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Pre-service Teachers' Interaction Tool Preferences in Blended Learning and Their Views on Google Classroom

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Abstract

Purpose: This study aims to determine the opinions of pre-service teachers who receive education through blended learning regarding Google Classroom support and their interaction preferences in blended learning environments. Methodology: The research was conducted using a case study design, one of the qualitative research designs. Data were collected from 11 pre-service teachers who participated in a teaching practice course, utilizing a semi-structured interview form. The collected data were coded and categorized using descriptive and content analysis methods. Findings: The study found that students primarily utilized Google Classroom for assignments and interactions with instructors, other students, and course content. Students emphasized their need for interaction with the instructor as the most significant aspect of blended learning, followed by content interaction and interaction with other students. Pre-service teachers' views towards Google Classroom were positive. Their opinions were categorized under the categories of contribution to self-regulation, an interactive assignment system, ease of use, and student-student interaction. Highlights: Google Classroom can be used as a support for LMSs. When it is used with activities that will attract students' interest, it may be possible to increase students' satisfaction. Students were very satisfied with the detailed and quick feedback on their assignments. Another prominent feature of Google Classroom is that the documents are systematically organized and always accessible. One may suggest that LMSs that do not have these features should take precautions at this point. All of the students plan to use Google Classroom in their professional life.

Key Words

Google classroom • Interaction • Blended learning • Web 2.0 • LMS

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Introduction

Distance education, which was being adopted by an increasing number of institutions before the Covid-19 pandemic, has become indispensable for educational institutions during the pandemic. As Adedoyin and Soykan (2020) state, it is clear that distance education, especially in the form of blended learning, will continue to be a part of our live. Blended learning combines the advantages of face to face and distance education, making education accessible to both instructors and students (Graham, 2006). In our country, where the number of students is constantly increasing (Council of Higher Education, 2021a), it has now become a necessity to leverage these advantages.

In our country, although the impact of the pandemic has decreased (as of the fall semester of the 2021-2022 academic year), courses have started to be held predominantly face-to-face (Council of Higher Education, 2021b). However, many institutions have continued to benefit from the advantages of blended learning, taking into account the course of the pandemic. In the distance education dimension of blended learning, some higher education institutions use self-developed learning management systems (LMSs), while others use open-source software such as Moodle. The LMSs are usually integrated with video conferencing software such as BigBlueButton, Zoom, Skype, Adobe Connect, Google Meet, etc. to enable instructors to conduct online synchronous lectures.

Institutions typically utilize LMSs to make announcements, share information and learning content, conduct lectures, and discussions on a given task (Wang et al., 2012). LMSs such as Blackboard, Desire2Learn, and Moodle are structured with weekly units or modules, through which instructors deliver course materials to students. Assessments and exams can also be administered using these platforms (Bates, 2018). However, it's important to note that each LMS has its unique limitations, and not all LMSs offer the same features.

While Moodle can provide a structure that enables students to engage in discussions on a topic, an institution's self-designed LMS may not possess this capability. However, it is well-established that discussions enhance student interaction (Rhode, 2008), and interaction is a crucial component of the learning process (Moore, 1989). Similarly, the necessity of giving feedback to students has been demonstrated by various studies in the literature (Author, 2020; Karadeniz, 2023; Rovai, 2003). Nevertheless, some of the LMSs may not facilitate instructors in offering detailed feedback to students. In such cases, the utilization of Web 2.0 tools becomes one of the best options.

Google Classroom is one of the Web 2.0 tools used in both face-to-face and online learning. This tool allows students to discuss a topic set by the instructor. In addition, instructors can collect students' assignments in an organized structure and evaluate them individually by marking and commenting on them (Google Classroom, 2022). Sukmawati and Nensia (2019) found that students were excited when using Google Classroom. The application can be easily accessed from devices such as computers and smartphones. Students can see the assignments and deadlines for these assignments in the application. In addition, assignments can be easily uploaded from any device. Additionally, students can interact with each other and the instructor in Google Classroom. The instructor can make confidential comments on students' assignments. The ability to upload MS Word, Powerpoint, and, pdf files to the platform is also one of its positive features. Students can easily access the materials they have forgotten again.

