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PERCEPTION, MOTIVATION, AND STUDENT LEARNING OUTCOMES AFTER USING THE BOT TELEGRAM INTERFACE APPLICATION

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Abstract

Learning in the millennial century really requires soft skills and ICT support skills by utilizing the sophisticated technological sophistication available. The use of various learning models and media, both in the learning process and in the evaluation, gives a new nuance to students (students). Students are always waiting for new things that are presented by the lecturer. A good educator is always missed by his students, because he is always innovating in the learning process. This indirectly provides new experiences in online learning, and students can interact in the form of chatting. The purpose of this study was to obtain information about students 'motivation to study biology education courses, as well as to find out students' improvement and understanding of concepts and subjects. This study uses survey research methods with a quantitative approach. Data collection was conducted through a survey of Biology education study program students in semester 2 for Animal Diversity courses. Data analysis was calculated based on the number of checklists filled out by respondents, then presented to determine the motivation of each student and look for the value of the gain and the difference between the initial and final knowledge of learning. Each respondent scores are summed with other respondents and averaged so that the average score of respondents' perceptions is obtained overall, then tabulated. The results showed that the perception of students using telegram chatbot with a very happy category by 58%, and very motivational by 67%. While the level of student knowledge becomes more increased with the gain value obtained by 0.78 and is categorized high.

Keywords: API, learning bot, learning media, telegram

INTRODUCTION

Telegram bot or bot API, is one of the superior features of the telegram application. This API bot can be used as a virtual assistant for creators. Bot API is an HTTP-based interface that is used for an application. Telegram bot can be used for the benefit of makers, such as teaching, playing, searching, broadcasting, reminding, connecting, integrating with other services, or even forwarding commands to the Internet of Things (IoT). Application Interface has been encrypted with end to end which functions to protect the data and account of the manufacturer.

Telegram bot has become one of the learning media to make learning more interesting and enjoyable in today's millennial century. One of the features of

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chattbot is also an interesting and unique experience for prospective millennial teacher students. Chatbot is one of the sophistications of artificial intelligence or Artificial Intelligence (AI) which is currently rife in public life. The presence of instructors is expected to introduce technological sophistication and its application in supporting the learning process to prospective teacher students, so that it is expected to help the transformation of science and mediate students in learning topics. Thus, the use of learning robots as one of the learning media, is in accordance with the learning model in the 21st century.

Student-centered learning can be mediated by presenting interactive learning media, and student learning outcomes can be measured by presenting interactive forms of assessment as well. Application of assessment using bot telegram, can foster enthusiasm and high motivation to learn and learning to be active and fun. The results of Ahmad's research, (2018) on biology students showed a positive response and interest in several android applications used in learning. The phenomenon of android-based smartphones among students, is one of the markers of millennial century. The increasingly rampant online social activities, should also be accompanied by learning activities. So this requires the creativity of students to design and utilize existing technology, so that students' smartphones are not merely used as communication tools, games, and entertainment, but can also be used for learning purposes.

Telegrams are very effective in supporting work (Bambang et al., 2012; Nova, 2018). The use of technology in learning provides a new professional role for teachers, new pedagogies and new approaches in teacher education (Balcaen & Hirtz, 2007). The successful integration of ICT in the classroom will depend on the ability of the teacher, in terms of: (i) the structure of the learning environment in a new way, namely to combine technology with new pedagogy, and (ii) develop active social classes that encourage cooperative interaction, collaborative learning and work in group. This requires a different set of classroom management skills than usual (Sanders, 2004).

The use of various learning models and media both in learning and in evaluation gives a new nuance to learning (Fitriyadi, 2013; Rahman & Ahmad, 2017). Indirectly provides new experiences in online learning, and students can interact (chatting) with the learning robots used in learning (Hutchison & Reinking, 2011). So, at the end of the lecture, students are expected to get to know and be directly involved in the use of learning robots that act as virtual assistant lecturers with chatt logic for learning purposes. This gives a positive contribution in supporting the competency profile of graduates of study programs that prioritizes IT

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independence and ability and is able to manage and literate big data, as contained in the learning achievements of graduates at level 6 in the Indonesian National Qualification Framework (KKNI) for S1 graduates.

RESEARCH METHOD

This research was conducted in May to August 2020, in the second semester students of biology education study programs, which contracted Animal Diversity Academic Year 2020-2021.

This study uses survey research methods with a quantitative approach. Data collection was carried out through a survey of biology education study program students in semester 2 for Animal Diversity courses. Samples that can represent the population are taken using a multistage random sampling technique. Determination of the sample size of the population, determined using the formula from Slovin (Fatimah Saleh & Lim, 2010) as follows.

