Figure Out the Online Discussion Activeness of Pre-Teacher Education Students

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ABSTRACT

Online learning has been widely applied at various levels of education, including lectures for prospective teachers of elementary school students in Indonesia. However, student activity in learning is still an obstacle in this study. This study describes student activity in online discussions. The discussion was conducted three times with different topics. The activity can be examined from the students' posts during the three discussions. The three aspects of the activeness were the number of posts in each discussion, participation in the three discussion topics, and the number of words in each post. These results were analyzed descriptively to see the trend of active discussion. The findings of this study show the role of lecturers in providing appreciation and feedback. The role of friends in reinforcing other friends' opinions determines the increase in activity in discussions. Social presence, self-esteem engagement, and social learning are essential issues in increasing this activity.

Introduction

The era of the Industrial Revolution 4.0 has given many changes in all life sectors, including the world of education. This era demands that all human activities be driven by fast-paced online technology. The existence of these conditions encourages education to metamorphose according to the times. In learning, it is the application of technology-based learning online. Learning online with the internet has been widely studied in various contexts [1-3]. Education in Indonesia must be online because of Indonesia's geographical condition, which is vulnerable to natural disasters [4]. Online learning is a solution for community development in Indonesia. Because online learning provides many benefits, including; improve learning interactions between students and teachers, having a more flexible time and place, reaching a wide range of students; facilitate storage of learning materials.

However, the government cannot implement online learning optimally due to various obstacles, including the unpreparedness of students to learn to teach online. The competence of teaching staff in different areas, especially the ability to use technology in learning, the internet network as the primary support for students interacting virtually in online education, has not been going well [5]. Another obstacle in online learning is that not all parents have cellphones or laptops. Student participation in online education is less than optimal. Some students cannot participate in learning and experience delays in collecting assignments [6].

Before the COVID-19 pandemic era. Online learning still lacks appreciation from the government and education providers at the school and college levels. Internet use activities in learning are still limited to learning communication and student assignments [7]. Thus, online learning does not show its effectiveness because education is still dominantly carried out by direct meetings in class. The pandemic has prompted an acceleration in the application of online learning. However, several factors need to be considered due to the adaptation process of this new learning strategy. There are three critical keys to learning today: technological literacy, communication skills, and multitasking [8]. Three keys to successful learning following the characteristics of the current generation is categorized digital age or generation Z. The digital era, as the dominant group of students today, has skills and interests in information technology and its various applications that affect how they learn [5,9]. They can access multiple information needed easily and quickly, both for the sake of education and the interests of their daily life. However, educators have not used this skill in the learning process. Communication skills are shown in student activities on social media with peers. However, this activity has not shown productivity related to learning outcomes. The ability to multitask is a unique skill in today's generation, who are accustomed to various activities simultaneously. They can read, talk, watch, or listen to music simultaneously. They want things to be up and

running fast. They want something simple. This condition certainly needs to be anticipated in applying appropriate learning strategies.

In several studies, students' self-esteem influences their level of courage in online discussions. Students experiencing lectures who are not trusted with the ideas shown tend to be reluctant to express their opinions in discussions, including online ones. An understanding of these student characteristics determines an excellent online learning design. In addition, online learning is building a social community online. The level of social presence during online learning activities with various engagement techniques carried out by teachers determines student involvement in online communities [10]. Many studies show that there is still a tendency for online learning to pay less attention to social presence. In this online community, students interact with other students as peer learning. So that the knowledge sharing process can occur during the discussion process. This phenomenon can be explored more deeply to reveal and explain the online learning process using social learning theory.

