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The Use of Remote Control Software in Increasing Their Learning Outcomes

Badeni Badeni ^{1,*}, Sri Saparahayuningsih ², Osa Juarsa ³

- ¹ Doctor Program of Education, Faculty of Teacher Training and Education, Universitas Bengkulu, Bengkulu, Indonesia. e-mail: badeni@unib.ac.id
- ² Study Program of Guidance and Counseling, Faculty of Teacher Training and Education, Universitas Bengkulu, Bengkulu, Indonesia. email: saparahayu@unib.ac.id
- ³ Departement of Education, Study Program of Teacher Profession, Faculty of Teacher Training and Education, Universitas Bengkulu, Bengkulu, Indonesia. email: juarsaosa@gmal.com
- *Corresponding author: Correspondence to Badeni Badeni.

Abstract

This study aims to describe students' perception of online-based learning with remote control software. The research method used is the descriptive method. Research instruments use questionnaires and interviews. The results of the study showed that students' perception of online-based learning with remote control software is very positive, and the use of the software provides a very significant learning experience and can improve students' learning activities and outcomes. It happens because the use of software (1) is easy to access and operationalize; (2) facilitates in the guidance of the completion of a new task for the first time, so that it is more challenging to curiosity; (3) improve learning motivation; (4) is very useful in increasing students' self-independence learning; (5) promote a more open way of

communication between lecturers and students rather than applying face-to-face learning models; (6) make it easier for students to overcome difficulties in learning the subject matter they are studying (7) is very effective because students know firsthand the existing errors and receive corrective guidance on the spot; and (8) make students are more optimistic about achieving better learning outcomes.

Keywords: perception, remote control software, lecture tasks, learning outcome.

Introduction

The effect of information technology on human life is immense, and its role in education also cannot be subsided (Khan et al., 2021)(Ozcinar et al., 2020). In the current environment technological and social changes, significant transformations are underway in terms of how we live and work. We refer to contemporary times as the "information age" or "knowledge-based society" characterized by the spread of information and communication technologies (ICT) and the growing demand for new educational approaches and pedagogies that promote lifelong learning in the current environment of technological and social changes(Yehya, 2020). The ICT consists of any part of the software. A software tool is a set of computer programs used by the developers to create, maintain, debug, or support other applications, and programs. One of them is so-called "remote control software." Remote control software tools help us connect to computers from a distance, provide remote access for tech support, take over PCs, host presentations or tutorials, and more. The software enables users to access one PC from another system or device remotely.

The impact of technology can be felt in every possible field one such field in Education (Raja & Nagasubramani, 2018). The terms "21st-century education," "21st-century learning," and "21st-century skills" are widely known these days. Educational institutions and students across the world have accepted and appreciated the online platform of learning. The reasons for this acceptability are ease of use, learning flexibility, and a controllable environment (Khan et al., 2021). Regarding this, educators have challenges in teaching their students to live and survive in the current era. Educators have to help students to master 21st-century skills so they can deal with the challenges of the 21st century. Due to the rapid advancement of technology, teachers should integrate technology into the classroom to engage students considered digital natives (Cakrawati, 2017)(Ali et al., 2020). The role of technology in the

field of education is four-fold: it is included as a part of the curriculum, as an instructional delivery system, as a means of aiding instructions, and also as a tool to enhance the entire learning process. (Raja & Nagasubramani, 2018). Some frameworks proposed by education experts are related to 21st-century education and learning. Generally, the frameworks focus on unquestionable core competencies, including collaboration, critical thinking, technology, and digital literacy, and problem-solving. The framework of P21 (Partnership for 21st Century Skills) is one of the frameworks widely used by educators who emphasize the importance of 21st-century skills in learning. According to the framework of P21, there are four aspects of skills required for students' outcomes, and one of them is mastering information, media, and technology skills. Since students considered as digital natives and people nowadays live in a technology and media-driven environment, expected to be familiar with skills related to information, media, and technology such as accessing and evaluating information, using and managing some information, analyzing media, creating media products, and applying technology effectively ((Fulton-Archer et al., 2009). Many studies investigate students' perceptions of the inclusion of ICT in their learning. Generally, students respond positively towards the implementation of e-learning (Almarabeh, 2014), but some students prefer traditional on-campus learning because they consider eLearning can cause uncertainty (Almarabeh, 2014). The concept of 21st-century education suggests educators develop their instruction to ensure their students meet the requirement of 21st-century skills. The relevant knowledge is to establish students' skills for a competitive career and good life, skills for lifelong learning skill and creative innovation, and competence for literacy, information, media, and technology (Suherdi, 2012).

