attract students' attention (Stichter et al., 2009).

### **Virtual Classroom Management and Technological Information**

Online learning environments such as virtual classrooms have advantages such as flexibility, interaction, interoperability, and reduced space and time barriers (Rufai, Alebiosu, & Adeakin, 2015). In addition, it is predicted that the virtual classroom application will make a significant contribution to continuous education in emergencies such as Covid-19, earthquake, war, forced displacement.

Liu (2015) stated that in general, virtual classrooms are more effective than real classrooms and distance education because virtual classrooms can visualize logical reasoning and abstract theories, and students in the virtual classroom group are more likely to reason logically more easily.

Effective virtual classroom management requires good curriculum planning, effective management of student behavior, and effective use and management of technical tools used in virtual classrooms. Technical tools for students require access to virtual lessons and the ability to use technical tools effectively. Gündüz and Can (2013) emphasize that teachers should have a solid professional knowledge, general culture, field knowledge and classroom management skills in order to manage the classroom effectively. Learning, socializing and developing desired behaviors, and success undoubtedly depends on their skills in classroom management. It can be said that these skills are necessary and important for teachers' success and effectiveness in virtual classroom management. According to Franklin and Harrington (2019), a teacher's role is not just to achieve program goals in the classroom. It is stated that effective classroom management can be achieved by sharing the roles and responsibilities of students and teachers and ensuring student participation.

### **Conclusion and Recommendations**

There are several obstacles to effective technology integration in the virtual education environment. The most important of these obstacles is the lack of technical literacy of teachers (Muir-Herzig, 2004; Jedeskoğ & Nissen, 2004; Usluel, Mumcu & Demiraslan, 2007). This situation has increased the importance of pre-service and on-the-job training for teachers (Muir-Herzig, 2004). In this context, it can be said that one of the most important factors to be considered in projects and researches aimed at ensuring effective technology integration in the learning-teaching process is teacher competence and teacher training (Yıldız, Sarıtepeci, & Seferoğlu, 2013).

The results of the research show that teachers need to understand and apply the basic principles and rules of this field and manage virtual classrooms effectively in order for the teaching activities carried out in virtual environments to continue effectively. Because, with the spread of the Covid-19 pandemic virtual classroom application, it has been shown that the factors caused by teaching, learning, courses, technical infrastructure, laws and regulations and environmental reasons directly affect the teaching practice in the virtual environment.

In summary, clear rules and policies, the encouragement of familiarity with them, rapid instructor feedback through a variety of tools, a sense of community, and a variety of lessons and assessment types are essential to student success in the online classroom. Aware of the preventive nature of classroom management, the online instructor will anticipate potential problems and structure the classroom to address issues before they arise. Considering such potential issues, the instructor should become more aware of the diverse nature of the students who make up any class. However, it is argued that the online learning environment can be as rich and rewarding as the traditional environment if preventive classroom management is made an integral part of lesson preparation.

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