DEVELOPMENT OF MICRO TEACHING-LEARNING MODEL BASED ON YOUTUBE CHANNEL IN DISTANCE LEARNING TO IMPROVE STUDENTS' BASIC TEACHING ABILITY

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Abstract

Teacher students who have taken the micro-teaching course are expected to master eight essential teaching competencies, namely: 1) opening and closing learning skills, 2) explaining skills, 3) questioning skills (basic, advanced), 4) variation skills, and 5) reinforcement skills, 6) class management skills, 7) small group and individual learning skills, 8) skills to lead small group discussions. YouTube-based microteaching-learning is expected to help master the eight essential competencies even in online learning conditions such as in the Terbuka University. This research was R & D using two classes with 50 students for the control class and 50 students for the treatment class. . From the results obtained in this study, the YouTube channel learning video product is proven effective in improving students' teaching abilities in microteaching courses. Hence, it is recommended for lecturers or teachers at schools to be able to complete their learning media by using videos that are integrated with YouTube to maximize the improvement of students' abilities.

Keywords: micro teaching-learning; youtube channel; distance learning; teaching ability; students

Abstrak

Siswa guru yang telah mengikuti mata kuliah micro teaching diharapkan menguasai 8 kompetensi dasar mengajar, yaitu: 1) keterampilan membuka dan menutup pembelajaran, 2) keterampilan menjelaskan, 3) keterampilan menanya (dasar, lanjutan), 4) keterampilan variasi, 5) keterampilan memberi. penguatan, 6) keterampilan mengelola kelas, 7) keterampilan belajar kelompok kecil dan individu, 8) keterampilan memimpin diskusi kelompok kecil. Pembelajaran mikro berbasis YouTube ini diharapkan dapat membantu penguasaan 8 kompetensi dasar bahkan dalam kondisi pembelajaran online seperti di Universitas Terbuka. Jenis penelitian ini adalah R&D menggunakan 2 kelas, 50 siswa masuk kelas kontrol dan 50 siswa masuk kelas perlakuan. Hasil yang didapat dari penelitian ini. Produk video pembelajaran channel youtube terbukti efektif dalam meningkatkan kemampuan mengajar siswa pada mata kuliah microteaching. Disarankan kepada dosen atau guru di sekolah untuk dapat melengkapi media pembelajarannya dengan menggunakan video yang terintegrasi dengan youtube untuk memaksimalkan peningkatan kemampuan siswa.

Kata kunci: micro teaching-learning; youtube channel; *pembelajaran jarak jauh; kemampuan mengajar; siswa*

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Introduction

The development of information and communication technology has influenced all aspects of life, such as the economy, culture, art, politics, and especially in the world of education. Technology improves the quality of education in the learning process. Technology helps the learning process as a medium that can facilitate access to information, make learning methods more interactive and build the creative power of educators and students. According to Suparman (2012: 54), "Advances in Information and Communication Technology (ICT) inspire, encourage and require every learning actor, especially students and teachers, to use ICT to help improve the effectiveness and efficiency of learning."

According to Kwartolo (2010:16), "Information and Communication Technology (ICT), in all forms of technology, support the delivery of information and the implementation of two-way communication or even more. This includes radio, television, computers with all their applications, the internet (online or offline), learning videos, and learning DVDs/VCDs"— so based on the slag of learning actors to master technology to achieve learning goals.

With many technologies today in education, learning actors can choose which platforms to use in the learning process. Information technology can be in the form of information from the internet, digital libraries, learning videos, knowledge in the form of audio/podcasts, and live interaction for two-way communication (Bersin, 2004).

One platform that is widely used is Youtube. Youtube is a web provider of video clips from its users. YouTube has over one billion users out of almost a third of all internet users. Every day, people watch hundreds of millions of hours of videos on Youtube can generate billions of video views. Youtube, as a whole, has reached more viewers aged 18-34 and 18-49 years than any other cable network in the world (Faiqah, 2016, p. 2). This shows that Youtube is the most widely used tool and is easy to use, especially for students. Youtube can be a video and audio-based learning media that can be accessed anytime and anywhere.