Technology makes itself felt in every area of our lives. Due to the convenience that technology has brought to people's everyday life, many people use technology effectively in many environments such as educational institutes, homes, and workplaces. It is supported by using technological tools in all areas of education, the effectiveness of these tools, and the conflicts that affect motivation levels (Ozcinar et al., 2020). One of using technology is online education. Online education programs are well established in higher education, including graduate-level and non-traditional teacher education programs (Hurlbut, 2018). According to the latest insights as to how modern students prefer technology and its impact o their learning, the learning and interactivity of students increases. (Raja & Nagasubramani, 2018). They also find it much more interactive, as aided by technology. The transfer of knowledge becomes very easy, effective, and convenient. It means that our minds now tend to work faster when

assisted with the use of modern technology. The more reliance and dependence on such innovation, the more makes life a smooth journey, and the more is unavoidable these days furthermore in schools, universities, and colleges (Raja & Nagasubramani, 2018).

In higher education, there have been rapid changes in the views on what education is, especially using e-learning. Widespread usage of e-learning led to one of the fascinating developments in educational technology (Sukhbaatar et al., 2018). The question is not only about the development of knowledge, but it is also about the development of skills and resources which are equally necessary to bring a social and technological change resulting in continuous lifelong learning (Zaid & Rabbah, 2019). Therefore, educators as a part of the educational support systems must focus on deep understanding and engage students with realworld data and tools. In terms of learning strategies, educators should integrate the benefit of supportive technology, problem-based approaches, and higher-order thinking skills. They should create a classroom atmosphere that will support the teaching and learning of the 21st century. Educators should integrate technologies with content and pedagogy. In 21 century is characterized by students ability in developing social skills for collaboration, conflict resolution, and multicultural communication, cognitive skills to engage in critical thinking for innovation and complex problem-solving skills to engage in self-reflection and self-learning, productivity skills to organize work effectively and efficiently, and technological skills to exploit ICT tools appropriately. So then, educators, including lectures, should develop the ability to creatively use technology, use remote control software in guidance on completion of lecture assignments learning evaluation to meet students' learning needs.

The increasing use of the internet as a medium of learning online is part of science and technology in information and communication system. Thanks to the application of technology, living has changed, and it has changed for the better. Technology has revolutionized the field of education. We can not ignore the importance of technology in an educational institution. In fact, with the set of computers in education, it has become easier for educators or lecturers to impart knowledge and for students to acquire it. It means that technology has made teaching and learning all the more enjoyable (Raja & Nagasubramani, 2018). Technology, such as the use of remote control software, are used in the educational context to engage students in their learning while providing social interaction with their peers as part of the learning process, to develop a deep understanding of content, and to allow students opportunities for (Ozcinar et al., 2020). However, several studies have revealed that pure online learning has been on par with face-to-face teaching ineffectiveness. Students had

