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Web 2.0 Tool Used in Classroom Management Teacher Opinions on The Usage of K12 E-School Applications

Saliha Kofal[a]

Abstract: In this study, the Web 2.0 classroom management tool, which is common in the Turkish Education System in Turkey e-school with the name of the research carried out under two different cities about classroom management tool under one roof Konya Selçuk district. The opinions of the teachers selected from 3 different schools were obtained. The teachers were addressed to the Class 2.0 Management Tool, which is the content management system, which is one of the Web 2.0 tools. The opinions of 23 teachers about K12 web 2.0 classroom management tool were collected through questionnaire. The content analysis revealed that teachers expressed positive opinions about K12. In addition, it has made suggestions for the improvement of the design by reorganization and the elimination of the functions that prevent the effective operation of the system.

Keywords: Web 2.0 tools, teachers, classroom management, K12.

1. Introduction

The rapid developments in information technologies in recent years have changed the means of communication and thus the working and educational environments as well as daily life. In other words, the changes observed in information and communication technologies not only change social life, but also reshape educational and business environments that require access to information, creating information, and using information. Communication, interaction, activity, etc. needed to increase success and improve performance. The employment of new environments that enable the elements to do it at all levels and easily is rapidly changing the roles and competency requirements in the educational environment (Trilling & Fadel, 2009). As a result of the returns of the century, students are expected to have basic skills such as critical thinking, analysis and synthesis, working in collaboration, being innovative and productive, as well as competences such as information, media and technology literacy. Teachers, who are one of the most important elements of the education system, are expected to have technological, pedagogical and content knowledge competencies such as using information technologies to meet the educational needs of the 21st century, having a good command of the subject area, using teaching methods and techniques suitable for the characteristics of the subject, and ensuring active participation. İlhan, 2004). As a result of these needs, teachers and students who have knowledge and skills about technology are expected to use this information effectively in their lives (Günüç, Odabaşı, & Kuzu, 2013). New generation internet technologies called Web 2.0 tools; It offers opportunities such as communication, interaction, information sharing and easy access to information, collaborative content creation, content storage and sharing, evaluation, and visualization in a simplicity that can be easily done by participants at all levels (Ajjan & Hartshorne, 2008; Altun, 2008). These new technologies provide students and teachers with the convenience and support they need, thanks to the advantages and ease of use they offer. In today's world where students are encouraged to be active participants and contribute to the content in learning environments, Web 2.0 tools enable students to create content, manipulate content, control content and socialize. In this context, Web 2.0 tools are considered to be a technological innovation that supports the change in the education system and it is recommended to adapt them to educational environments (Elmas & Geban, 2012).

Some Important Web 2.0 Classroom Management Tools are given below;

Seesaw

For students in the class, they can strengthen their work independently or as a group in the common area by adding pictures, text, drawings, audio and video. It is a fun platform where the teacher can sort the whole class by subject or date from a single session, make changes on it and share these works with the parents (Seesaw, 2022).

[a] Computer Education and Instructional Technologies Department, Necmettin Erbakan University, Konya, Turkey, salihakofal1923@gmail.com

Classloom

Classloom is a completely free social platform that aims to enable parents to share information and documents with each other and teachers to communicate more closely and better with each other. In Classloom, parents and teachers can set up special groups for their classes, share activities, assignments, photos, documents with each other and easily communicate with all other group members (Classloom, 2019).

• Parent contact information is not lost in Excel spreadsheets with Classloom.

• The confusion of paper and stationery sent from school is eliminated.

• Parents never skip their children's school activities.

• Children always go to school with the right materials.

• Everyone's life becomes easier with Classloom.

Edmodo

Edmodo is a classroom management tool where teachers can create classes and add students, provide tools such as exams, file sharing, homework, and parents can follow students. There are 3 user groups on the site, which is free of charge, as teachers, parents, and students (Wikipedia, 2019).

Class Dojo

ClassDojo is a gamified classroom management application with Turkish language support. With ClassDojo, you can create classes and give your students badges for behavior, study, homework, or topics of your own choosing. You can reward a student who shows exemplary behavior during or after the lesson or a student who solves the given problem with a badge and share it with your parents on classdojo.com, which you can use with a computer, tablet, or smartphone.