In the literature, various studies have explored students' and teachers' opinions about Google Classroom. Korkmaz (2021) collected opinions about Google Classroom from 54 students in the Department of Mathematics teaching with the help of an open-ended question in a questionnaire form. As positive aspects of Google Classroom, the students identified individual speed and replay, easy access, time and space independence, student-faculty dialogue, being economical, and being suitable for formation courses. The factors that stand out in the negative aspects are that it is not suitable for field courses, does not provide instant feedback, and passivates the student. In addition, some of the students find the application inefficient.

Çınar et al. (2015) examined Google Classroom as a LMS. As a result of the analysis, it was determined that its features, such as simple and plain interface design, asynchronous communication, not requiring additional software, sharing resources, giving assignments, file storage, bulletin board, task reminder, etc. would be useful for educational purposes. Accessibility, the creation of a robust comment network and feedback system, and a user-friendly interface are also advantages of Google Classroom (Akgün et al., 2021, Mohd Shaharanee et al., 2016). Sansinadi and Winarko (2020) also evaluated Google Classroom as easy-to-use software. According to the study conducted by Yılmaz (2020), Google Classroom was used as a LMS in many universities in Turkey during the pandemic period. In the same study, it was determined that students were partially satisfied with Google Classroom in terms of navigation, access, course period, assessment and evaluation activities, and support services.

Poyraz and Özkul (2019) questioned whether Google Classroom can be used as a LMS. The researchers identified the strengths of Google Classroom as "ease of use, time-saving, flexible structure, open to everyone and mobile" and the weaknesses as "Google dependency, limited communication, instant quizzes, and tests, sharing between learners". It was evaluated that Google Classroom cannot be used as an LMS for reasons such as organizational course design, collaborative work, and lack of learning analytics. Azhab and Iqbal (2018) also received opinions from 12 instructors about Google Classroom and concluded that this software can only be used for document management and basic classroom management.

Ülker et al. (2021) evaluated Google Classroom as an e-portfolio software. As a result of the application with 17 pre-service science teachers, it was determined that the pre-service teachers enjoyed doing assignments on Google Classroom, even if it was difficult. In addition, the pre-service teachers think that they will use Google Classroom in their professional lives in order to teach effectively. Teachers who are actively teaching are of a similar opinion. Teachers find it useful in terms of enabling collaborative learning, reducing problems, organizing student documents, and saving time, and they want to continue using Google Classroom (Harjanto & Sumarni, 2021).

When the studies in the literature are examined in general, it is seen that Google Classroom has advantages and disadvantages, but its advantages stand out. Features such as having a deadline and systematic storage of documents can be utilized for self-regulation skills that are part of successful distance education. The resource management skill, which was developed by Pintrich et al. (1991) and included in the accepted self-regulation scale, is considered as one of the skills necessary for students to use the resources in the learning environment effectively. It can be said that Google Classroom also contains components that can contribute to students' self-regulation skills. Considering

that students with high self-regulation skills are more likely to be successful in distance education (Yükseltürk, 2009), it can be thought that it would be useful to get Google Classroom's support in this regard.

It is seen that Google Classroom is sometimes used as a complete LMS and sometimes as a support to the LMS. In the institution where this research was conducted, students used the unique distance education platform of the institution as the LMS. Online synchronous courses were conducted through Google Meet, which is integrated into the system. Additionally, the process was supported with face-to-face lessons. In addition to the distance education portal, Google Meet, and face-to-face meeting components, the instructor included Google Classroom and Whatsapp software in the process. As a matter of fact, there is no support in the institution's portal for students to communicate among themselves in writing. Google Classroom was integrated into the process in order to overcome the disadvantage of the portal in giving feedback on assignments, ensuring asynchronous communication, and to providing self-regulation for students who are faced with many tasks. The main reason that motivated the researcher to conduct this study was to determine the place and impact of Google Classroom among all these tools. In this context, the aim of this research is to determine the opinions of pre-service teachers who receive education through blended learning about Google Classroom support. In line with this purpose, answers to the following questions will be sought:

1. How do pre-service teachers utilize different platforms in blended learning when doing assignments, interacting with the instructor, other students and content?

