



Using Google Workspace for Education to Engage Accounting Students

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Abstract

This study aimed to describe the level of student engagement in online and face-to-face learning. This study also aimed to describe learning innovations created by lecturers by utilizing existing features on Google workspace. Finally, this study offers suggestions for using Google Workspace in accounting learning to improve student engagement. Quantitative and qualitative descriptive research was conducted by observing the experiences of students and lecturers during post-pandemic face-to-face learning. Questionnaires, observations, and interviews were used to gather data. The data analysis method used was quantitative and qualitative descriptive analysis. The results of the study indicated that there was no lack of student engagement in face-to-face learning. Lecturers had utilized the features on Google workspace but not optimally. Google's most frequently used service features were Google Classroom, YouTube, and Google Drive. Meanwhile, Google site, Jamboard and podcasts were the services that were rarely used. Lecturers could utilize google docs, google sheets, and google slides for accounting learning so that student engagement could increase significantly. This feature required students to actively collaborate to complete assignments because lecturers could monitor activities carried out by students in real time.

Abstract

Penelitian ini bertujuan untuk mendeskripsikan tingkat student engagement dalam pembelajaran daring dan luring. Penelitian ini juga bertujuan untuk menggambarkan inovasi perkuliahan yang didesain oleh dosen dengan memanfaatkan fitur yang ada pada Google workspace selama ini. Terakhir, penelitian ini menyajikan rekomendasi pemanfaatan google workspace untuk perkuliahan akuntansi dalam rangka meningkatkan student engagement. Penelitian deskriptif kuantitatif dan kualitatif telah dilakukan dengan mengamati pengalaman mahasiswa dan dosen selama pembelajaran tatap muka pasca pandemi. Metode pengambilan data yang dilakukan adalah kuesioner, pengamatan dan wawancara. Metode analisis data yang digunakan adalah analisis deskriptif kuantitatif dan kualitatif. Hasil penelitian mengindikasikan bahwa tidak terdapat lack keterlibatan mahasiswa dalam pembelajaran tatap muka. Dosen telah memanfaatkan fitur pada Google workspace tetapi belum maksimal. Fitur layanan Google yang paling sering digunakan adalah google classroom, youtube dan google drives. Sementara google site, Jamboard dan podcast merupakan layanan yang paling jarang digunakan. Dosen dapat memanfaatkan google docs, google sheets, dan google slides untuk pembelajaran akuntansi sehingga student engagement dapat meningkat secara signifikan. Fitur ini mengharuskan mahasiswa aktif berkolaborasi untuk menyelesaikan penugasan, karena dosen dapat memantau secara real time atas aktivitas yang dilakukan oleh mahasiswa.

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INTRODUCTION

Almost all learning models emphasize the importance of student engagement in overall learning success (Siddiqi et al., 2022). Student engagement is an important proxy for measuring the educational process. A student with a high level of involvement will have more contacts or a greater commitment to the academic experience (Yanto et al., 2013). Interaction between students and between students or lecturers and students during learning can increase student satisfaction (Ayanbode et al., 2022). The learning process is said to be successful if it can increase overall student involvement. Educators have made a variety of efforts to increase student engagement, both online and in-person. Case-based learning has been shown to significantly increase student engagement (Raza et al., 2019).

During the COVID-19 pandemic, online learning is an option that presents both opportunities and challenges. Motivation to learn during a pandemic that has seen a significant decrease is one of the phenomena that occur during online learning (Hussein et al., 2021). Students face challenges in online learning, such as technological constraints, delayed feedback, and teachers' inability to manage information technology in learning (Muthuprasad et al., 2021). The effectiveness of online learning, particularly during a pandemic, is determined by three factors: students, teachers, and infrastructure. As a result, tertiary institutions should develop education-friendly curricula, technological updates, and proactive administration (Gautam & Gautam, 2021). Implementing online learning will be more effective if teaching staff can properly use technology for learning.