N=ΣN/1+Ne2 = 80 Respondents (biology education study program students)

To determine the criteria for student responses, race on the following criteria table:

No.	Category	(%)
1	Not glad/ Unmotivated	0-25
2	Gladless / minus motivated	26-50
3	Glad / motivated	51-75
4	Very glad / very motivated	76-100

Riduwan, (2004)

To find out the increase in student learning outcomes obtained by calculating the difference in the value of Gain with the following formula:

Normalized Gain= postest score-pretest score/max score-pretest score

Data interpretation, with the following criteria:

N-Gain score	Interpretation
-1,00 <g<0,00	Decreasing
G = 0,00	Stable
0,00<g<0,30	Less
0,30<g<0,70	Standard
0,70<g<1,00	High

Slavin, (2010)

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RESULT AND DISCUSSION

The results showed that 70% of students were highly motivated by learning using the telegram application interface (API) chatbot learning media. 27% of students feel very motivated and will apply the applications taught when they become teachers later. Student learning outcomes have improved, that is, approximately 90% of students have graduated with satisfactory grades. They hope that in each lesson, teachers can present new breakthroughs by displaying creative learning media, so that learning is more enjoyable.

Indicator	**Respondent's response**			
	Not Glad	Enough	Glad	Veryglad
Swalearn	0	2	8	12
Easy Access	2	2	5	10
Happyfull	0	1	7	12
Active	0	2	5	12
Rerata	**2,5**	**7,5**	**31,2**	**57,5**
	Unmotivated	Enough	Motivated	Very motivated
Keep going	0	1	5	15
Participated	0	2	5	14
Strong Heart	0	1	5	12
Planned	0	2	3	15
Rerata	**0**	**7,5**	**22,5**	**70**

Based on the table above, it shows that the average student (with a perception of 58%) feels happy, and 70% have high motivation for the use of telegram-based chatbot learning media. They are very assisted in learning (easy access). Some of the obstacles that occur are network connectivity (network) which is sometimes unstable, especially in the rainy season or bad weather.

The use of telegram API-based chatbot greatly facilitates the user (students) because in addition to having similarities with other conversation applications, it also provides a virtual assistant in the form of chatbot to overcome the delay in the teacher's response.

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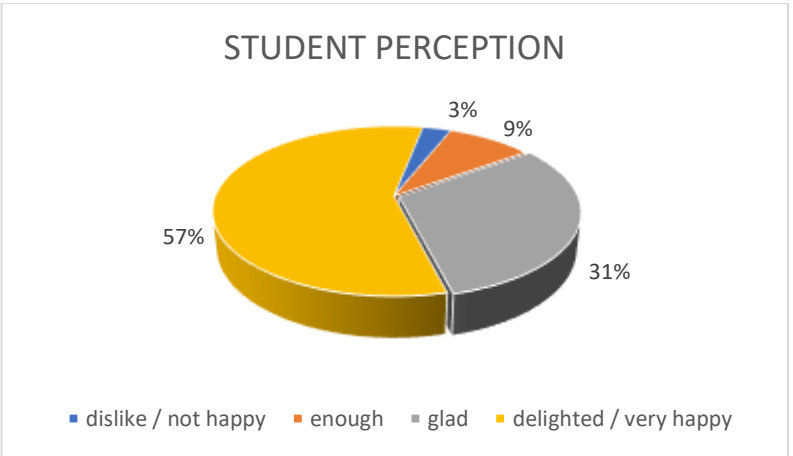

Figure 1. Graph of student perception

The use of this chatbot application is very interesting and suits the needs of the current millennial generation, which has characteristics and characteristics that often interact with technological sophistication to answer the challenges of the industrial revolution 4.0. The development of technology which is increasingly fast, it is right for teachers at every level to prepare supporting media for the transformation of science by utilizing technological sophistication. This can be seen in Figures 1 and 2, presented the profile of perception and motivation of students after participating in learning by using the telegram API application.

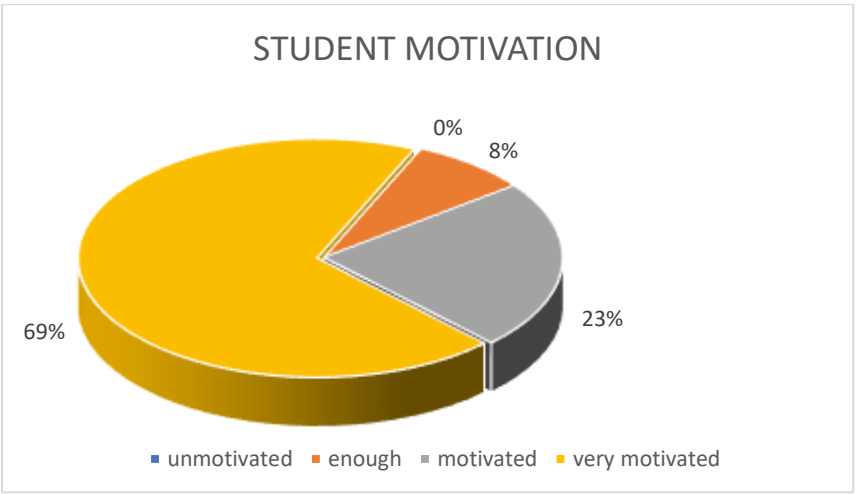

Figure 1. Graph of student motivation

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Student knowledge test results using a gain score showed an increase of 0.7818. The gain value is interpreted that learning outcomes are in the high category. The use of digital-based learning media is believed to be able to improve learning outcomes.

CONCLUSSIONS

The results of this study concluded that learning by using the interface application provides a pleasant learning atmosphere. Students are more independent and motivated to learn. Student learning outcomes have also increased. Seen from the graduation of students in animal diversity courses, which is equal to 90%.

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