Microteaching is a course given to prospective teacher students. In micro-teaching courses, students are provided with various essential teaching competencies. Eight basic teaching competencies must be mastered by prospective teacher students (Hamalik, 2009). The eight essential competencies must be genuinely understood and mastered. Students must be continuously trained so that these essential teaching competencies become a habit that becomes the soul of a prospective teacher. In mastering the eight essential teaching competencies, students need repetition until they are mastered, so it takes quite a long time. With the help of the development of information technology, especially YouTube, the efficiency and effectiveness of lectures can be helped. Lecture meetings can be done in a blinded manner, combining face-to-face and online via YouTube (Fleck et al., 2014). Theoretical material that requires explanation and clinical supervision can be done offline. As for practicing the eight essential skills, it can be done independently and in groups with videos. After the perfect training video is uploaded to the youtube channel, there is an interaction between students and lecturers (Holland, 2016).

To support an effective and efficient learning process, developing a youtube-based learning model in micro-teaching lectures is necessary. It is for facing the industrial era 4.0, characterized by the development of information technology that comes in all aspects of life,

including the world of education. Learning is more effective and efficient by utilizing advances in information technology, as mentioned in the research by Shaw (2017) on Accomplished Teaching: Using Video Recorded Micro-teaching Discourse to Build Candidate Teaching Competencies.

This study aimed to measure whether the microteaching task was a learner-centered activity that promotes teaching skills achieved through higher-order thinking and how students demonstrate synergistic professional teaching practices. The research method used was to evaluate 328 microteaching videos. This study randomly selected 1 video per candidate or registered student. The exchange of video recordings between the candidate in the role play as a teacher and the playmate or the student making the role play in which the teacher's actions and the current level of cognitive quality were measured. Based on the data obtained, it was revealed that the participants tended to get better at certain aspects with a large variety of exercises when they interacted with students individually and with learning objectives. The broad practice aspects for learners and their peers during the microteaching teaching experience illustrated the assessment embedded in the complexities of teaching. Microteaching activities provided candidates with many opportunities to reflect on aspects of practice as they role-play both as teachers and as students.

Lectures or available lessons are similar to asynchronous learning lessons. Only the restrictions are much less. Open schedule lectures have no weekly deadlines, allowing students to do things on their own time and better balance their extracurricular commitments. This is the preferred choice for full-time workers, parents, or anyone who wants to study but does not have a schedule for traditional courses. Each institution has its methods and structures for distance learning that will likely fit into one of these categories or a mix of different types. Asynchronous education and open schedules are much more common for higher education courses.

Several previous studies have discussed how there is a role for YouTube channels in increasing students' knowledge in the learning process. One of them is research conducted by Clifton & Mann (2011) who said that the development of teaching materials in the form of learning videos on YouTube could improve the practice skills of nursing students. In addition, the development of YouTube learning video can also improve students' speaking skills (Widayat et al., 2022). In addition to speaking skills, video can also improve students' microbiology practicum skills (Lacey & Wall, 2021). Thus, it can be ascertained that the use of learning videos can increase students' creativity (Reina et al., 2021), language and teaching skills of students (Brook; Jennifer, 2011), help the learning process and its application (Taşdelen, 2019), and help improve teaching practice (Pattier, 2021). Of course, from some of these studies, there is no complete discussion of how the role of learning videos distributed through this YouTube channel can improve students' teaching practice skills, especially students at Terbuka University. The formulations of the problem discussed in this study were (a) How to develop a youtube-based micro teaching-learning model in distance learning for Terbuka University students? (b) How to develop a Youtube channel for Microteaching learning? (c) How to develop electronic-based micro-teaching teaching materials? (d) Can the youtube-based micro-teaching-learning model affect the basic competence of teaching Terbuka University students?

Method

This research was conducted at the Faculty of Educational Sciences at Terbuka University, Jakarta. . The sampling technique was purposive sampling. The sample of this study used three lecturers and three students of FKIP Terbuka University for interviews, using three lecturers because qualitative data was obtained from the three lecturers. Twelve lecturers and 1,485 students of FKIP Terbuka University as sample data for needs analysis, and in 2 classes with 50 students for the control class and 50 students for the treatment class using SRS as the research sample. This descriptive quantitative data collection employed a questionnaire with indicators such as material, time, access, and constraints tested for validity and reliability. All items on the instrument used all valid items with a reliability of 0.92. In Terbuka University, students majoring in education take Micro teaching courses or basic teaching competencies. The research was carried out for one semester, from April to October 2021. The steps of this research were divided into three stages: (a) the pre-survey stage, (b) the program model development stage (c) the model testing stage.