The use of interactive technology for learning is becoming increasingly important, especially since the COVID-19 pandemic (Aleisa, 2022). Online learning during the pandemic demonstrated the efficacy of using technology in learning, so hybrid learning is an option that should be implemented in universities in the future (Ayanbode et al., 2022). Learning ecosystems with digital learning content, in addition to other education policy components, will be important tools for solving learning problems in the future (Nguyen & Tuamsuk, 2022). The use of learning technology in tertiary institutions will promote more inclusive learning and allow students to adapt more quickly (Kirupainayagam & Sutha, 2022). As a result, digital learning designs will continue to be used to supplement face-to-face learning in higher education. Learning innovations will continue to be developed by lecturers and teachers to increase student involvement in learning.

Social media platforms are also being used more and more in educational activities. Interacting on social media allows students to learn a new language and culture (Aleisa, 2022). Because it is easily used by lecturers and students in Zimbabwe, the WhatsApp application is the most popular platform for online learning (Rudhumbu et al., 2021). Social media tools enable students to think critically and creatively. Students can become more involved with their teachers, more capable of collaborating with their peers, and possibly even reach across cultures (Tadros, 2011). The use of social media, such as class blogs (WordPress) and microblogs (Twitter), allows students to engage in social learning that emphasizes participation, group interaction, and group collaboration (Bodle, 2015). Thus, the use of social media will make learning more interactive and enjoyable for students.

Google is a learning technology service provider with a variety of features. Before the pandemic, Google had developed several services and expanded their utility so that they could be used more effectively during online learning. Google Classroom is a well-known service as a learning management system feature, and its use has increased during the pandemic (Hussein et al., 2021). Google Meet is a popular synchronous online learning tool (Ironsi, 2022). Google workspace is the most recent cloud-based feature that can be used to increase student involvement in learning activities such as assignment creation, group learning activities, and projects (Lake, 2022). Google Scholar has also been used by researchers and librarians because it provides an online publication database and can be used as a learning resource (Jacsó, 2012; Norris et al., 2008). Google is also superior in terms of coverage and accessibility (Brophy & Bawden, 2005), making it the most used search engine today (Andersson, 2017; Jamali & Asadi, 2010; Tazehkandi & Nowkarizi, 2021). Google Docs is an online collaborative document editing service that has grown in popularity among

various parties (Riley-Huff, 2010; Semeraro & Moore, 2016). Google Docs is easier to use because it is user-friendly and can improve students' ability to construct knowledge collaboratively (Chu & Kennedy, 2011). Google forms are also available for collaboration and evaluation, allowing users to create online surveys and polls (Djenno et al., 2015). Google Trends provides data for tourism predictions (Hu & Wu, 2022).

The various features available on the Google platform will truly spoil educators when designing classroom learning, both online and hybrid. Because of the many learning activities designed by lecturers, learning in class will be more interactive and will increase student involvement. The combination of learning in class and utilizing Google features will be more engaging, and students will be able to participate more actively. Have Google features been used in lectures in Indonesia? This study aims to describe the experiences of lecturers at Universitas Negeri Semarang (UNNES) in utilizing the features available on the Google for education platform. This study also presents ideas and suggestions for using Google in lectures to increase accounting students' participation. UNNES has used Google services as the primary service to support academic activities such as Gmail-based email services, organizing Google workspace training for lecturers, and other services. Accounting students can benefit from improved use of Google services by their professors. Thus, this paper presents novelty in terms of using Google workspace for education to increase student engagement. Quantitative and qualitative approaches are used in this study to obtain a more comprehensive analysis.

METHOD

The descriptive analysis (quantitative and qualitative) research design was used to present the experiences of lecturers and students in using the Google platform for lectures. The convergent parallel design was used in this research (Creswell & Clark, 2011). This study also presents ideas that lecturers can use to increase the engagement of accounting students in lectures by utilizing Google features. The population in this study were accounting lecturers and students at Accounting Education Study Program, Faculty of Economics of Universitas Negeri Semarang. The students who were sampled in this study were students from batch 2020 and 2021 who had experienced online learning as well as face-to-face learning while studying at UNNES, a total of 338 students. This study was carried out during the odd semester of 2022/2023, from September to November 2022.