2. What are the interaction preferences of pre-service teachers in blended learning?

3. What are the positive and negative aspects of using Google Classroom in the learning process?

Method

Research Design

The research was conducted based on the case study design, one of the qualitative research designs. Case studies aim to collect comprehensive, systematic, and in-depth information about a situation (Patton, 2014). In this study, it was aimed to examine the benefits and limitations of using Google Classroom from the pre-service teachers' perspective. Additionally, information was obtained from students about how often they use different interaction tools and which interaction tools they prefer for different types of interaction.

Study Group

The study group of the research was determined by convenience sampling and criterion sampling techniques. In the convenience sampling technique, the researcher selects the most appropriate sample in terms of time, effort and, cost (Patton, 2014). This researcher also conducted the study with the most accessible groups. In criterion sampling, participants are included in the study according to certain criteria (Patton, 2014). In this study, in order to be included in the data collection process, the participants were required to meet the criteria of taking the teaching practice course with Google Classroom support and taking the teaching practice course with blended learning. Demographical information about the participants is given in Table 1.

Table 1

Demographic Characteristics of the Participants

Participants	Age	Gender	Department
P1	27	Female	Turkish Language and Literature
P2	21	Female	Social Sciences Teaching
P3	22	Male	Social Sciences Teaching
P4	24	Female	Turkish Language and Literature
P5	42	Female	Turkish Language and Literature
P6	22	Female	Social Sciences Teaching
P7	21	Male	Social Sciences Teaching
P8	24	Female	Turkish Language and Literature
P9	25	Female	Turkish Language and Literature
P10	22	Female	Social Sciences Teaching
P11	21	Female	Social Sciences Teaching

Table 1 shows that 9 of the participants were female and 2 were male. The ages of the participants ranged between 21 and 42, but most of them were in their 20s. A total of 11 participants took part in the study, 5 of whom were Turkish Language and Literature and 6 of whom were Social Studies Teachers and the participants were coded as P1, P2....

Research Instruments

A form containing structured and semi-structured interview questions was used as a data collection tool. In the first part of the form, students were asked questions about how often they use different interaction tools, and which interaction tools they prefer for different types of interaction. In the second part, there were questions about the positive and negative aspects of using Google Classroom, how it could be used better, and whether the participant would use this program when s/he becomes a teacher. The form was developed based on the literature and the researcher's experiences. The draft form was reviewed by two open and distance learning experts and revised and finalized in line with the feedback.

Research Processes

The data of the study were obtained from 11 pre-service teachers who took the teaching practice course at the faculty of education of a state university. During the data collection period, the course was taught as a blended course. During the teaching practice course, the instructor and the students regularly held online meetings lasting 30 minutes on average every week. During the meetings, the students were given feedback on their assignments and explained in detail how they should do the next assignments. Since each course had six students, interactive lessons were possible. In order to discuss some topics in more detail, the instructor and the students had face-to-face lectures 3 times in one group and 4 times in the other during the semester.

Although the institution's LMS included a section on assignments, it was not possible to provide detailed feedback to students through the module, for these reason assignments and some learning/teaching activities were carried out through Google Classroom. In Google Classroom, the assignment of the week was explained to the students in detail and templates were uploaded if necessary. In addition, students were given small quizzes and activities such as debates.

Data Analysis

The answers given to the structured questions in the first part of the form were analyzed by the descriptive analysis method. In descriptive coding, the answers of the participants are placed in predetermined codes (Yıldırım & Şimşek, 2013). The answers to the semi-structured questions were analyzed with the content analysis method, which is based on the method of categorizing the data into codes, categories, and themes (Miles & Huberman, 1994). Content analysis was conducted using MAXQDA software.