For this reason, online learning is optimal by paying attention to student characteristics. It is imperative to examine various alternatives to online learning during a pandemic like today. Online learning that provides opportunities for students to construct knowledge personally and mediated by peers determines learning success. Flexibility in mastering knowledge from certain subjects is essential. An essential part of optimizing learning is to allow students to interact flexibly in the various features available on the learning platform. In this way, students may use their audiovisual, visual, or kinesthetic abilities. In providing a learning response, good communication skills in the language aspect, the courage to express ideas, the activeness of responding to friends determine the success of learning as a community. Good online learning fosters a social presence which is as important as an academic presence taking into account the characteristics of students. Based on the study of changes in the learning environment, this study reveals the situation of increasing the effectiveness of online learning, especially in increasing student activity. The results of this study are to explain the level of student learning activity, the factors that influence learning activity, and recommendations for learning success.

Methods

A. Context

This online discussion forum is a 2nd-semester student development course at Elementary Education Pre-teacher Training, Indonesia. The course was the Introduction of Student Development that students must master as a fundamental concept in understanding the development of students according to their age and developmental tasks. As one of the introductory courses, through this course, students are expected to understand the principles of child development, analyze the potential of students according to their development, and

respond appropriately to student behaviour. There were three discussion activities carried out in this online learning, namely: (1) Child development in the prenatal, natal and postnatal periods; (2) Cognitive and Humanistic development theory; and (3) Developmental theory of psychoanalysis and behaviourism.

B. Learning Activities

The learning strategy used to achieve the objectives in this course was the online discussion method. The consideration of the discussion method chosen is a student-centred learning approach. This method provided opportunities for students to construct knowledge independently and mediated by peers. During online discussions, lecturers carried out various engagement activities to encourage self-esteem and social presence. The lecturer in the discussion acted as a facilitator to foster the role of students as peer learning. Table 1 shows the steps in applying the online discussion method.

Table 1. Discussion-based Learning Steps

Phase	Activity	Action details
1	Group Forming	The teacher divides students into several groups
2	Topics Sharing	Each group chooses a topic by lottery
3	Group Working	Each group makes a paper according to the topic
4	Product Sharing	Each group uploads learning outcomes through the forum feature
5	Questions	All students review the work of other groups. Each student can ask questions to different groups according to the topic. Queries use the question words Why or how.
6	Answering and Confirmation	Other students can provide feedback

C. Analysis Technique

Three aspects were considered active in online discussions: the number of participation in three arguments, the number of posts per discussion, and the number of words in each post. The lecturer did not announce these criteria to obtain the quantity and quality of original posts from students during learning. The posting quality was based on the number of words categorized as Table 3.

Table 2. Post Score Category

No	Word Count	Score
1	Not posting	0 (not very good)
2	1-5 words	1 (not good)
3	6-10 words	2 (pretty good)
4	11-15 words	3 (good)
5	more than 15 words	4 (very good)

Results

A. Respondent

At the beginning of learning, there were 45 registered students (11 males, 34 females). However, seven students never attended during the study because there was no internet access, so the total number of students used for the analysis was 38 students (7 males, 31 females).

B. Number of Participation in three discussions

Fig. 1 shows how many times students post from 3 different topic discussions. Nine students only once participated in a debate about a particular topic from the figure. Fifteen students participated twice and participated 14 times. This data does not indicate which topics students join in.
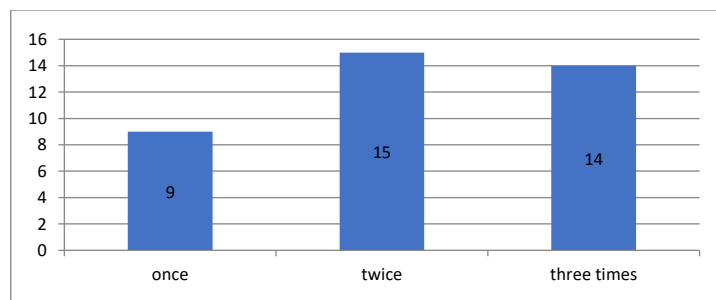

