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Abstract. *The attitude of students and teachers towards the Blended Learning Model in Biology class XI at SMA Negeri Makassar is a descriptive quantitative research. The purpose of this study was to determine the attitudes of students and teachers towards the Blended Learning Model in class XI Biology at SMA Negeri Makassar. The research was conducted from April to May 2022 at SMA Negeri 21 Makassar, SMA Negeri 18 Makassar, SMA Negeri 6 Makassar, SMA Negeri 17 Makassar, and SMA Negeri 10 Makassar. The research instrument used a questionnaire on the attitudes of students and teachers. The data analysis process was carried out using SPSS ver.23. The results of the study showed that students' attitudes towards Blended Learning Model in Biology class XI at SMA Negeri Makassar were in the neutral category with a percentage of 38% and teachers' attitudes towards Blended Learning Model in Biology class XI at SMA Negeri Makassar were at negative category with a percentage of 50%.*

Keywords: *students and teachers attitude, blended learning model*

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Students' Attitude and Teachers Towards Blended Learning Model in Class XI Biology Subjects at State High School in Makassar

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Introduction

An important element in the definition of education nationally are conscious and planned efforts, creating a learning atmosphere and learning process that allows students to actively develop their potential. Education should be managed, both in quality and quantity. This is so that students can complete their education on time with good learning outcomes. Rusman (2017) argued that learning activities are an educational process that provides opportunities for students to develop potential in the context of attitudes, knowledge, and skills. The role of educators in the world of education is very dominant, because educators determine everything that is considered right for students. Educators are seen as people who best know the needs of learners as well as assess learners. Makki and Aflahah (2019), suggest that the components of the learning system are students, teachers, learning materials, and the learning environment. This component is an effort to create conducive environmental conditions for the learning process to occur. Each learner has his own preferences and learning styles as well as the attitudes he shows while learning. Similar to students, educators also have their preferences in teaching and the attitudes shown are different. Yulivan (2018), stated that attitudes are very closely related to individuals because they determine a person in aspects of behavior, perception, personality, feelings, and motivations possessed by the individual. It is an awareness of the environment around the individual, to form information that is captured and stimulated by one's sensory apparatus. The information will be processed to determine the reaction that causes both positive judgment and negative judgment depending on the information or experience obtained by the individual. Secord and Bacman, Kreitner and Kinicki (2005) in Purba et al. (2020), divide attitudes into three components, namely as follows: 1) Cognitive component, is a component consisting of

knowledge. This knowledge that will form beliefs and opinions about an object. 2) The affective component, which is a component related to feelings of pleasure or displeasure so that it is evaluative. and 3) The conative component, is a component in the form of a person's readiness to behave in relation to an object.

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The teaching and learning process itself does not escape the role of technology as a support for the realization of learning goals. Technology in the education system has eliminated the boundaries of educational space for both educators and learners. During the pandemic, online learning was one of the solutions used to support the continuity of the education system. The existence of online learning or E-learning helps anyone to be able to learn anytime and anywhere. However, for some students, still need face-to-face meetings in class to discuss and complement the learning process that has been done online. This learning process is called blended learning. The importance of the blended learning model process for students and teachers is intended so that students and teachers can know more effective ways to learn and teach. In addition, this blended learning model is also intended to further improve the ability to use available technology and information.

Horn and Staker (2011), suggested that blended learning is when the learning process of some students is supervised in a location far from home and some students learn via the internet or online by paying attention to several aspects such as time, place, and steps. Semler (2005), states that blended learning is the best combined aspect of online learning, face-to-face structured activities, and real-world practice. Based on the two definitions above, it can be interpreted that blended learning is an educational program where some students participate in face-to-face learning activities at school and some participate in online learning activities at home (Sari, 2019).

This learning model combines synchronous and asynchronous learning settings to achieve learning objectives. Synchronous learning is learning activities carried out at the same time and place, while asynchronous learning is learning activities carried out at different times and places (Santoso and Chotibuddin, 2020). The elements used in the blended learning model include face-to-face in class, self-study, application utilization, tutorials, cooperation, and evaluation. These elements will be managed by educators who act as facilitators and mediators. Educators explain and give directions to students about the applications used in learning and educators provide additional materials by utilizing electronic media and giving structured assignments to students (Abdullah 2018).

Atmoko et al. (2021), stated that the success of the blended learning process is influenced by several supporting factors. One of them is technology, media, and modes of delivery. Effective integration in designing blended learning programs is done by considering the face-to-face or virtual presence of educators, parts that can be directed by educators but without the presence of educators, and parts that students do independently. The shortcomings of blended learning stated by Widiara in 2018 are 1) educators need to master skills in organizing e-learning, 2) educators need to prepare time to manage learning systems, 3) good learning strategies are needed by educators to maximize the potential success of blended learning, and 4) uneven supporting facilities and infrastructure for students and lack of understanding using technology.