Validity and Reliability

The data obtained in the study were coded twice by the researcher, 10 days apart. In the second coding process, for example, a category previously named as "systematic organization" was combined with the category of "resource access and management". In qualitative research, many measures are taken to increase the validity and reliability of the research. One of these measures is to indicate the researcher's experience and biases (Gibbs, 2009). Accordingly, the title "the role of the researcher" was included in the study. In addition, Lincoln and Guba (1985) suggested that the results of the research should be verified by other researchers to confirm that they are not the product of the researcher's imagination. In this study, updates were made by taking the ideas of an instructor who has qualitative research and has used Google Classroom. Participant confirmation as suggested by Creswell (2009) was employed for the validity of the research. Accordingly, the researcher summarized the participants' statements from time to time during the interview to confirm whether she understood the participants' statements correctly.

Role of the Researcher

The researcher took part in this research study as a practitioner and had the opportunity to make observation in the field for a long time. Having worked on improving the quality of open and distance learning for many years, the researcher observed that the LMS alone was not sufficient for the teaching practice course. She found that students wanted to receive feedback on their assignments, but this was not possible via e-mail. In addition, she realized that students were doing assignments based on unsubstantiated information obtained from other students taking the course, and students needed written and clear instructions. One of the most significant observations is that students tend to procrastinate on their weekly assignments (lesson plans, observation reports, etc.) until the end of the semester, resulting in lower-quality work. For these reasons, the researcher thought it would be useful to use a platform that would support students' self-regulation. The researcher's experience in conducting qualitative research made it easier for the researcher to conduct the research without involving her feelings and thoughts in the process.

Results

Pre-Service Teachers' Level of Utilization of Different Platforms

Table 2

Ranking of Preferred Platforms for Assignments

Platforms	1st		2nd		3rd		4th	
	f	%	*f*	%	*f*	%	*f*	%
LMS	1	9,1	4	36,4	3	27,3	3	27,3
WhatsApp	2	18,2	4	36,4	3	27,3	2	18,2
Face to face	3	27,3	1	9,1	2	18,2	4	36,4
Google Classroom	5	45,5	2	18,2	3	27,3	1	9,1

When Table 2 is analyzed, it can be seen that Google Classroom is the platform that students find most useful when doing assignments. This is followed by LMS and WhatsApp. Face-to-face communication ranked last. During the implementation, assignments were given via Google Classroom, especially because of its advantages in giving feedback and corrections. The reason why the pre-service teachers used Google Classroom first for doing assignments may be due to the implementation effect. However, this effect is not negative as seen in Figure 1.

Table 3

Ranking of Preferred Platforms for Student-Instructor Interaction

Platforms	1st		2nd		3rd		4th	
	f	%	*f*	%	*f*	%	*f*	%
LMS	2	18,2	5	45,5	1	9,1	2	18,2
WhatsApp	6	54,5	1	9,1	4	36,4	-	-
Face to face	2	18,2	2	18,2	2	18,2	4	36,4
Google Classroom	1	9,1	3	27,3	3	27,3	4	36,4

Table 3 shows that pre-service teachers primarily used WhatsApp to interact with the instructor. The reason why pre-service teachers first preferred WhatsApp may be that it provides instant written communication. In addition, WhatsApp may have come to the forefront because it is the easiest software to access among the software in the table and the most widely used software in daily life. The majority of the students preferred the LMS in second place. It is thought that the reason for this is that the LMS also includes video conferencing software. Thanks to video conferencing, students can see the instructor instantly from wherever they are, even if virtually. It is less attractive for students to come to the faculty and see the instructor in person or to communicate asynchronously via Google Classroom.

Table 4

Ranking of Preferred Platforms for Student-Student Interaction

Platforms	1st		2nd		3rd		4th	
	f	%	*f*	%	*f*	%	*f*	%
LMS	-	-	1	9,1	2	18,2	2	18,2
WhatsApp	3	27,3	6	54,5	1	9,1	-	-
Face to face	4	36,4	3	27,3	2	18,2	-	-
Google Classroom	4	36,4	-	-	3	27,3	2	18,2

Students mostly prefer to interact with their fellows face-to-face and through Google Classroom (Table 4). In fact, the practitioner observed that students interacted more on WhatsApp than on Google Classroom. However, it is thought that Google Classroom has come to the forefront because students enjoy brainstorming and debate-like activities in Google Classroom. Indeed, Figure 1 demonstrates that Google Classroom effectively facilitates student interaction.