The initial stage was a pre-survey to analyze the need for the importance of a youtube-based microteaching learning model. The survey was conducted among stakeholders: students at Terbuka University, the lecturers, and staffs. The survey results were used as a base on developing a youtube-based micro teaching-learning model.

The second stage was the development and testing stage of the model. Based on the findings of the development results in the form of a prototype, then it was tested to develop a YouTube-based Micro teaching Learning model in Distance Learning at Terbuka University. The third stage was the validation test. This was done to measure the effectiveness of the YouTube-based Micro teaching-learning model in improving the basic teaching abilities of Students at Terbuka University.

Results and Discussion

The following is the result of a needs analysis conducted with a sample of lecturers and students atTerbuka University:

The data obtained were lecturers as respondents stating that the learning model being carried out was currently quite relevant to the material being taught to students. For time efficiency, if it could be redeveloped, it was suggested a learning model which could make time as effective as possible and more organized so that the start and end of lectures can be appropriate with a predetermined schedule. In addition, in terms of access, what has been done in learning today is also dependent on signals because most of them use *Gmeet/Zoom* to provide material. Thus,many students who live with poor internet connections are disrupted in their learning activities. The following is the result of the lecturer's quantitative data analysis as per dimension:
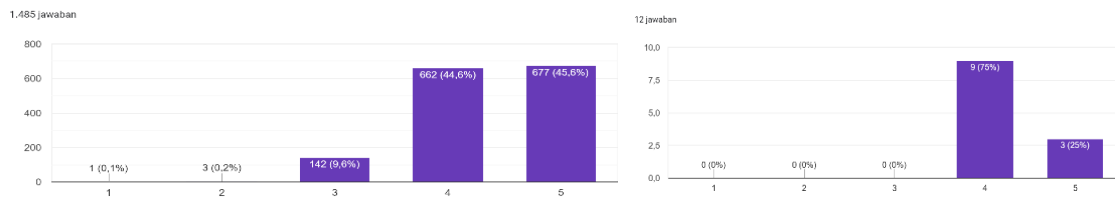
(Left = Student, Right = Lecturer)

Figure 1. The relevance of the material with the learning model
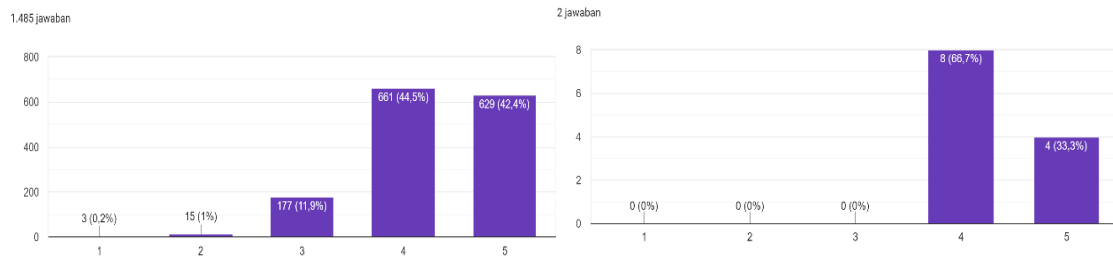
The relevance of the material. The learning model stated by the lecturers and students is classified as being in the poor category.
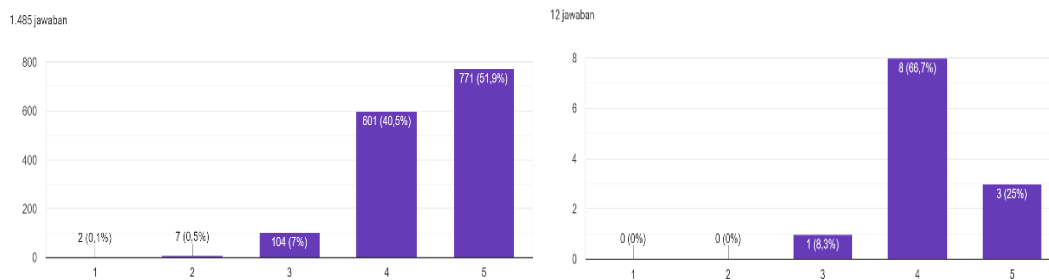
(Left = Student, Right = Lecturer)