Based on this, the student's attitudes and teachers towards blended learning models in class XI Biology subjects at SMA Negeri Makassar are considered necessary to be studied further to find out the attitudes of students and teachers during the blended learning process in high school class XI Biology subjects.

Research Method

The research conducted is quantitative research with descriptive survey methods. The research was conducted at 5 State High Schools in Makassar from April to May 2022. The schools that became the place of research were SMA Negeri 21 Makassar, SMA Negeri 18 Makassar, SMA Negeri 6 Makassar, SMA Negeri 17 Makassar, and SMA Negeri 10 Makassar. The selection of 5 schools is because these schools have implemented a blended learning model in their learning. The research subjects consisted of 300 classes of XI students and 14 biology subject teachers at 5 State High Schools in Makassar. The research instrument used is an attitude questionnaire instrument related to student and teacher attitudes toward the Likert scale-type Blended Learning Model.

Data collection techniques are carried out through two methods, namely observation and questionnaires. The data collection process was carried out by distributing questionnaires directly related to the attitudes of students and teachers towards the blended learning model in class XI Biology subjects at SMA Negeri Makassar. The data analysis used in this study is descriptive statistical analysis. Data on student and teacher attitudes towards blended learning that have been obtained were then processed first using the following formula:

$$P = \frac{\text{Raw scores obtained by students and teachers}}{\text{Maximum score}} \times 100$$

where P is the magnitude of students and teachers' attitude toward blended learning. After the calculation uses the above formula, then the data is processed with the help of SPSS v. 23 for Windows to determine the mean, median, mode, and standard deviation of the overall data. Furthermore, the data will be adjusted to categorize the level of student and teacher attitudes toward blended learning.

Table 1. Category Level of Student and Teacher Attitudes towards Blended Learning

Attitude Score Range	Category
$Mi + 1,5 SDi < X$	Highly Positive
$Mi + 0,5 SDi < X < Mi + 1,5 SDi$	Positive
$Mi - 0,5 SDi < X < Mi + 0,5 SDi$	Neutral
$Mi - 1,5 SDi < X < Mi - 0,5 SDi$	Negative
$X < Mi - 1,5 SDi$	highly Negative

(Source: Azwar, 2010)

Note :

Mi = Mean Ideal

SDi = Standar Deviasi Ideal

With pattern :

$Mi = \frac{1}{2} (\text{skor maksimum} - \text{skor minimum})$

$SDi = \frac{1}{6} (\text{Maximum Score} - \text{minimum score})$

Result and Discussion

The results of students' descriptive analysis of the blended learning model in class XI Biology subjects at SMA Negeri Makassar, obtained the lowest score of 54, the highest score of 99, the average value (mean) of 75.44, the median value (median) was 74, the most appeared value (mode) was 74, the standard deviation was 8.1314, and variance was 66.121. The frequency distribution of student attitudes towards blended learning and the category level of student attitudes towards blended learning can be seen in Table 2 as follows.

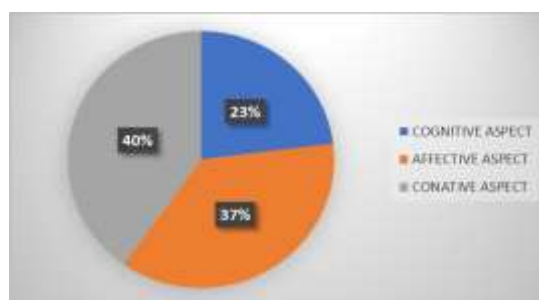
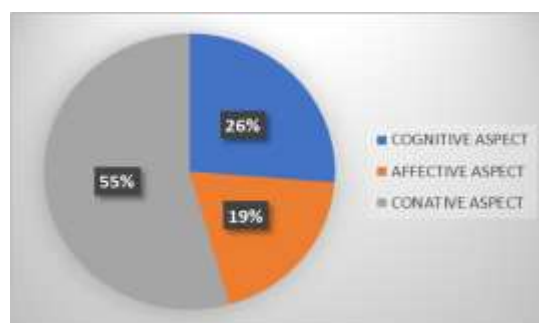
Table 2. Frequency Distribution of Student Attitudes towards the Blended Learning Model

Interval	Category	Frequency	Percentage (%)
Skor ≥ 88	Highly Positive	24	8
80 - 87	Positif	62	21
72 - 79	Neutral	115	38
64 - 71	Negative	84	28
Skor ≤ 63	Highly Negatif	15	5
	Total	300	100

The results of descriptive analysis on teacher attitudes towards blended learning models in class XI Biology subjects at SMA Negeri Makassar obtained the lowest score of 75, the highest value of 98, the average value (mean) of 86.14, the median value (median) was 81.50, the most appeared value (mode) was 78, the standard deviation of 9.453, and variance of 89.363. The frequency distribution of teacher attitudes towards blended learning and the level of teacher attitude category towards blended learning can be seen in Table 3 as follows.