Table 5

Ranking of Preferred Platforms for Student-Content Interaction

Platforms	1st		2nd		3rd		4th	
	f	%	*f*	%	*f*	%	*f*	%
LMS	1	9,1	3	27,3	2	18,2	1	9,1
WhatsApp	1	9,1	5	45,5	2	18,2	1	9,1
Face to face	-	-	-	-	1	9,1	-	-
Google Classroom	9	81,8	2	18,2	-	-	9	81,8

It is seen that students interacted with the content mostly through Google Classroom (Table 5). This finding was expected since the instructor primarily shared course documents, particularly assignments, via Google Classroom. When the instructor shared the same document on the LMS and Google Classroom at the same time, it was observed that only a few students view the document on the LMS, while all students responded to the document on Google Classroom. Secondly, students accessed the documents via WhatsApp. The reason for this was that the instructor shared the documents again via WhatsApp in response to some questions. Since the documents were only transmitted electronically, it is unsurprising that students did not access the documents in a face-to-face manner.

Pre-service Teachers' Interaction Preferences in Blended Learning

Table 6 shows that the pre-service teachers stated that they needed to interact with the instructor the most in order to be successful in the learning process. This is followed by student-content interaction. Pre-service teachers need student-student interaction the least. In order to be successful, students need to do the tasks assigned to them. In order to do this, they should follow the instructions given by the instructor well. Although the necessary documents

are uploaded to Google Classroom and LMS after they are organized in detail, students always need to ask questions to the instructor. This may be the reason why students attribute the most value to the interaction with the instructor in being successful.

Table 6

Pre-Service Teachers' Interaction Preferences

Type of Interaction	**1st**		**2nd**		**3rd**	
	f	**%**	***f***	**%**	***f***	**%**
Student-instructor	1	9,1	3	27,3	2	18,2
Student-content	1	9,1	5	45,5	2	18,2
Student-student	-	-	-	-	1	9,1

