

# blended

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## Blended learning in students' view

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**Abstract.** The purpose of this study was to know students' views on blended learning, and the various aspects needed that students when using blended learning. This descriptive study was carried out with a questionnaire technique. The subject of the study was a mathematics education student from Universitas Negeri Medan. The result showed that 51% of students knew blended learning, 73% of students said they were ready to use blended learning in the teaching and learning process, and 62% of students expressed satisfaction with the implementation of learning using blended learning. Good appraisal of students' views on blended learning, giving a significant role in the implementation of education, students become more independent.

### 1. Introduction

The use of blended learning is increasingly popular, blended learning is a new traditional learning model, more effective and can accommodate all types of learners [1, 13] In the teaching and learning process educators must be able to utilize information technology progress. In the 21st century, educators are required to be able to educate and teach knowledge and practice thinking skills. Educators and learning spaces need in the teaching and learning process as a means of delivering material, direct student interaction by presenting technological progress. The appropriate program to be developed is a blended learning based learning model; this lecture model introduces students to lectures by utilizing IT. One of the IT-based education is web usage. Web-based learning supports independent learning students. Good web packaging is a rich source of learning material that can facilitate something that cannot do in traditional classrooms; the web can also provide social interaction facilities.

The increasing availability of distance education provides educational opportunities to millions of people [1]. Also, the emphasis on open education (OER) resources in recent years have resulted in significant cost reductions without reducing student performance [2]. Blended Learning one of the learning models that are developing in this century, the population of the use of blended learning in universities is increasingly increasing. Blended learning is a learning model that can overcome learning problems so far. Blended learning can combine face to face and online. In 2002, identified four different concepts' denoted by blended learning (1) To combine or mix modes of web-based technology (e.g., Live virtual classroom, self-paced Instruction, collaborative learning, streaming video, audio, and text) to accomplish its educational goal, (2) To combine various pedagogical approaches (e.g., constructivism, behaviourism, cognitivism) to produce an optimal learning outcome with or without instructional technology, (3) To connect any form of instructional technology (e.g., videotape, CD-



ROM, web-based training, film) with face-to-face instructor-led training, (4) To mix or combine instructional technology with actual job tasks to create a harmonious effect of learning and working [3]

The university as the highest institution in education must be able to carry out the teaching and learning process with blended learning. There are several benefits obtained by using blended learning in school, namely (1) The reach of knowledge becomes broader than traditional education, (2) Make it easy to implement theories that cannot be taught in traditional classrooms, (3) Efficient with time and cost, (4) The possibility of producing optimal learning outcomes, (5) Adjust the various needs of students, (6) Increase student motivation and attractiveness [4].

Many kinds of literature state that blended learning design in multiple ways ranging from including online learning activities to traditional learning activities such as face to face, all developed from the beginning of education.

## 2. Method

This research is a descriptive study, by surveying students of mathematics education study programs at Universitas Negeri Medan (Unimed). The aim of inquiry to look at the views of students of mathematics education courses, especially new students about blended learning. Data collection techniques using questionnaires and interviews to first semester students in 2018. Research activities include (1) Make surveys and interview instruments used for data collection. The information contained in reviews and interviews includes knowledge of blended learning, readiness to use blended learning and satisfaction using blended learning, (2) The questionnaire and interview that compels test for validity by using expert opinions conducted by three instrument experts who also understand blended learning (3) Collect questionnaire data and interviews. There were 180 first semester students of mathematics education study programs in 2018, who filled out a questionnaire of 39 people. Ten students were interviewed related to the three aspects. Data obtained from students in the form of quantitative and qualitative data were analyzed descriptively.

## 3. Results and discussion

Data collected through questionnaires in the way of student's view responses to blended learning were presented based on aspects observed and descriptive qualitative exposure based on reactions delivered. Based on the questionnaire, 51% of students stated that they knew about blended learning, as shown in Figure 1. The analysis in Figure 1 was supported by various descriptions of student knowledge about blended learning.