Questionnaires, documentation, and interviews were used to gather data. The questionnaire method was intended to describe student engagement in online and offline learning as well as student opinions on the use of the Google platform. Documentation was used to capture lecture activities created by lecturers using Google. ELENA is a UNNES learning management system service for viewing online learning activities. The interview method was used to capture more deeply the experiences of lecturers and students, particularly when using Google services. The data analysis method used quantitative and qualitative descriptive analysis. Quantitative descriptive analysis method uses the frequency distribution (percentage description) of the observed variables. The qualitative analysis method refers to the interactive analysis model developed by Miles & Huberman (1992) which consists of data collection, data reduction, data presentation, and drawing conclusions.

RESULTS AND DISCUSSION

Online learning at the Faculty of Economics, Universitas Negeri Semarang, were still being held in the Even semester of 2021/2022, or from March to July 2022. Meanwhile, face-to-face learning had been held in the odd semester of 2022/2023, or from September to December 2022. Table 1 shows students' perceptions of engagement during online and face-to-face learning. There was no discernible difference in the level of student engagement between online and face-to-face learning. However, the number of students who were not active in face-to-face learning was lower than in online learning.

Table 1. Comparison of student engagement levels in online and face-to-face learning

No.	Category	Online learning	Face-to-face learning
1.	Very active	10%	6.7%
2.	Active Enough	46.7%	53.3%
3.	Active	26.7%	30%
4.	Not Active	16.6%	10%
5.	Very Inactive	0%	0%

The high level of student engagement during learning was consistent with student perceptions of the lecturer's efforts to increase their engagement during lectures. Table 2 shows that lecturers did their best to design lectures that required a high level of student participation. Differences in student opinion appeared to be significant, indicating that the lecturer's efforts in face-to-face learning were more pronounced. Only 10% of students questioned the lecturer's efforts to increase student engagement in face-to-face learning. None of the students agreed or strongly disagreed (0%). As a result, lecturers' efforts to increase student engagement during lectures were more significant in offline lectures.

Table 2. Students' perceptions of lecturers' efforts to increase the level of student engagement during lectures

No.	Category	Online learning	Face-to-face learning
1.	strongly agree	13.3%	10%
2.	Agree	70%	80%
3.	Doubtful	13.3%	10%
4.	Disagree	3.3%	0%
5.	strongly disagree	0%	0%

Google offers a variety of learning services. Google for Education and Google workspace are both current and well-known services among users. These integrated features can improve user performance and productivity. However, there are a few features that users, including lecturers and teachers, can understand and use when designing learning. Google service features can be used as the main feature during online learning or as supplemental features in hybrid learning modes, including face-to-face learning.

Table 3 shows the use of features in Google services for learning, both online and face to face learning. The Google Classroom service was the one that lecturers most frequently used in class, especially in online learning mode. Google Classroom is another service that can manage online learning or classes. This service is very simple, making it accessible to both lecturers and students. Google Classroom can supplement the campus's learning management system (LMS), ELENA. Google Classroom was preferred by lecturers because of its ease of use and speed of access. The Google Drive service was also one of the most frequently used features, both during online and face-to-face learning. This cloud file-sharing service was very familiar to users, especially when it can be integrated with other Google services. Aside from these two services, YouTube was also very popular for learning. The abundance of learning resources encouraged lecturers to use them in their teaching.

Google sites, Jamboard, and podcasts were all services that lecturers rarely used for learning. Google sites were more personal and could create resource services and lecture materials. The benefits provided by the Google site may have been accommodated in the Google classroom service, causing the service to be used less and less. The Google site could be used for more than just classes (online or face-to-face). Likewise, Jamboard is a service for providing live and collaborative opinions. The appearance is quite appealing, and it can be used to directly see student opinions without being affected by lecture mode. This service is available for both online and face-to-face learning. Because lecturers believe they were unaware of this service, they did not frequently use it to supplement classroom learning. Podcast services were also rarely used by lecturers, even though they are ideal for the current generation. The difficulty of creating content for podcasts was a significant factor in

why lecturers did not use it frequently.