Positive and Negative Aspects of Using Google Classroom in the Learning Process

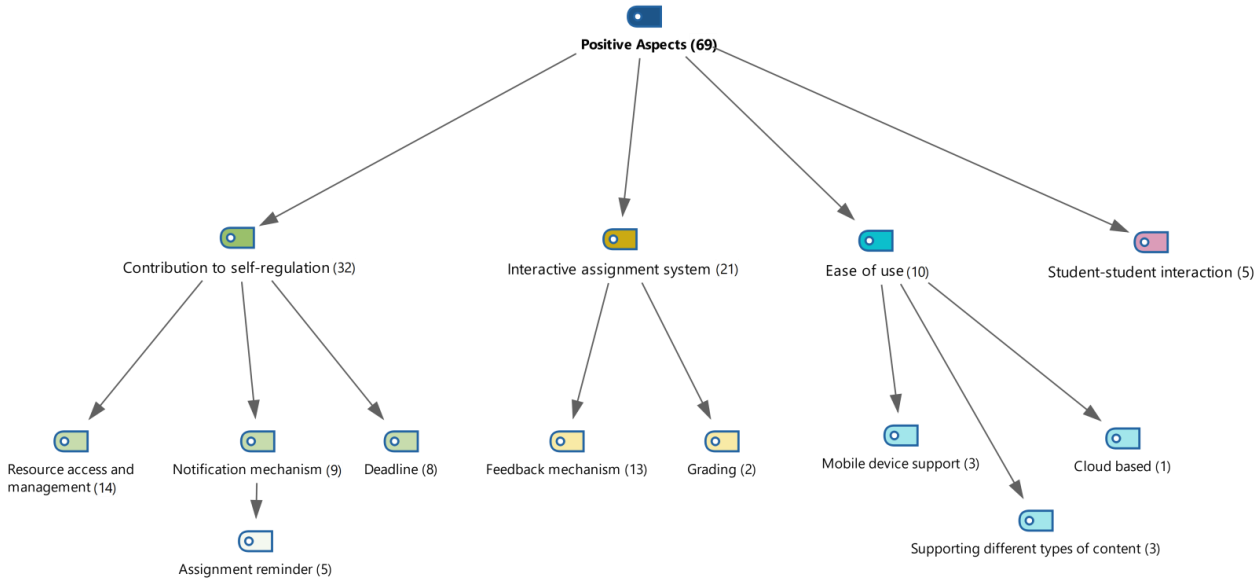

Figure 1. Positive Aspects of Google Classroom in the Learning Process

When Figure 1 is examined, it is seen that students discussed the positive aspects of using Google Classroom in the categories of contribution to self-regulation, interactive assignment system, ease of use and student-student interaction. None of the students responded negatively to the question about negative experiences with Google Classroom. Only two of the students stated that an instant messaging module and a video conferencing module could be added to Google Classroom. This advice from the students is noteworthy. In fact, Google has a video conferencing infrastructure (Google Meet) and a chat infrastructure (Google Chat). However, these are not integrated into Google Classroom and require planning on a separate platform. This may reduce the possibility of them being

used together with Google Classroom. This is the only deficiency identified for Google Classroom in the research and in the following sections, positive opinions are analyzed by category respectively.

Contribution to Self-Regulation

The most frequently mentioned codes about the positive aspects of Google Classroom by pre-service teachers formed the category of "contribution to self-regulation" (Figure 1). The constant accessibility of resources on Google Classroom, along with its systematic organization, aided pre-service teachers in resource management, allowing for easy retrieval of forgotten or confused information/content. As an example, when preparing the final assignment file, pre-service teachers downloaded the assignments they had completed since the beginning of the semester, effortlessly organized them, and then submitted the organized file to the instructor. P7 expresses this situation as follows: When I was collecting my final assignment file, I took my assignments from Google Classroom. I put them on my own computer very messy, I did not create a separate file. I downloaded my assignments from there again and organized them. Google Classroom is ready and systematic. (P7- Resource access and management).

In addition to resource access and management, students also appreciated the fact that Google Classroom notifies them by e-mail when an assignment or document is uploaded, when feedback is given, etc. The assignment's specified due date and time on the platform were also positively received. Again, the fact that the platform reminded the students one day before the assignment was due contributed to students' self-regulation. Below are some participant statements regarding the notification mechanism and deadlines:

Not everyone likes doing assignments, but there is a constant assignment message in the classroom. I mean, that's how I perceive it. There is a message there; I have to do the assignment to delete that message. I mean, I think it gives responsibility. I mean, in a way, it teaches the student to be aware of his/her own responsibility. (P5-Notification mechanism)

I was impressed that there was a deadline for assignments. When I saw the deadline, I would say, "Oh, I have an assignment that is due soon, I should do it as soon as possible." (P4-Deadline)

Interactive Assignment System

After the features that contribute to self-regulation, the category that students most frequently mentioned positively was the "interactive assignment mechanism". This mechanism was appreciated in terms of providing detailed feedback (feedback mechanism) and grading. However, some students noted that the feedback was still dependent on the instructor's motivation; another instructor might not provide feedback even with the use of Google Classroom. During this implementation, students were given assignments every week and feedback was provided for all assignments within 2-3 days after uploading. In addition to the feedback provided on the document, symbolic notes were given. These notes helped students to understand the quality of their assignments. The situation can be better understood from the students' statements:

I mean, it gave us the opportunity to communicate one-to-one with the instructor. Instructor made a comment and immediately gave us the opportunity to correct it again. It is very good. I mean, writing a comment there is a very

good benefit. I mean, it is good, you get direct feedback. I can also get back to you directly. It is very useful in this respect. (P5-Feedback mechanism)

You (the instructor) highlightened the places where we made mistakes with a different color on the assignment. I think that attracted our attention. (P4- Feedback mechanism)

For example, when you first graded us, we got low grades. We realized that we were deficient; we started doing our assignments accordingly. This is also important. (P6-Grading)

Ease of Use

Some of the students compared Google Classroom with the LMS in terms of having a mobile application. Accordingly, Google Classroom having a mobile application is an advantage. In addition, the fact that only certain types of documents (pdf and zip) can be uploaded to the LMS, but a much wider range of documents can be uploaded to Google Classroom puts it one step ahead. Moreover, one student stated that he used Google Classroom as a storage tool when their mobile phone's memory was insufficient. Some examples of participant statements are given below:

It can be accessed easily from mobile. We can easily see the assignments and the feedback given to the assignments. Even when we were having a discussion on Google Classroom, it was easier to enter and comment from mobile. (P11-Mobile device support).