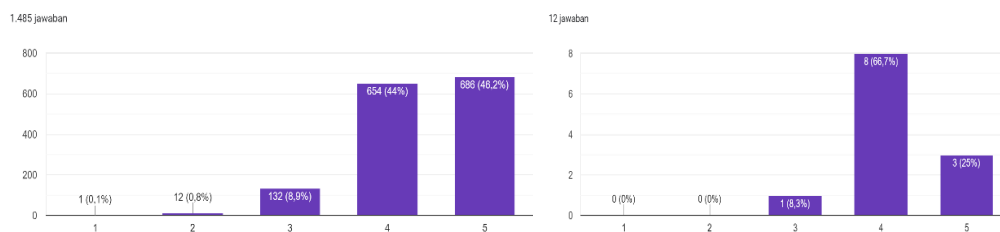Figure 2. Completeness of the material in the learning model

Lecturers and students stated that the completeness of the material in the current learning model was still quite good.

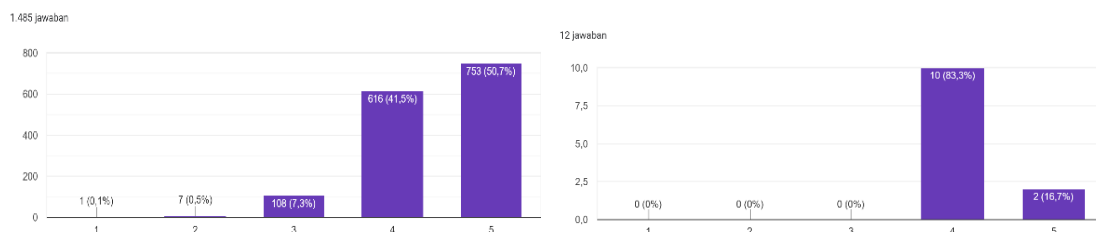(Left = Student, Right = Lecturer)

Figure 3. Material attraction

Lecturers and students thought that the attractiveness of the material in the current learning model was attractive, although some students said it could be more enjoyable.

(Left = Student, Right = Lecturer)

Figure 4. Regularity of the material in the learning model

The lecturer stated that the regularity of the material in the current learning model was in the moderate to very good category. However, it was different from the results stated by the students. Some students stated that there was still a need for regularity in the material in the current learning model.

(Left = Student, Right = Lecturer)

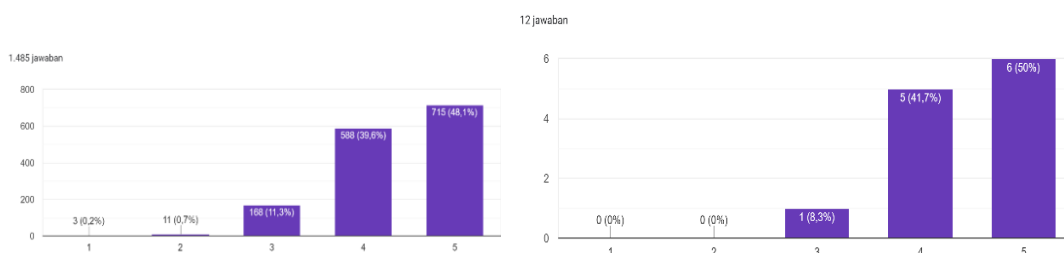Figure 5. The quality of the material in the learning model

According to lecturers and students, the material quality in the current learning model was quite good, although some students stated that it still needed improvement.
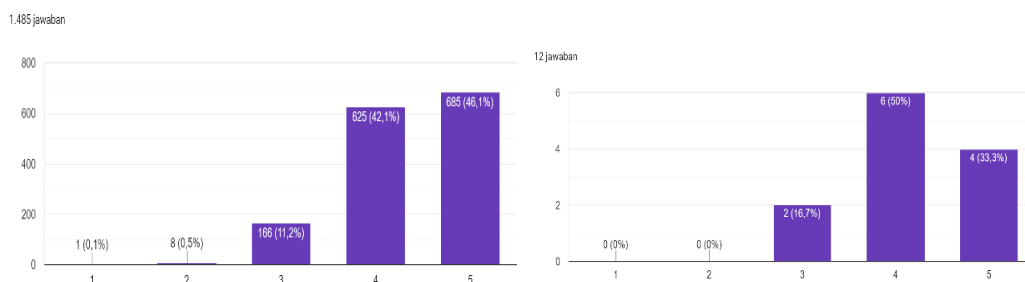
(Left = Student, Right = Lecturer)

Figure 6. Suitability of time between the delivery of the material with the learning model

Lecturers and students had good response in terms of time efficiency for the delivery of material using the current learning modelalthough some students still stated that they still needed to improve.