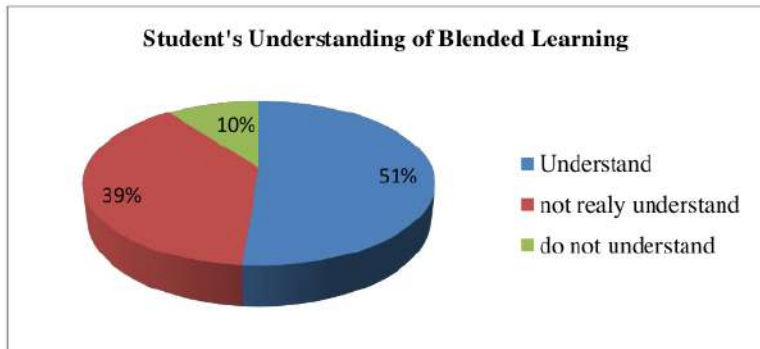


Figure 1. Student's Understanding of Blended Learning

The results of interviews support the data in figure 1  
Teacher: Where did you get information about blended learning?  
Student\_1: When we were in second-grade high school, we had taught using the internet. Our teacher says this is called blended learning. Twice in a while we do learning with the internet.  
Student\_2: I am looking for the definition in Google when filling out the questionnaire.

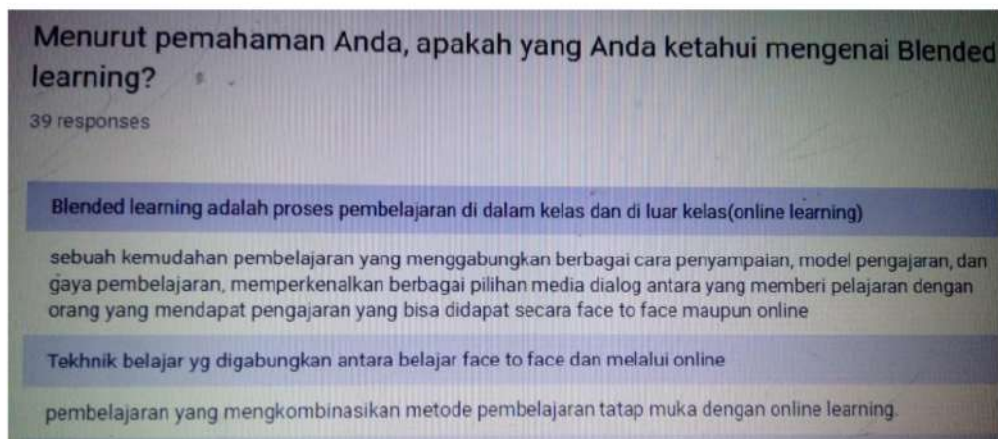
Student\_3: I don't know Mom when I was in high school there was no learning through the internet. Asked to go to the internet cafe to look for assignments for example about other regional cultures to be used as papers

Teacher: How your teacher does blended learning

Student\_1: My biology teacher who teaches with blended learning. For biology subjects, we meet in class twice a week. Usually, the teacher gives us the task of finding information from various sources regarding biology, such as the reproductive system of worms. We were given two weeks to complete this task. We were told to go to the internet cafe on Sunday afternoon to discuss our assignments through google classroom. The teacher said that we study in class and through internet cafes are called blended learning

Student\_2: I have never studied like my friend, but from Google, the word blended learning is face-to-face learning in class and online. For example by using social media such as telegram. The teacher and students agree to study by telegram at the appointed hour. Yes, like this friend of mine, ma'am, at his school first. Heheheheh (the respondent laughed).

The results of student interviews are supported by data from questionnaires as shown in Figure 2. Based on Figure 2, students define Blended learning as learning done face-to-face in class and online. This opinion is by the definition of blended learning expressed by experts, namely the teaching and learning process that combines learning activities with face to face in class, and online education [5, 6, 7]



Translate the questionnaire:

according to your understanding what you know about blended learning answer:

Blended learning is learning in the classroom and outside the classroom (online).

An ease of learning that combines various ways of delivering, teaching models, and learning styles, introducing a variety of media dialogue options between those who teach with people who get teaching that can be obtained face to face or online

Learning techniques are combined between face to face learning and online. learning that combines face-to-face learning methods with online learning.

**Figure 2.** Results of student questionnaires

Indeed the primary purpose of the teaching and learning process is to provide opportunities for all students with various characteristics so that self-learning, sustainable and developing throughout life occurs. Finally, the teaching and learning process becomes more effective, efficient and exciting. The appearance given to the e-learning model especially blended learning has a positive impact on each

character of the learner [8]. Melanie student character in this century allows that from the start of junior high school to the tertiary level already know blended learning. The effects of technological developments affecting academia to transform education [9]. Knowledge using e-learning in the form of blended learning can increase student motivation to learn [10, 11, 12]. The results showed a significant difference in learning outcomes between classes that use blended learning with students who do not use blended learning. From the results of research conducted by several experts, it can be concluded that the campus as the creator of investment in education must be ready and able to use blended learning

Based on Figure 3 regarding the readiness of students using blended learning, 73% of students said they were prepared to use blended learning, and 27% said they were not ready to use blended learning.