I could directly upload my assignments. When I upload something to LMS, I have to compress it or convert it to pdf, but in Google Classroom I can upload it directly. It was very convenient for me. (P11- Supporting different types of content)

You know, there are some applications like this, they are complicated, difficult to access, and you get a bit confused when you enter. I think Classroom is very clear. You can easily find out what is where. Even when I enter it on my mobile phone, when there is an assignment or announcement, it shows it at the beginning, so I think it is very nice in that respect. (P3- Ease of use)

Student-Student Interaction

Student-student interaction is the least emphasized but an important category. Since it is not possible to provide interaction between students in a LMS, it is encouraging to receive positive feedback for Google Classroom in this regard. In this implementation, no great effort was made to increase student interaction. However, some students stated that their interactions with their friends increased thanks to activities such as discussions, etc. within the course. Some of the participant statements belonging to this category are given below:

We created a discussion environment with our friends. Everyone wrote down their opinions and I thought it was good. Interaction increased a lot. Yes, I liked the application in this respect. I mean, I think it increased communication with friends in education. I think it had a positive effect on that. (P4-Student-student interaction)

I would like to do more discussion activities in Google Classroom. I read my friends' comments individually. I responded where necessary. (P3-Student-student interaction)

Discussion

In this study, which examines how pre-service teachers use different platforms for doing assignments, interacting with the instructor, other students, and resources, and their thoughts about Google Classroom among these platforms, it was determined that students intensively benefit from Google Classroom and have positive thoughts about Google Classroom. As it is known, interaction is an important component in online learning environments (Moore, 1989). In this study, students stated that they needed to interact with the instructor the most in order to be successful in the course. This is followed by interaction with the content. Indeed, Kuo et al. (2019) identified student-instructor interaction as the greatest predictor of satisfaction in online learning. Satisfaction is one of the paths to academic success. However, in this study, it was determined that the LMS alone cannot provide the interaction that students need. In other words, while interacting with peers, instructors, and students, students may use other platforms more than the LMS. The LMS was not the predominant first choice of students neither for doing assignments nor for interacting (instructor, students, and content). This finding aligns with the views of Stern and Willits (2011) who emphasized that LMSs alone are no longer sufficient in the teaching process. They suggested that Web 2.0 tools should be integrated into the learning process as appropriate. Google Classroom, while sharing similarities with Moodle LMS, offers various benefits in educational environments (Barman & Karthikeyan, 2019).

The pre-service teachers' perspectives concerning the advantages of Google Classroom align with the outcomes elucidated in the initial segment of the investigation. Students articulated that they were capable of engaging with their peers due to the utilization of Google Classroom. This discovery coincides with the conclusions established by Sukmawati and Nensia in (2019), and Korkmaz in (2021). Although there is no category for direct interaction with the instructor, especially in the code of detailed feedback in the interactive assignment system category, it presents that students can interact with the instructor and benefit from it. Alqahtani (2019) also emphasized the interactive assignment feature of Google Classroom as an advantage. In addition, Google Classroom is useful in providing interaction between students and with the instructor (Salim & Tresnadewi, 2020). Students' satisfaction with the feedback system of Google Classroom was determined by Akyüz (2021) and Mohd et al. (2016). Sukmawati and Nensia (2019) also concluded that students were satisfied with the feedback mechanisms and the capability to engage in private commentary within the platform.

In the course of this research, it was observed that students conveyed a sense of enjoyment regarding the activities facilitated through Google Classroom. This discovery is congruent with the research outcomes delineated by Ülker et al. (2021). Furthermore, as discerned in the investigation conducted by Ülker et al. (2021), prospective teachers express a desire to incorporate Google Classroom into their instructional practices in the future. Google Classroom, particularly, exhibits utility in the systematic management of instructional materials for extensive student cohorts and the expeditious provision of feedback, thereby ameliorating concerns related to students becoming disoriented within the educational system.