By giving students badges, you can help them correct their behavior or enable them to participate more actively in the lesson. ClassDojo assigns students cute monster avatar characters. Students can change this character if they want. This just turns into an interesting application by the students as well (Classdojo, 2022).

E-school System in Turkey

It is a school management information system web software that was put into use by the Ministry of National Education of Turkey in January 2007 within the scope of the Ministry of National Education Information Systems (MEBBİS) project. It is a system that includes the entire process from the registration of a student to school until graduation. It is developed by the General Directorate of Educational Technologies. State and private primary schools, kindergartens, private education institutions, secondary education institutions operate in the e-school system. When you enter the system, the following information can be learned:

Announcements: There are announcements that are wanted to be delivered to you by school administrators or teachers. Individual or collective announcements

Curriculum: Course schedule, course start and end times, teacher information, weekly course schedule,

Absenteeism Information: Disabled and unexcused absences during the period

Grade Information: Scores related to exams, projects and performance determination studies taken by the student at school

Exam and Project Information: The dates when the student will take the exam and submit the project are entered(MEB, 2019).

1.1. Related Research

As institutional and higher education environments increasingly use Web 2.0 tools, according to previous research, Web 2.0 tools to prepare K-12 teacher candidates, K-12 education and lesson design course, and course participants' learning

to find out how these tools can support classroom teaching and learning goals. survey responses regarding their perceptions of their experiences about their experiences were evaluated, showing that teacher-students appreciated and approved the design of the lesson and felt that their learning experience scaffolded their ability to use Web 2.0 tools in the classroom and school context (Kale & Goh, 2014). In another study, it was tried to reveal the perceptions of primary school administrators and teachers about the e-school application of the Ministry of National Education, the contribution of this application to the education system, the success of the system and its positive and negative aspects. A total of 303 teachers and 26 school administrators were surveyed by choosing 10 primary schools from 5 education regions in Van, by random sampling method. As a result of the research; The opinion that the e-school application prevents time and labor loss by eliminating documents such as grade book and grade sheet has been determined as the first advantage. Activating the save button in some transactions from the administrator module was seen as the most important disadvantage of the e-school application (Ozkan & Akbaba, 2013). The e-School applications of the Ministry of National Education were conducted in line with the opinions of school administrators, teachers, students and parents, who are the four most important stakeholders of teaching studies, as a result, a case study was made from qualitative methods. It has been suggested that, thanks to this application, students can learn their grades over the internet, they cannot hide any situation from their families, parents have the opportunity to follow their students and the system will be more useful when the server and speed problem is solved (Kızılboğa, 2010). It has given rise to the idea that Web 2.0 tools can also be used in educational environments due to many features they have. Many researchers emphasize the benefits such as making it easier for the student to interact with the teacher and the content, and supporting students to use and develop their research, questioning and problem-solving skills through cooperative learning (Özmen et al., 2011).

1.2. Problem Statement

To determine the attitudes of the teachers regarding the use of the k12 e-school application, which gathers private and public schools of the Ministry of National Education, with 5 open-ended questions directed to them, and to reveal the situations that cause demotivation in its use by determining the deficiencies of the application.

1.3. Purpose and Importance of Research

The purpose of this research is to determine the opinions of teachers about the usability of the web 2.0 tool k12 e-school applications used in classroom management. In this context, answers to the following questions were sought.

- What are the most used modules of K12 e-school?
- What are the unused modules in the K12 e-school application?
- What is the module or factor that makes it difficult to use in the K12 e-school application?
- What are the advantages of K12 e-school application over the classical method?
- What are the problems encountered in the K12 e-school application?

In this context, the importance of the research was determined by the Ministry of National Education as a classroom management tool to determine the opinions of teachers about the e-school system used in schools and it was researched. The fact that the findings obtained from this qualitative research will give an important idea about the improvement of the system and have the potential to lead new research on this subject makes the research important.

2. Method

In this section, the model of the research, its participants, data collection tools and data analysis are given.