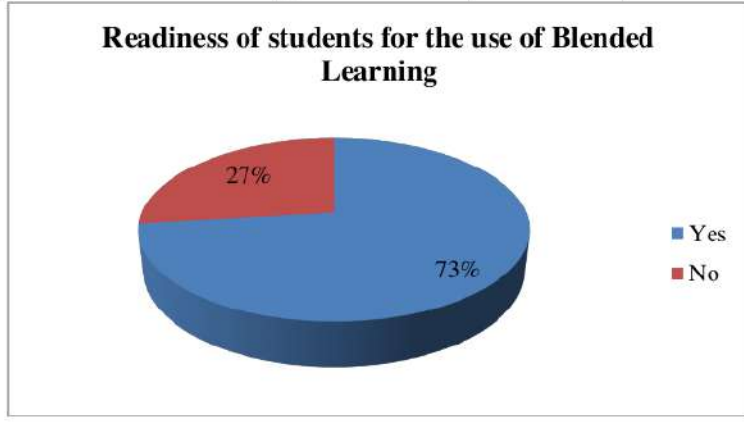


Figure 3. Readiness of students for the use of Blended Learning

To support the data in figure 3, interviews were conducted with three students

Teacher: Have you ever used blended learning on this campus while you were studying?

Student\_1: Lecturers of logic set subjects have done blended learning three times. The first by using the web, we were asked to download the material, then discuss with him at the specified time. Besides the internet there is also WhatsApp, he gives questions to be addressed and then calls group members to answer.

Student\_2: Lecturer on logic set subjects. My lecturer uses mentimeter not web or WhatsApp

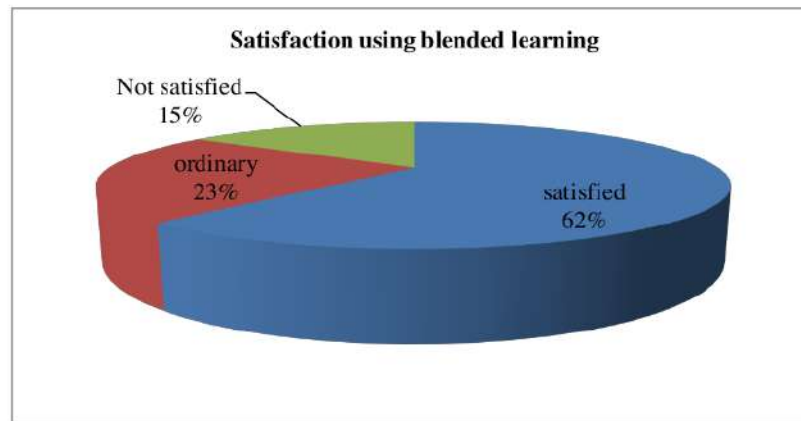
Teacher: Are you happy with the learning done by your lecturer?

Student\_1: Blended learning is good, and fun because it doesn't sit in class. But not all of us during online learning have an internet package (heheheh, understand mom boarding children, specific dates run out of remittances). So if you can't join the online class, it's considered absent. I prefer direct learning because I feel that quality is where the teacher stands to teach me

Student\_2: I like it because it's good and fresh. We were asked to make a presentation slide in the mentimeter and then sent it to the lecturer mentimeter account. Learning time is not limited in class, wherever you can learn. The problem is the internet; sometimes our packages run out. But try to overcome it by downloading material and asking to use the internet while on campus. Internet on campus is ok.

Student\_3: I like blended learning, we as students must be able to keep up with the times. Lecturers who are older than me make changes in the teaching and learning process, as students must be ready too

<sup>1</sup>Based on the results of the questionnaire analysis and interviews regarding the convenience of using blended learning, 62% of students felt comfortable learning with blended learning. The data are shown in Figure 4. There are only 15% of students who are not comfortable using blended learning.



**Figure 4.** Satisfaction using blended learning.

Blended learning can improve learning outcomes and student learning motivation equal to or higher than students who study conventionally or fully online, although success rates vary between disciplines [14,15].

#### 4. Conclusion

Students have a good view of blended learning; it influenced by the knowledge and experience of students in using technology. Students show their willingness to do education with blended learning by 73%, besides that students support in e-learning content there is instructional that must do with blended learning, an overview of learning that will be carried out in class, as well as material that can absorb before face to face learning. The level of student satisfaction in using blended learning reached 62%. The need to develop knowledge with blended learning that is by the characteristics of the material, so that the use of blended learning can be maximized and provide students with supplies while working as a teacher in the digital

#### 5. Acknowledgement

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