had problems in adapting online learning to education (Ozcinar et al., 2020). Based on a result of research on online learning was concluded that many prospective teachers and lecturers seem to have an advantage because they will have instant access to information and make people's easier lives, and as its disadvantage because it would enable lazy students to learn from easy access, research and practice (Ozcinar et al., 2020). Others state, and mixed approaches are more effective than teaching offered entirely in face-to-face models (Hurlbut, 2018). Mixed learning--now known as the blended learning approach—is considered an effective learning method for students in teacher education, course instructor involvement, media elements, and an overall learning experience (Hurlbut, 2018). Online education continues to gain momentum as the preferred method of higher education (Kennedy et al., 2016). Another study conducted by (Kennedy et al., 2016) revealed that learning with a blended learning model of learning activities is higher than face-to-face. The above results of research we can have given the idea that learners are comfortable with learning with a virtual learning approach because it is more considered enjoyable. Online learning supports the learners' autonomy and enhances self-discipline for their learning progress. The mixed learning process--now known as the blended learning approach—is considered an effective method among students of teacher education, course instructor involvement, media elements, and an overall learning experience (Hurlbut, 2018). He also revealed that online education continues to gain momentum as the preferred method of higher education. In sum, online learning is an effective method to encourage the students to have participation, motivation, self-discipline, and learners' autonomy in an online learning environment. However, there is a lack of substantial research into online programs with remote control software as guidance completion of lecture assignments learning evaluation. In short, It means that the results of the study give an idea that learners are comfortable with learning methods with a virtual learning approach because it is considered more attractive. However, these research results do not reveal how online learning techniques are doing, and it only explains that learning is doing with a mixed face-to-face approach and online.

Based on the above things, researchers developed a blended learning model by using remote control software to increase learners' activated and students' outcomes. In this study, we only focused on "the perception of learners towards online learning with remote control software/instruments." So the purpose of this research is to find out the perception of learners towards blended learning models using remote control software in increasing students to be activated and students' outcomes.

Method

Research Design

The study employs a mixed-method approach to put quantitative and qualitative data together. In this study, researchers collect and analyze quantitative and qualitative data to answer the research problems investigated in the study (Hamied, 2017, Monique Hennink, Inge Hutter, 2020). Researchers applied the concurrent triangulation design to collect quantitative and qualitative data and compared the data to figure out whether they have convergence, differences, or some combination (Creswell, 2009).

Data Collection

Researchers researched from the beginning of July to the last November 2020. It involved 80 students of the early childhood education programs, Faculty of Education and Teacher Training, Universitas Bengkulu. For data collection, Researchers used questionnaires and interview techniques delivered toward the students' perception of the implementation of the remote control software. The questionnaire was adapted and simplified from similar previous studies conducted by Vitoria et al. (2018) and Manowong (2016). The questionnaire consists of 14 closed-ended questions using a four-Likert ranging from strongly disagree (SD) = 1, disagree (D) = 2, agree (A) = 3, and strongly agree (SA) = 4.

The questionnaire was applied to figure out students' perception of the use of mote control software in guidance on completion of lecture assignments learning evaluation. Meanwhile, Researchers interviewed 80 students. The interview consists of 15 questions aimed to gain an in-depth explanation and description of the use of remote control software in guidance on completion of lecture assignments learning evaluation in the process of lecturing. Furthermore, the interview was to investigate students' opinions about the benefits of using remote control software in guidance on completion of lecture assignments learning evaluation. The questionnaire was applied to determine the opinions of the 80 students of the early childhood education program, about remote control software in guidance on completion of lecture assignments learning evaluation. The questioner in the form of Open-ended questions in the questionnaire was created based on the literature and the researchers' own experiences. Before using the questionnaire, researchers asked for five experts who have experience in qualitative research to be examed. The questionnaire was sent to four instructors outside the study group for pilot implementation in this state, and it was checked whether the questions were understandable.

Open-ended questions in the questionnaire were created by using the literature and the researchers' own experiences. The questionnaire was first examined by five experts who have experience in qualitative research.