Fig. 1. Student Involvement in Discussion

C. Number of Posts per Discussion

The number of posts per discussion shows how many times students have posted in each discussion of a particular topic. The more students post can be an indication of the student's activity. Fig. 2 shows this phenomenon. From that figure, many students (18) did not post an opinion in the first topic discussion. However, until the discussion of the third topic, only a few students (6) did not express an opinion. The opposite situation occurs when students give ideas more than five times (3) on the three discussion topics.
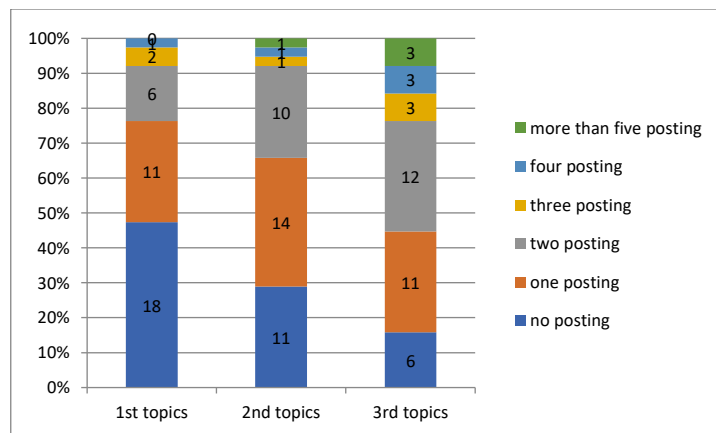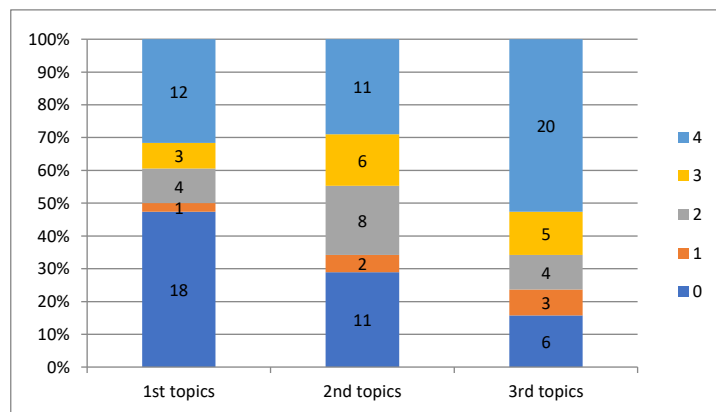

Fig. 2. Student Activity in the Discussion of each Topic

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D. Word Count per Post

Assuming students can make good sentences in their opinion, the number of words in each post can illustrate how much information support students have is used to provide views. The more the number of terms used can be an indicator of the quality of the post. Fig. 3 shows this phenomenon. From that figure, it informs that from 1st-topic to 3rd-topic. There is a change in the proportion of the number of words used to express opinions. There is a tendency for students to use more words in their opinion. In 1st-topic, 12 students use more than 15 words (score 4), but on 3rd-topic, there is an increase to 20 students with a score of 4.

Fig. 3. Quality of Student Posts in Discussion of each Topic

Discussion

Several factors influenced student activity in online learning by conducting discussions. The learning design was carried out for good discussion, among others, by providing exciting and relevant discussion topics in real life. The material became a provision for students when teaching at school. In addition, the learning environment was developed with a constructivist approach. The lecturer engaged through words of appreciation, did not blame the student's ideas directly, providing opportunities for all students to have an opinion, rose various perspectives of different opinions. Implementing this strategy is seen in the data posted by students during discussions on various topics.

The activeness in the discussion can be explored from the number of students who post. Of the 48 students registered to participate in all discussion activities, nine students only posted on one discussion topic, 15 students posted on two discussion topics and 14 students posted on three discussion topics. In each discussion, several students posted several times. The number of students who posted more than once on one topic increased throughout the discussion. It is also on the quality of the discussion. The number of students who posted complete and comprehensive (in terms of word count) increased throughout the discussion from 1st-topic to 3rd-topic. Of 12 students who posted with excellent criteria, there were 20

students with the same criteria. In addition finding, the number of students who did not post was also reduced (18 on 1st-topic, 11 on 2nd-topic, 6 on 3rd-topic). Students who did not do this post are different in each topic. This situation indicates that all students were involved in the overall discussion activity. Qualitative data show that discussions include asking questions, giving rebuttals or confirmations, and adding answers to other answers. This activity indicates a sense of security and confidence when engaging in online activities. Further investigation of the factors that cause an improved phenomenon in this online discussion activity needs to be investigated.