Table 3. Utilization of Google Features for Learning

No.	Google Features	Online learning	Face-to-face learning
1.	Google Classroom	93.3%	73.3%
2.	Google Docs	26.7%	20%
3.	Google Slides	43.3%	36.7%
4.	Google Forms	83.3%	63.3%
5.	Google Site	6.7%	3.3%
6.	Google Sheets	23.3%	23.3%
7.	Google Drive	86.7%	73.3%
8.	Google Meet	70%	6.7%
9.	Jamboard	6.7%	23.3%
10.	YouTube	90%	73.3%
	Podcasts	26.7%	0%

Google Docs, Google Slides, and Google Sheets were rarely used by lecturers for online or face-to-face presentations. This service is very appealing for facilitating collaborative and group learning in real-time. It can be used by lecturers for both individual and group assignments. Lecturers can see whether students are working continuously in real-time. Lecturers can revisit these services to increase student engagement.

Figure 1 shows that the ELENA feature (learning management system service used for learning at UNNES) was most frequently used by lecturers during the odd semester of 2022/2023. YouTube is a Google service that was frequently used by lecturers in face-to-face lectures that were integrated with online learning modes. Because lecturers preferred Zoom meeting services, Google Meet as a videoconferencing service was not widely used. UNNES had subscribed to the Zoom service in 2022 so that lecturers could use it for free. Lecturers preferred other learning models when conducting face-to-face learning. Lecturers rarely used ELENA's features because they were viewed as a supplement to face-to-face instruction. In class, lecturers interacted more directly with students. Student discussions, quizzes, and assignments were completed in class without the use of online learning features.

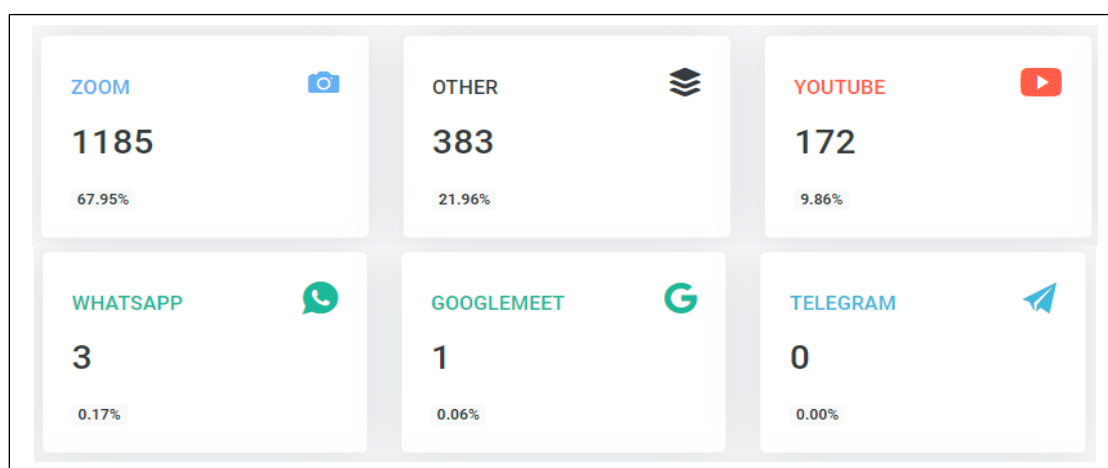


Figure 1. The ELENA feature is most often used during face-to-face learning.

Figure 2 shows the use of Jamboard in the classroom for face-to-face Accounting Education students who learnt Management Information Systems courses. Lecturers planned class discussions using Jamboard so that students could respond directly. Jamboard is a virtual whiteboard service that allows students to write responses to lecturer questions. Students can quickly find out what other students' answers are, but the lecturer can overcome this if he manages the discussion well. Jamboard can help students overcome their fear of expressing their opinions orally. Students only

need to type their thoughts into an appealing dialog box that can be customized in terms of color and size. The Jamboard's appearance has improved. Lecturers can also directly monitor students who are actively participating in activities designed by lecturers using Jamboard. Using this Jamboard will significantly boost student engagement.