The research procedure taken is to assign tasks to face-to-face learning, and guidance in completing tasks is done online with remote control using the Team Viewer application. Guidance is carried out in groups and individually. In this case, students display the results of work assigned to be corrected, and corrections were carried out if directly needed, and at the same time. Communication and discussion were carried out via chat on the work that is displayed. The collected data were analyzed in the form of quantitative and qualitative. In this case, the student displayed the results of the work assigned to be corrected, and corrections or guidance is carried out if needed directly, and at the same time communicating and discussing through chat is also carried out on the work that is displayed.

Data Analysis

The data obtained from the questionnaire were analyzed statistically by calculating the mean score for each question. The data from students' closed-ended questionnaire was statistically computed to find out the mean score for each group question, the percentage of each statement, and then was interpreted descriptively. The interview data were all transcribed and analyzed for repeating key features that were related to the use of remote control software in the classroom. The reappearing of a particular opinion can be assumed as the participants' concern towards the issue. The data from the questionnaire and interview were used to describe students' perception on the use *students' perception of online-based learning with remote control* software in guidance on completion of lecture assignments learning evaluation and the benefits felt by students after using the learning platforms in Indonesian teaching and learning process.

Results and Discussion

Data revealed from this study provides information that more than half of students have attended e-learning lectures using an unsynchronous approach. While lectures with direct interaction through a kind of remote control software have never been conducted before. The overview obtained in this study is as follows:

Table 1: Percentage and Mean of Students' perceptions on the ease and experience of using the remote control software

Item	Observed Aspects		Perception Category					
Number	Observed Aspects	SA	A	D	SD	Mean		
	I think that e-learning in the form of the operation of the	83.75	16.25	0	0	3.838		
1	remote control software is very easy and provides easy							
	access to get information for students							
2	I think the use of remote control software saves effort and	87.5	12.5	0	0	3.875		
Z	time in getting learning materials.							
	Mean	68.5	11.5	0	0	3.856		
	Percentage	85.63	14.37	0	0			

Table 1 shows that the student's perception of the ease and experience of using remote control software was positive. None of the students strongly disagreed with the statements in the questionnaire. Table 1 also shows that there were 85.63% of students strongly agreed that the operation of the remote control software is very easy and provides easy access to get information for students, and there were 14.37% of students who agreed that the use of remote control software saves effort and time in getting learned materials. They all (with means = 3.856) think that the operation of the remote control software is very easy and provides easy access, either save effort or time, to get information for students. As evidence in table 1, the students agreed that the application of e-learning remote control made them easy to get many sources of learning materials. During the interview, the students explained that the use of an e-learning remote control gave them more time to read the materials so they could understand well about a particular topic before the class meeting.

In summary, the majority of students have positive perceptions of the ease and experience of using remote control software was positive, either in ease of using, getting information or saving of time effort and getting learning materials. This statement in line with (Vitoria et al., 2018)(Ali et al., 2020) (O. Abu Hantash et al., 2020) all the availability of various sources online which the students could access at their convenience was digested by the students to be helpful in their effort to understand a topic or learning materials. The statements are also in line with the result of the study (Khan et al., 2021) that e-learning technology enables easy information access leading to positive attitude formation of students towards it.

Table 2. Percentage and Mean of Students' perceptions on the impact of implementing remote control software facilities on student self-development

Items	Observed Aspects	Pe	Perception Category					
Numbers	Observed Aspects	SA/%	A/%	D/%	SD/%	Mean		

3	I think the guidance on remote control software can	85	12.5	2.5	0	3.825
	increase our learning motivation					
4	I think the remote control software provides students	86.25	10	3.75	0	3.825
	getting information independent of time and resources					
	Lecture guidance in using remote control software is	85	7.5	5	1.25	3.738
5	indeed useful					
	I think the Learning instructions on remote control	72.5	6.25	6.25	0	3.213
6	software helped me understand the lecture material we					
Ü	are studying.					
	I think the remote control software is indeed helpful in	90	6.25	3.75	0	3.863
7	overcoming the difficulty of understanding the					
	material studied					
8	I think the remote control software can help and	72.5	15	7.5	5	3.550
o	improve my achievement of learning outcomes					
9	I think the remote control software provides students	85	10	2.5	2.5	3.775
9	easy to Store/transfer more information					
10	I think the use of remote control software can help	82.5	10	7.5	0	3.750
10	students to increase creativity					
11	I think the Remote control software improves my self-	75	15	6.25	3.75	3.613
11	confidence in expressing ideas and opinions					
	Mean					3.683
	Percentage	81,53	10,28	5	1,39	
	Total	Ç	91.81%		6.39	