Pre-service teachers perceive the utilization of Google Classroom as notably straightforward. Some students stated that they found the LMS more complex to use than Google Classroom. Google Classroom was especially liked in terms of the simplicity of using both the web and the interface and supporting different types of content. In

Akyüz's (2021) study, students also stated that Google Classroom was accessible and user-friendly. Similarly, Sansinadi and Winarko (2020) found that Google Classroom was perceived as easy-to-use by students. The attribute of user-friendliness was similarly identified in the investigations conducted by Korkmaz (2021), and Poyraz and Özkul (2019). The features of accessibility from different devices and uploading documents from any device, which are included in the findings of this study, were also expressed by Sukmawati and Nansia (2019).

Another feature of Google Classroom revealed in this study is that it contributes to students' self-regulation skills. Certainly, given the qualitative nature of this study, the outcomes derived may not be readily generalizable. Nevertheless, it is pertinent to acknowledge that resource management and time management, integral facets of self-regulation as delineated by Pintrich et al. (1991), emerged as prominently emphasized attributes of Google Classroom within the context of this investigation. The features of Google Classroom that have been identified in previous studies are that it helps students organize documents and saves time (Harjanto & Sumarni, 2019), provides access to forgotten assignments (Sukmawati & Nensia, 2019), eliminates students' anxiety that documents will be lost (Carley, 2015), and has features specific to LMS such as giving assignments, setting deadlines, and making reminders (Çınar et al., 2015). However, if all these features are considered as pieces of a puzzle and the big picture is considered, it can be seen that Google Classroom can contribute to students' self-regulation skills. Indeed, students stated that Google Classroom's reminding them about the assignments helped them to organize their learning process. In addition, the fact that all documents and assignments were systematically organized in an interface made it easier for them to plan the process. Considering all these, it would be insufficient to characterize Google Classroom simply as a document organization and classroom management platform (Azhab & Iqbal, 2018).

Conclusion & Suggestions

In this study, which centered its focus on students' preferences regarding interaction tools and the perceived advantages of Google Classroom relative to these tools, it was ascertained that students exhibited a favorable perception of the utility of Google Classroom. Notably, they predominantly used Google Classroom when engaging in assignment-related tasks, interactions with the instructor, peer interactions, and accessing course content and resources. Google Classroom's features such as giving assignments, setting deadlines for assignments, giving feedback and grading uploaded assignments can be used in blended learning. In addition, it would be useful to have students engage in activities such as discussion, brainstorming, etc. in the flow section of the platform. Using Google Classroom only for document sharing may negatively affect both students' and instructors' perception of the benefits of this platform.

Some LMSs may encompass the comprehensive array of functionalities characteristic of Google Classroom. In this case, based on the results of this study, practitioners may be advised to incorporate activities that increase interaction between students and provide detailed feedback on assignments as soon as possible. If the LMS does not have the functions mentioned here, it may be useful to utilize Google Classroom or an alternative Web 2.0 tool. The significance of the instructor's utilization of the extant features was also highlighted by the findings of this research. If the institution recommends or requires the use of Google Classroom, it would be beneficial to provide both technical and pedagogical education to the instructors.

This research was undertaken with 11 pre-service teachers. No planned intervention was made. Therefore, in future studies, students' opinions can be taken again by making planned interventions for different types of interaction. There were no negative opinions about Google Classroom in the study. However, it may be crucial for Google Classroom to integrate plugins such as Google Chat and Google Meet so that the instructor does not need to use a separate platform. Moreover, although students in this study expressed almost no negative opinions about Google Classroom, this situation may differ in different study groups. As a matter of fact, some studies in the literature have identified negativity towards Google Classroom. Additionally, the interaction levels perceived by the students can be determined by applying a scale for interaction from larger samples using Google Classroom, and the results can be compared with the results of the students who only use LMS.

Ethic

The requisite ethical clearances and permissions for the research were duly obtained from the academic institution in which the research was conducted. (16.04.2022, 159431)

Statements of publication ethics

I hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

Conflict of Interest

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