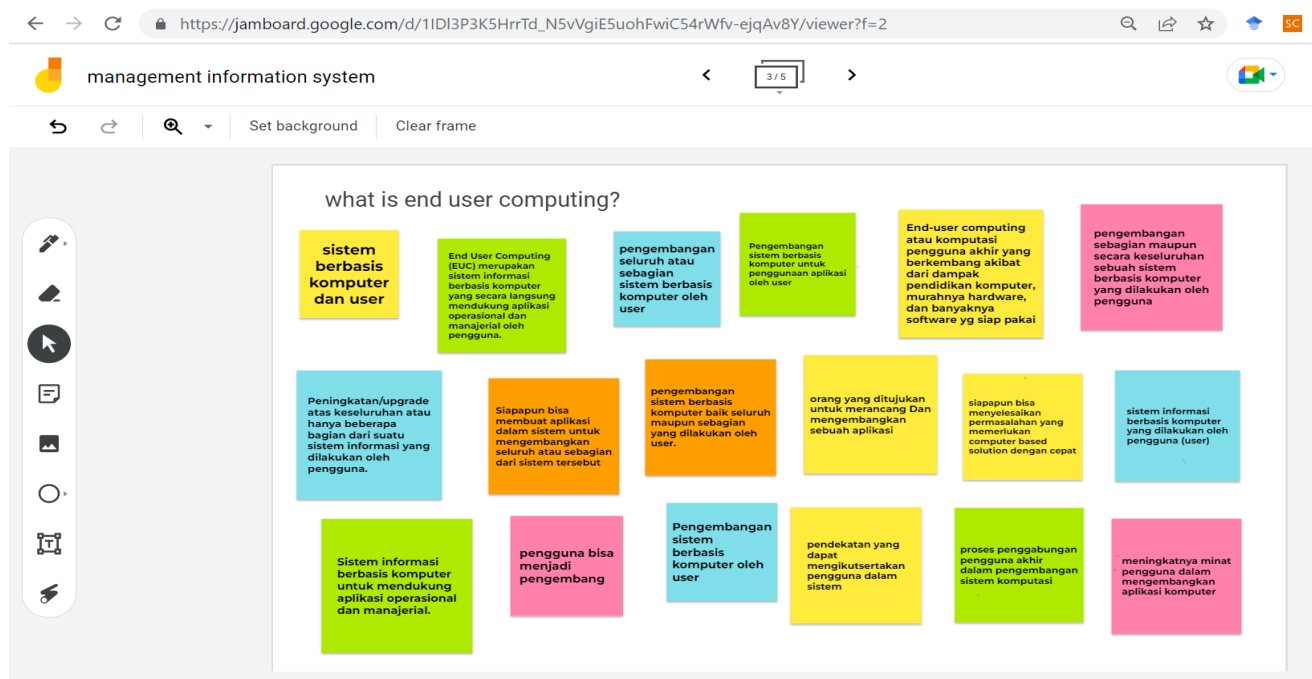


Figure 2. Display of the use of Jamboard in the discussion of Management Information Systems courses

Face-to-face learning designs using Google workspace services to increase student engagement in accounting learning can be created by integrating various existing features. According to student feedback and lecturer interviews, the Google Docs, Google Sheets, and Google Slides features are ideal for accounting education. This service encourages students to complete assignments from lecturers online, both in class and in other rooms, and can be monitored in real-time by the lecturer. Lecturers can create assignments and others both individually and in groups. In files shared with students, lecturers can specify who can act as an editor and who can only view. Lecturers will be able to determine which students are active in completing group assignments. This service also encourages students to improve their technological adaptation by utilizing Google workspace. This service is also integrated with other Google services such as Google Drive. This means that lecturers and students will not have to worry about losing the files they have created. Students must collaborate with other students to complete the task successfully.