Table 2. shows that 91.81% of students have a positive perception of the impact of implementing remote control software facilities on student self-development was positive. The most favorable item was item no.7 (mean = 3.863), and the least favorite questioner item was item no.6 (mean = 3.213). There were 91.81% of students (consisted of 81.53% of them stated strongly agreed and 10.28% of them) stated agreed. While the rest of the students (5% of them) stated disagree and 1.39% of them or a total = 6.39% stated strongly disagreed. In other words, the majority of students have positive perceptions that the operation of the remote control software is beneficial in overcoming the difficulty of understanding the material studied. Based on an interview with them, they think that remote control can provide students getting information independent of time and resources. By their independence of time and resources in getting information, they feel it easy to store/transfer more knowledge and understanding, improves their self-confidence in expressing ideas and opinions, be motivated, and enjoyed learning material being learned. The impact of it helps students to increase their understanding of learned material, and improve their achievement of learning outcomes. It is in line with other results of studies that state that the use of e-learning remote control has a positive impact on motivation improvement in learning, self-discipline,

independence in learning, self-confidence in expressing ideas and opinions (Khan et al., 2021) (Cakrawati, 2017), more time to explore learning sources, (Vitoria et al., 2018) (Raja & Nagasubramani, 2018), easy access to information (Khan et al., 2021)(Raja & Nagasubramani, 2018) and improving interactions with friends and the teacher (Cakrawati, 2017) even the shy ones tended to be more conversational in online communication (Al-Dosari, 2011). Improvement in students' interactions is beneficial for students' learning because as Vygotsky states that learning happens when students interact and communicate with each other. It can be concluded that the students perceived the e-learning remote control software as somethings useful.

Tabel 3. Students' Perceptions on The Impact Of Implementing Remote Control Software Facilities On Students' Learning Process

Item	Observed Aspects	Pe	erception			
Numbers		SA	A	D	SD	Mean
	I think the application of remote control	81.25	7.5	6.25	5	3.650
12	software encourages me to learn					
12	cooperatively and interactively between					
	students, and between students and lecturers.					
	I think the use of remote control software	72.5	15	7.5	5	3.550
13	increases my effectiveness of learning					
	process and results					
	Mean					3.600
	Percentage	81,53	11,25	7,5	5	

Table 3 shows that the impact of implementing remote control software facilities on students' learning process. As indicated in item 12, that 81.25% of the early childhood education program students with a mean = 3.65, strongly agreed that the use of remote control software encourages me to learn cooperatively and interactively between students, and between students and lecturers. Table 3 also indicates the students 72.5% strongly agreed that the use of remote control software increases their effectiveness of learning. This occurs because remote control software lets students either access their home or office computer from another location or allow others to have access to some or all of their files as if they were sitting in front of their PC instead of somewhere else entirely. Some are tailor-made for personal use, while others, with their complex security protocols and granular menus, are better suited for a more corporate environment. Remote access software lets one computer view or controls another computer, not merely across a network, but from anywhere in the world. With remote control software, students might use it to log into their friends' computers, lecturers' computers, and show them how to run a program, or sort out their technical troubles. Or a