Table 3. Frequency Distribution of Teachers' Attitudes towards the Blended Learning Model

Interval	Category	Frequency	Percentage (%)
Skor ≥ 102	Highly Positive	0	0
92 - 101	Positive	5	36
83 - 91	Neutral	2	14
74 - 82	Negative	7	50
Skor ≤ 73	Highly Negatif	0	0
	Total	14	100

**Picture 1. Percentage of Aspects of Student Attitudes towards the Blended Learning Model****Picture 2. Percentage Aspects of Teachers' Attitudes towards the Blended Learning Model**

Based on the data in Table 2, it shows that the largest frequency for student attitude scores towards blended learning is in the interval, namely the interval 72-79 with respondents as many as 115 people and a percentage of 38%. Referring to the frequency and average of the respondents' overall scores, students' attitudes towards blended learning in Class XI Biology subjects at SMA Negeri Makassar are in the neutral category.

The neutral attitude shown by students is due to the influence of social and environmental factors. There are tendencies such as equating answers with friends and lack of interest in reading statements from the questionnaires distributed cause the average student to answer neutrally. Azwar (2021), stated that among the many limitations of attitude measurement is the result that must be interpreted carefully because often individual responses to scales are influenced and determined by other factors so that they do not reflect current attitudes. One factor that undermines interpretation is deliberately not giving a response as perceived but a response that is acceptable and considered good.

The second highest percentage obtained regarding student attitudes towards the blended learning model was in the negative category with a percentage of 28%. The high percentage in the negative category is likely due to students preferring face-to-face learning rather than online learning. 102 students answered "Agree" to statement number 9 "I feel bored learning Biology during online learning" and 138 students answered "Disagree" to statement number 8 "I feel bored quickly learning Biology during face-to-face learning". Then the third highest percentage is in the positive category with a percentage of 21%. The results obtained in the positive category show that the blended learning process is running quite well. 135 students answered "Agree" to statement number 10 "I like to study Biology both face-to-face and online learning because the media used by teachers is interesting.

Based on picture 1, the highest percentage of students' attitudes towards the blended learning model is in the conative aspect with a percentage of 40%. This is because most students answer neutrally to the conative aspect statement. The cognitive aspect shows that students have the willingness to learn Biology during the blended learning process, have independence in learning Biology such as searching the web or videos related to Biology subjects as additional lessons and always do the assignments given by the teacher during the blended learning process. This is related to research conducted by Arifin, et al. (2019), that the technology used in blended learning in Biology can provide opportunities for students to explore Biology as an experimental object, not just descriptive and build students' understanding of Biology concepts.

Research conducted by Muis and Arsad (2018), states that viewed from the aspect of interest (cognitive), students consider blended learning interesting and not boring and provide efficient time for students in understanding learning concepts well. Then, for the self-confidence (affective) aspect, students become more motivated to learn and help students in critical thinking. And for the satisfaction aspect (cognitive), students feel more valued in expressing opinions and have courage in issuing opinions..

Based on the data in Table 3, it shows that the largest frequency for teacher attitude scores towards blended learning is in the interval 74-82 with 7 respondents and a percentage of 50%. Referring to the frequency and average of the respondents' overall scores, the teacher's attitude towards blended learning in Class XI Biology subjects at State High School in Makassar is in the negative category.

When viewed from the statement items in the questionnaire distributed, each statement item leads to positive results. However, the results of descriptive statistical analysis show that teachers' attitudes toward blended learning models are in the negative category. This is likely due to 14 teacher respondents, 2 of whom have never used a blended learning model in teaching, and also likely because teachers use the lecture method more often when teaching and are not used to using technology in their teaching. This is related to research conducted by Muis and Arsad (2018) which states that some teachers are still accustomed to conventional ways of

teaching. Teachers use the lecture method more often and understand less how to integrate technology into their learning process.

Based on picture 2, the highest percentage of teacher attitudes towards the blended learning model is in the conative aspect with a percentage of 55%. This is because most teachers answer in agreement with the statement of the cognitive aspect. This shows that teachers are disciplined in teaching and assigning assignments to students and always prepare themselves before teaching and try their best and help each other during the blended learning process..

This is in line with research conducted by Kardo and Yuzarion (2017), which the three components forming attitudes are positively correlated with shaping teachers' attitudes in teaching. The attitude shown by teachers toward students during blended learning is a picture of supportive or unsupportive attitudes to developing students' potential. Through an attitude of support, students will get more opportunities to develop their potential and get maximum educational treatment.

Conclusion

Based on the results of the research described in the previous section, the following conclusions can be drawn that students' attitude towards blended learning models in class XI Biology subjects at SMA Negeri Makassar are in the neutral category. Also, the teacher's attitude towards the blended learning model in class XI Biology subjects at SMA Negeri Makassar is in the negative category.

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