(Left = Student, Right = Lecturer)

Figure 7. Time effectiveness

Lecturers and students stated that the effectiveness of time using the current learning model was in the good - very good category, although some students rated it less - very poor.
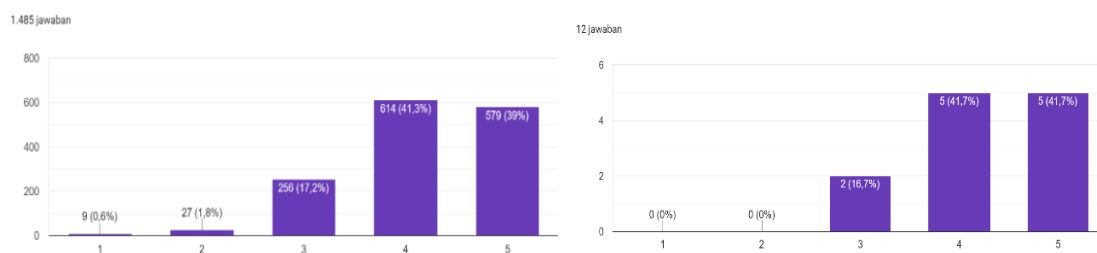
(Left = Student, Right = Lecturer)

Figure 8. Ease of access

Lecturers and students stated that it was easy to access learning at this time, although some students still needed help to make it easy to access.
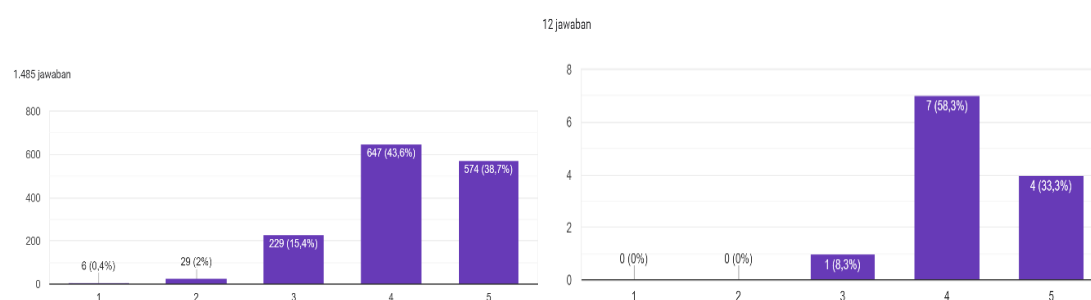
(Left = Student, Right = Lecturer)

Figure 9. Access quality

The quality of access assessed by lecturers and students was still considered to be in the poor category. According to lecturers and students, the current learning model was in the category of quite good - both in terms of material quality. Lecturers considered that the regularity of the material in the current learning model was quite good, except for students who still think it is terrible—both in terms of relevance and completeness, the attractiveness of the material. The learning model was not good enough for lecturers and students, including time and access in the wrong category. The current condition of the learning model was already quite good, however, in some respects, such as completeness and attractiveness. The material, time effectiveness, and ease of access still need to be upgraded again.

Considering that most of Terbuka University students who live in rural areas are over 40 years old, it is difficult for students to complete secondary lectures on their own, and of course, it will be very boring if the material presented is not interesting. Therefore, the completeness and attractiveness of the material must be considered. As for the problems that are not good at the level of service and learning at Terbuka university, it is necessary to provide assistance in improving learning for students (Alsop et al., n.d.; Park et al., n.d.; Rapanta et al., 2020; Rohwer et al., 2013; Zeni, 1998). Where if this is allowed to continue, it will get problems in the future (Ã, 2008; Beijaard et al., 2000; Cronin-Jones, 1991; Green et al., 2020; Jo McDonough, 1997; Salazar et al., 2010; Zeni, 1998).

Based on the needs analysis results, there was an excellent need for YouTube-based interactive learning materials in terms of the material's attractiveness and ease of access. That can

be downloaded anytime when there is a signal, and its completeness as teaching materials supports the current learning model at Terbuka university.

The following are electronically integrated teaching materials that utilize Google Drive as a storage and sharing medium for Terbuka University students as a support in making learning videos linked on the YouTube Channel, which are free to download anytime and anywhere.