student can even use it to invite friends or their lecture to view his desktop while the student runs a demo for them. A student can use the screen as a temporary whiteboard, drawing lines and circles, a digram that helps friends and lecturers understand what he is doing on his computer or theirs. This means that the remote control software can encourage students to learn cooperatively and interactively between students, and between students and lecturers. Those learning activities might support the effectiveness of their learning outcomes this is in line with the findings (Vitoria et al., 2018) the use of remote control software encourages students to learn cooperatively and interactively between students and between students and lecturers (Khan et al., 2021). The study of (Khan et al., 2021) reveals the preferences of students for e-learning as it provides them much freedom to connect with their teachers, fellow students and engage with their study materials in the comfort and flexibility of space and time. Other results of the study revealed that the perceived usefulness, such as the effectiveness of learning, and perceived ease of use are factors that directly affect students' attitudes toward using the Elearning system (El-Adl & Alkharusi, 2020). As seen in item 13, those at 72.5% of the early childhood education program students have a mean = 3.55, strongly agreed that the use of remote control software increases the effectiveness of their learning achievement and process. These findings are in line with the result of research (Raja & Nagasubramani, 2018)(O. Abu Hantash et al., 2020)(Zayapragassarazan, 2020) that stated that the main results of their studies illustrated the positive impact of online-remote education on the learning process as more than half of the students (53.9%) increase the effectiveness of learning results.

Tabel 4. Percentage and Mean of Students' perceptions on the impact of using remote control software on the lecture process conducted by lecturers

Item	Per	ry				
Numbers	Observed Aspects	SA	A	D	SD	Mean
14	I think the use of remote control software encourages lecturers to implement student-centered learning	73.75	12.5	7.5	6.25	3.538
15	I think remote control software facilitates interaction and communication between lecturers and students.	75	10	10	5	3.550
	Mean	59.50	9.00	7	4.50	3.544
	Percentage	74,38	11,25	8,75	5,63	

These four of things 4 shows that 74.38 % with mean = 3.55 reveals that the use of remote control software influences the lecture process conducted by lecturers. This finding can be seen on the table that 73.75% of students with a mean = 3.538 thought that the use of remote

control software encourages lecturers to implement student-centered learning, and 75% of them with 3.544 considered that the use of remote control software facilitates interaction and communication between lecturer and students. As stated above, the application of remote control software allows students to try on their own, find their learning material, and interact with fellow students in interacting with their lecturers, becurse this will enable lecturers to implement student-centered learning. In line with the result of research (Khan et al., 2021)(Ozcinar et al., 2020)(Sukhbaatar et al., 2018)(Vitoria et al., 2018) stated that the use of remote control software encourages the students to be active in learning and facilitates interaction and communication between lecturer and students.

Table 5. Means of Students' perceptions of using the remote control software

Item	Observed Aspects		Perception Category					
Number	•	SA	A	D	SD	Means		
1	Students' perceptions on the ease of using the remote control software	68.5	11.5	0	0	3.856		
2	Students' perceptions on the impact of implementing remote control software facilities on student self-development	65.22	8.22	4	1.11	3.683		
3	Students' perceptions on the impact of implementing remote control software facilities on students' learning process	61.5	9	6	4	3.600		
4	Students' perceptions on the impact of using remote control software on the lecture process conducted by lecturers	59.50	9.00	7	4.50	3.544		
	Average/Means	63.68	9.43	4.25	2.40	3.67		

Table 5 shows that average of students) had positive perception on the use of remote control platform (mean = 63,68, they stated "strongly agreed," and mean = 9.43 they state "agree) that the use of remote control was easy, could facilities on student self-development, learning process, and lecturing process conducted by lectures. Only (mean 4.25) stated disagree, and 2.40 stated strongly disagree. Based on table 5, with a mean = 3.67, in short, be concluded that the majority of students had a positive perception of the remote control platform/software. This result of the study on line with (Cakrawati, 2017) stated that the use of remote control software was easy to use (Vitoria et al., 2018) can improve their understanding of the contents of the lesson, enhance the learning process(Khan et al., 2021), improve their comprehension, independence, self-discipline, motivation to learn, and interactions with each other and with the teacher(Vitoria et al., 2018).