The results of the study indicate that there is no significant difference in student engagement in online learning and face-to-face learning. The level of student engagement is higher during face-to-face learning. Students are more able to adapt in class during face-to-face learning because they are used to it before the pandemic hit. The results of the study provide reinforcement that face-to-face learning combined with the use of online learning modes will be more able to increase student engagement in class. This can be done by utilizing the features provided by the Google platform when face-to-face learning takes place. Online learning experiences have had a significant impact on students' ability to adapt to information technology in learning. Ayanbode et al. (2022) argues that hybrid learning is a learning solution that needs to be implemented. Learning ecosystems with digital learning content are learning solutions in the future (Nguyen & Tuamsuk, 2022).

Face-to-face learning is preferred by students as the main mode in lectures. However, using the Google workspace for education feature will improve the quality of face-to-face learning. Student engagement will increase because learning activities are more diverse and demand higher student

interaction. Google workspace is the latest feature based on cloud computing that can be used to increase student involvement in learning such as making assignments, group learning activities and projects (Lake, 2022). Various features are available on the Google platform for learning. Many studies also provide empirical evidence that Google workspace for education features is easy to apply and can be beneficial for learning. Google docs has a user-friendly interface that makes it easy to use (Chu & Kennedy, 2011). Google docs presents a collaborative and online document editing service (Semeraro & Moore, 2016). The Google form can be used to increase collaboration between students and can also be used for assessment (Djenno et al., 2015). Google classroom can be used as an interesting and familiar learning management system for pandemic students (Hussein et al., 2021).

The results of the study show that the use of the Google workspace for education feature has decreased significantly during face-to-face learning. This is because the lecturer returns to the conventional learning method which is easier to implement. Lecturers have not maximally used the Google workspace for education feature. Lecturers and students choose conventional activities, namely "manual" classroom interactions. The lecturer delivers lecture material through the method of class discussion. Students work on practice questions and assignments "manually" through an offline assignment book or laptop. However, there are favorite features used in learning such as YouTube, Google Drive, Google Classroom, and Google Sheets. In the case of accounting learning, the utilization of Google Sheets should be higher because it can be used for student materials and assignments. It will also be easier to prepare financial reports and other calculations using Google Sheets. In addition, this feature can also present collaborative student activities and live.

In addition, the use of various features in the Google workspace for education must also pay attention to the conditions and needs of lectures and students. For example, when using the Jamboard application, there will be students who are not too serious in expressing their ideas. These students will tend to reveal unimportant things such as pictures and ideas that have nothing to do with the discussion material. Therefore, lecturers must be able to properly manage the use of the Jamboard application. Students must be given understanding and rules during the discussion through the Jamboard application. Likewise, when utilizing the Google Docs, Google Sheet, and Google Slide applications. Students must be given clear guidelines and instructions so that they will be able to carry out lecture assignments properly, namely being actively and positively involved during learning.

CONCLUSIONS AND SUGGESTION

Student engagement did not appear to differ significantly between online and face-to-face learning. Students believed lecturers had made efforts to increase student engagement during lectures, particularly in face-to-face learning. Because there were still many features that lecturers have not used in online or face-to-face learning, the use of Google services for learning was still considered less than optimal. Google Classroom and YouTube were two Google services that were frequently used in online learning. Its use was still prevalent in face-to-face learning, particularly on YouTube. Meanwhile, the Google site, Jamboard, and Podcast features were services that lecturers rarely used during class. The Google site was more personal and could be used to store resources and learning materials for students. Jamboard could be used as a medium for live and text-based discussions between lecturers and students or students and students. Jamboard could help students who struggled with verbal communication. Furthermore, lecturers still struggled to create podcast content.

Google Docs, Google Sheets, and Google Slides were examples of Google workspace services that could be expanded upon. This service, particularly Google Sheets, was perfectly suited to the nature of accounting education. The benefit of this service was that lecturers could track students' activities in real-time. Individual or group learning activities could be designed by using this service. Lecturers could also provide notes on student work directly. As a result, high student participation was required for this service.

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