2.1.Research Model

This research is a descriptive study carried out to describe the characteristics of the phenomenon studied. Descriptive studies, as the name suggests, are conducted to describe the characteristics of the phenomenon studied (Fraenkel & Wallen, 2006). In the study, teachers' views on k12, which is frequently referred to as e-school, a web 2.0 classroom management tool, were analyzed descriptively.

2.2.Population and Sampling

The participants of the research are 23 teachers working in high school and primary education who use the k12 application, one of the web 2.0 classroom management tools. The age range of teachers is between 23 and 46. Eight of the teachers are female and 15 are male.

2.3. Data Collection Tool

A semi-structured interview form was developed by the researcher to collect data in the study. Questions were included in line with sub-purposes. The data collection tool was shown to Turkish and computer teacher field experts, and their opinions were taken on linguistic and content validity. For the measurement tool, which included a total of 5 questions, the pre-service teachers who used the web 2.0 tool were determined and the data were collected in a one-week period.

2.4. Data Analysis

The answers obtained from the teachers were analyzed with the content analysis method. Two different expert opinions were taken to ensure the validity and reliability of the collected data. It was calculated by using this similarity formula, which is called internal consistency and conceptualized as consensus among coders by Miles and Huberman (1994), and a similarity rate of 92% was found.

3. Findings

In the research, the answers of the participants about the positive and negative aspects of the modules used in the K12 e-school application, which is a school management information system web 2.0 tool that was put into use in January 2007 within the scope of the Ministry of National Education Information Systems (MEBBIS) project by the Ministry of National Education Table 1 given in.

Table 1. Distribution of most used K12 modules

Most used Modules	f	%
Grading Operations	16	27,6
Exam Date Entry	8	13,8
Institutional Transactions	7	12,1
Absenteeism Procedures	6	10,3
Student Procedures	6	10,3
Social Event Entry	4	6,9
Contact/Sms	2	3,4
Project Assignment entry	2	3,4
Create Library	1	1,7
Transfer Procedures	1	1,7
Reports	1	1,7
Create Class Library	1	1,7
Agenda	1	1,7
Announcements	1	1,7
Records Management	1	1,7
Total	**58**	**100**

When Table 1 above is examined, it is seen that a total of 58 answers were received to the open-ended questions directed to the teachers of the modules most used in the K12 e-school application, and each teacher gave more than one answer to the same question. The most used module question is Grading Operations, which has a significant rate of 27% with 16 frequency values, followed by Exam Date Entry with 13%.

As another question, teachers were asked about features not used in the same module (Table 2).

Table 2. Unused modules in K12 e-school application

Not using Modules	f	%
Administrator Module	11	34,4
School Report Additional Information	3	9,4
Students who do not choose a field	3	9,4
Reports	2	6,3
User Pool	2	6,3
Notebook	2	6,3
School Information	1	3,1
Student Transactions	1	3,1
Exam Procedures	1	3,1
Study Tracking	1	3,1
Homework Tracking	1	3,1
Student Parent Portal	1	3,1
Social activities	1	3,1
IYEP Modules	1	3,1
Note Transactions	1	3,1
Total	**32**	**100,0**

When the Table 2 are examined, open-ended questions were asked to the teachers in the research of the modules not used in the K12 e-school application. Each teacher specified one or more module names. Administrative Modules have a significant rate of 34% with 11 frequency values of 32 answers given to the questions, followed by the students who did not choose their School Report Additional Information and Students who do not choose a field with 8%. As another research question, the reasons making use of the e-school application difficult were investigated and are given in Table 3.

Table 3. Reasons that make it difficult to use in e-school application

Modules That Make It Difficult To Use	f	%
Design Confusion	5	26,3
Time out	3	15,8
Elective Course Entry	2	10,5
Difficulties due to application operation	2	10,5
Useless Modules	1	5,3
Limited Authority	1	5,3
Inability to access information from previous years	1	5,3
Application is slow	1	5,3
No complicating factors or modules	3	15,8
Total	**19**	**100,0**

As can be seen from Table 3, a total of 19 opinions were reported for the module, which made it difficult to use, directed to teachers in the K12 e-school application. 15% of these opinions were that there was no difficulty in the modules. 26% design complexity and 15% timeout were the most common reasons for usage difficulties.