The above data are supported by the results of interviews conducted by researchers. The summary of statements of 36 (90%) sample students is as follows: (1) The software used is easy to access and operationalize; (2) The use of remote control software in the guidance of the completion of a new task for the first time, so that it is more challenging to curiosity; (3) This learning model can increase learning motivation; (4) Guidance using remote control software is very useful; (5) The use of remote control software is more effective and efficient because the communication between lecturers and students is more open than face-to-face learning; (6) This open communication is indeed helpful for students to overcome difficulties with the material learned; (7) Guidance by remote control is very beneficial because students know firsthand the existing errors and receive corrective guidance on the spot; and (8) Students are more optimistic about achieving better learning outcomes.

The motivational factors (for example, pursuing appealing and enjoyable learning resources) help learners retain their learning activities, maintain their motivation, and overcome a loss of motivation (Dabbagh & Kitsantas, 2012). Feeling of personal also control over their learning" and "Control over the activity or resource" as self-directed informal learning key factors and motivation factors (Manowong, 2016). Online learning, such as the application of remote control software, supports the learners' autonomy and enhances self-discipline for their learning progress (Zayapragassarazan, 2020)(Vitoria et al., 2018). In sum, the online learning design is to encourages the student's participation, motivation, self-discipline, and learners' autonomy in an online learning environment.

The data presented above indicate that the conditioning of online learning with remote control software can build significant student perceptions which in turn will affect the learning process, learning motivation, and student learning outcomes. Thus, a learning process needs meaningful engineering that can affect the perceptions of students which will then change their attitudes for the better.

The revealed research results state that the use of internet-based software using remote control has a positive impact on increasing student motivation and learning outcomes. This is consistent with the opinion of (Raja & Nagasubramani, 2018) stated that the use of internet-based software has (a) the potential to increase access to education and improve its relevance and quality; (b) promotes learner engagement as learners choose what to learn at their own pace and work on real-life situations' problems; (c) encourages interaction and cooperation among students; and (d) makes learning fun and enjoyable for students. Other results of research, such as (El-Adl & Alkharusi, 2020) which states that internet-based learning can

improve the learning process, is effective, provides convenience, and is cheap in financing (Hurlbut, 2018). The same thing was also expressed by (Al-Dosari, 2011) regarding the advantages of online learning which will be learner-centered and the conditioning that is carried out will support learning styles and flexibility. The conditioning itself is under Thorndike's S-R theory and Bandura's social learning theory that the conditioning of a process by providing the right stimulus can form positive responses and perceptions and will form cognitive schemas in individuals. As also stated by (Zayapragassarazan, 2020), that the conditioning of the learning environment both internally and externally will affect the learning outcomes achieved (Sukhbaatar et al., 2018). In this case, online-based learning with remote control is a conditioning process with the use of stimuli as expressed. Thus, engineering the conditions of the learning environment in the online learning process is needed to be carried out by a teacher as well as learning in class. Related to this research, which engineered learning conditions by utilizing remote control software, it turned out that it not only provided an interesting learning experience for students but also made a significant contribution to the achievement of learning objectives. Therefore, the positive response of students to the online learning process with remote control instruments is quite significant for the development of a learning model with a blended learning approach. However, this research is needed to find an effective form of learning strategy which of course can be developed with a larger number of samples as well as several similar software to test its effectiveness.

Conclusion

Students' perceptions of the use of remote control software are very positive because the use of remote control provides a significant learning experience and can increase student understanding and make it easier to complete lecture assignments, in addition to providing a freer space for interaction between lecturers and students. However, this research is still very limited in terms of the number of samples and the diversity of study programs. Therefore, a survey with a significant number of respondents will certainly provide different results and these findings may be generalized to a larger population.

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Author contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by [Badeni Badeni], [Sri Saparahayuningsih] and [Osa Juarsa]. The first draft of the manuscript was written by [Badeni Badeni] and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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