In asynchronous learning, students are encouraged to work independently. There are no group lessons, only weekly assignments, and deadlines for each to complete. This self-study method lets students know their structure and schedule but offers far less group interaction and communication with the teacher.

Teaching Material Link: https://bit.ly/MicroteachingYoutube, The following is the YouTube account used for student learning in this study:
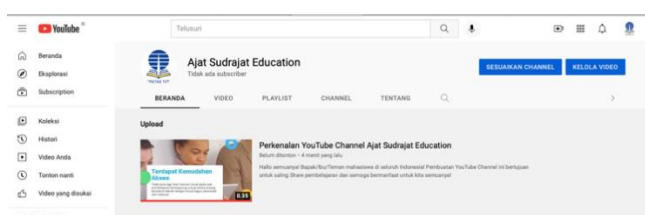

Figure 10. YouTube account

Following findings as to the impact of dissemination to students: 1)Pretest data for the group of students who listened to the product; 2) Post-test data for the group of students who listened to the product; 3)Student group pretest data as control; 4) Student group post-test data as control. The test results were conveyed whether the difference in the mean of the four groups of data was significant or not:

t-test dependent pretest-posttest group of students who listened to the product

Table 1. Paired Samples Test

| | | Paired Differences | | | | | | | |
| | | | | | 95% Confidence Interval of the Difference | | | | |
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	POSTTESTEKS - PRETESTEKS	.3000	7.44846	1.05337	-1.81683	2.41683	.285	49	.777

The result was t count = 0,285 with t table(0,05;49) = 1,676, so t table < tcount < ttable. It meant that there was a significant increase in the basic teaching ability of Terbuka University students (Posttest) compared to before listening to the product (Pretest).

t-test dependent pretest-posttest group of students who did not listen to the product

Table 2. Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	POSTTESTKON - PRETESTKON	15.4643	13.00484	1.73785	11.98157	18.94701	8.899	49	.000

The results obtained t count = 8.899 with t table (0.05;49) = 1.676, so there was no increase in basic teaching skills in Terbuka University students (Posttest) compared to the Pretest.

Independent t-test group of students who listened to the product and those who did not listen to the product.

Table 3. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
POST TEST	Equal variances assumed	1.405	.242	2.69	48	.010	5.44000	2.02139	1.37573	9.50427
	Equal variances not assumed			2.69	45.8	.010	5.44000	2.02139	1.37071	9.50929

The results obtained were t count = 2.691 with t table(0.05;48) = 1.67, so t count > 1.66. It meant that there was a significantly difference in the basic teaching abilities of Terbuka University students who listened to the product compared to those who did not.

Results from independent t-test

Table 4. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
GAIN	Equal variances assumed	17.217	.000	5.956	48	.000	21.76000	3.65322	14.41471	29.10529
	Equal variances not assumed			5.956	32.85	.000	21.76000	3.65322	14.32623	29.19377

The results obtained were t count = 5.956 with t table(0.05;48) = 1.67, so t count > 1.66. This meant that the product was proven to be effective in significantly improving the basic teaching skills of students at Terbuka University.

Based on the effectiveness test results, it was found that the product could significantly improve students' teaching abilities in micro-teaching courses. This was also supported by research conducted by Orus et al. (2016) and Kanuka (2006) which stated that student-generated

content and the use of YouTube as a teaching tool positively impact learning outcomes and student satisfaction. In addition, there was a research conducted by Casey & Goodyear (2015) and Khan (2017) suggested that learning videos on YouTube are not only able toimprove students' abilities in learning pieces that rely on calculations and memorization, but also improve their abilities in the physical field (skills). Of course, that research was also very supportive of the present research. In this study, what was measured as the effectiveness of the YouTube Channel learning product on students' teaching abilities, which skills? This can be a reference for increasing students' abilities in other subjects or even student practicum skills, mainly when the Covid-19 pandemic occurs.

Distance learning can be very effective, especially for participants who are more mature, have a solid motivation to pursue success, and like to be trusted to carry out the learning process independently. However, the success of the distance learning in which it abandons sticking to a schedule as in the face-to-face learning process, is a challenging choice for both instructors and students. Distance learning requires a different planning, design, course delivery, and communication approach. Participants need self-motivation to initiate and develop persistence and skills in self-directing work. Instructors will develop and use new methodologies and learning styles, from direct instruction to managing learning strategies, supporting learners, facilitating distance debate, and disseminating information and views. The distance learning process presents several elements of the facilitated and individualized learning process.