Table 4 shows the advantages of e-school application over paper-based classical school management applications.

Table 4. Advantages of the e-School application compared to the classical method

Advantages of the e-School application	f	%
Ease of access to information	21	32,8
Secure information storage	13	20,3
Access to all information about the general condition of the student	8	12,5
Saving on time	8	12,5
Save on paper costs	5	7,8
Instant viewing of shared information by parents and students	4	6,3
to be faster	2	3,1
Viewing the student's other course grades	1	1,6
Total	**64**	**100,0**

When Table 4 is examined, it is seen that a total of 64 answers were received from 23 teachers who were asked open-ended questions in the study in which the advantages of K12 e-school application compared to classical classroom management were asked. The answers given to the question of what are the advantages compared to classical classroom management were Ease of Access to Information, which has a significant rate of 32% with 21 frequency values. Secure Information Storage module followed the second place with 20%.

In Table 5, the problems encountered in the e-School application are investigated and the results of the findings are given.

Table 5. Problems encountered in the e-School application

Problems encountered in the e-School application	f	%
Slowing from Intensity	7	28
Not enough time	5	20
Locking the System	4	16
Difficulty of use	3	12
Lack of report module on home page	2	8
Student Photos Are Out of Date	1	4
Error while printing a document	1	4
Failure to Provide Student Personal Information Collectively	1	4
Total	**25**	**100,0**

It is seen that a total of 25 answers were received from 23 teachers regarding the problems identified regarding the use of the K12 e-school application. Internet connection speed slowing down at most by 28%, not having enough time to use with 20%, and frequently crashing the system with 16% were the most expressed problems.

4. Results and Discussion

The e-School management system is a system used in private and public schools throughout Turkey. In general, it is stated that the use of e-school management systems has many advantages, but it should have important competencies in use (Jain, 2021; Fetaji, et al, 2013; Serbedzija, 2003). For this reason, the opinions of teachers who use the e-school system effectively, which is used throughout Turkey and which has a significant potential for use in terms of students, teachers, parents and administrators, were investigated and the results obtained are given below.

15 different topics such as graduation procedures, entering exam dates, teaching services are expressed as e-school usage modules expressed by teachers. In other words, it has been seen that the e-school services used serve a very wide area. In this respect, it can be stated that it has a significant potential. Di et al. (2010) stated that it is important to meet the needs in the use of e-school systems. Durnali (2013) states that the richness of e-school management systems is important in terms of usage potential. For this reason, it can be stated that the e-school system has significant opportunities and potential for use.

There are areas that are stated to be not useful in terms of e-school management application. It is seen that the most expressed ones on this subject are concentrated in certain parts such as reporting and student transactions. For the sake of improvement, it can be suggested that these modules be improved to include different stakeholders. Di et al. (2010) stated that it is important to improve database and related transactions in e-school management systems and to gain rich transactional competencies.

As a question that criticizes the e-school management system, it has been seen that the design confusion is in the first place in terms of the reasons that make it difficult to use. When other problems are examined, it is seen that all issues such as timeout problem and slowness of applications are technical issues. Grepon et al. (2021) refers to technical issues as important to the success of e-school management systems. Febrianty, Hadiwijaya, and Octafian (2020) state that e-school systems increase the quality of learning, so technical problems should be eliminated. In this respect, it can be recommended to carry out studies to solve technical problems in e-school systems.

As a matter of fact, it is seen that the problems encountered with the many advantages expressed by the teachers are similar to the literature (Febrianty et al., 2020; Durnali, 2013; Di et al., 2010). It can be stated that the e-School system has a significant potential. A suggestion can be made to eliminate the deficiencies expressed by the teachers.

As a result of the research, it can be recommended to conduct quantitative studies with wider participation and the views of teachers, students, parents and administrators. In addition, experimental studies can be planned to determine the effect of the modules used. On the other hand, in the context of the problems encountered, it can be suggested to eliminate technical problems and to improve unused modules and make them more functional.

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Conflict of Interest

it has been reported by the authors that there is no conflict of interest.

ORCID

Author 1 Saliha KoFAL http://orcid.org/ 0000-0001-6009-0448