Social presence is an essential factor in online learning, which brings students from outsiders to insiders in the online community. Ensuring the involvement of teachers (not only academic presence) and students in online activities foster social presence [11,12]. To enhance social presence, the teacher's role in engaging in activities that promote online activity is vital in achieving learning success [13] because teachers are innovative agents of change in education [14]. In learning, lecturers have responded (appreciation, feedback, guidance) to student posts. Following this theory, engagement by lecturers influences the increase in discussion activeness. In several studies in other online learning fields, lecturers' role by providing positive responses as attention shows the same results [15-17].

Some students had not prepared themselves for the material being discussed from analyzing student post data in the online discussions. However, the papers of other groups' work had been distributed previously. Postings indicate this in the form of requests for explanations of certain concepts. However, there were more discussions based on the references that have been given, especially in the discussion of 3rd-topic.

By using social learning theory, this phenomenon can be explained. There is a tendency that in learning, students in Indonesia are afraid of being wrong to express ideas in discussions during learning. The teacher's awareness to develop a constructivist learning environment affected the students' courage to participate in discussions. For this reason, teachers need to provide opportunities for students to explore, experiment, build communication and reflect on what they are doing so that they learn from their own experiences [18,19]. Teachers in constructivist learning act as guides, monitors, coaches, tutors and facilitators, while students play a central role in mediating and controlling learning [20].

Social learning theory states that learning occurs when students pay attention to other students and copy various aspects. When students expressed opinions during discussion, other students tried to capture the idea and internalize it. When students did certain activities and got appreciation, other students would do the same. This situation aligns with the basic explanation of social learning [21-23]. With these various activities, the role of colleagues is

significant in the online learning process to build shared knowledge in online learning community networks [24]. The part of lecturers in all stages of learning that creates opportunities for reinforcement in learning to be determining factor inactivity during discussions. In this online learning, several posts by students became a trigger for other students to add new ideas. Lecturers who did not blame students encouraged students to be more courageous in expressing their opinions. Several other studies on social learning confirm the findings of peers' critical role in forming online learning communities [14,25,26].

Several studies have shown that social learning engagement positively impacts self-esteem [14,27,28]. This concept explains how the strengthening process in peer moderation encourages student activity in discussions both in collaborative and individual activities [29-31]. Confidence in successfully doing certain activities encouraged students to repeat the action in the online discussion. In this online learning, students' opinions that were not blamed (as part of constructivist learning) encouraged them to dare express their views again on other activities so that this strengthening impacts the number of posts and the quality of posts from 1st-topic to 3rd-topic.

The lessons learned in this research occurred during the Covid-19 pandemic. At this time, students and lecturers are in the adaptation phase to apply online learning. The professional development of lecturers for online learning management skills is essential. This study has implications for the need to consider social learning and engagement to implement good online learning. In the context of students today, the various features on the learning system platform, different engagement techniques, and strengthening social presence in online communities need to be emphasized because these aspects are still rarely used in online learning in this transitional period.

Conclusion

Social presence by lecturers is essential in learning apart from academic attendance. The lecturers' role in this aspect promotes the self-confidence of students participating in lectures. Lecturers can apply discussions on particular themes to increase student activity. Increased student self-confidence leads to increased activity in online discussions. This increase can occur through the encouragement of lecturers by providing appreciation and feedback and support from colleagues in reinforcing opinions during online discussions following the social learning theories. The implication of this finding is the importance of using various techniques of giving preference from lecturers and friends either with positive words, emoticons, or stickers when responding to online discussions.

Conflict of Interest

We declare that there is no conflict of interest.

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