Conclusion

Based on the results and discussion obtained, this study concluded that an engaging online learning system is urgently needed, does not require a good signal with an urgent time, and can be learned anytime and anywhere. This indicates that YouTube channel learning videos are indispensable in supporting the current learning model implemented at Terbuka University. The YouTube channel learning video product was proven effective in improving students' teaching skills in microteaching courses. This proved that learning videos can also be used to improve students' practical skills, not just numeric or student memorization. Therefore, it is recommended for lecturers or teachers at schools to be able to complete their learning media by using videos that are integrated with YouTube to maximize the improvement of students' abilities. The novelty of this research was that lecturers who had difficulty explaining and improving students' microteaching learning skills can use YouTube videos in their use.

References

Ã, K. E. O. C. (2008). "" You choose to care "": Teachers , emotions and professional identity. 24, 117–126. https://doi.org/10.1016/j.tate.2006.11.008

Alsop, S., Dippo, D., & Zandvliet, D. B. (n.d.). Journal of Education for Teaching: International research and pedagogy Teacher education as or for social and ecological transformation: place - based reflections on local and global participatory methods and collaborative practices. December 2014, 37–41. https://doi.org/10.1080/02607470701259499

Beijaard, D., Verloop, N., & Vermunt, J. D. (2000). *Teachers' perceptions of professional identity: an exploratory study from a personal knowledge perspective.* 16.

Bersin, J. (2004). *The Blended Learning Book: Best Practices, Proven Methodologies, and Lessons Learned.* San Francisco: John Wiley & Sons.

Brook;Jennifer. (2011). The Affordances of YouTube for Language Learning and Teaching Jennifer Brook What is YouTube? *Hawaii Pacific University TESOL Working Paper Series, 9*(1,2), 37–56.

Casey, A., & Goodyear, V. A. (2015). Can Cooperative Learning Achieve the Four Learning Outcomes of Physical Education? *A Review of The Literature. Quest,* 67(1), 56-72.

Clifton, A., & Mann, C. (2011). Can YouTube enhance student nurse learning? *Nurse Education Today, 31*(4), 311–313. https://doi.org/10.1016/j.nedt.2010.10.004

Cronin-Jones, L. L. (1991). Science teacher beliefs and their influence on curriculum implementation: Two case studies. *Journal of Research in Science Teaching, 28*(3), 235–250. https://doi.org/10.1002/tea.3660280305

Faiqah, F. (2016). Youtube Sebagai Sarana Komunikasi Bagi Komunitas Makassarvidgram. KAREBA: Jurnal Komunikasi, 5(2).

Fleck, B. K., Beckman, L. M., Sterns, J. L., & Hussey, H. D. (2014). YouTube in the Classroom: Helpful tips and student perceptions. Journal of Effective Teaching, 14(3), 21-37.

Green, J. K., Burrow, M. S., & Carvalho, L. (2020). Designing for Transition: Supporting Teachers and Students Cope with Emergency Remote Education. *Postdigital Science and Education, 2*(3), 906–922. https://doi.org/10.1007/s42438-020-00185-6

Hamalik, O. 2009. Pendidikan Guru. Jakarta: PT Bumi Aksara.

Holland, M. (2016). How YouTube developed into a successful platform for user-generated content. Elon Journal of undergraduate research in communications, 7(1).

Jo McDonough, S. M. (1997). *Research Methods for English Language Teachers Hodder Arnold Publication 1997.pdf* (hal. 1–138). Great Britain.

Kanuka, H. (2006). Instructional Design and eLearning: A Discussion of Pedagogical Content Knowledge as a Missing Construct. *E-Journal of Instructional Science and Technology, 9*(2), 1–17.

Khan, M. L. (2017). Social media engagement: What motivates user participation and consumption on YouTube? *Computers in Human Behavior, 66,* 236–247. https://doi.org/10.1016/j.chb.2016.09.024

Kwartolo, Y. (2010). Teknologi informasi dan komunikasi dalam proses pembelajaran. *Jurnal Pendidikan Penabur,* 14(9), 15-43

Lacey, K., & Wall, J. G. (2021). Video-based learning to enhance teaching of practical microbiology. *FEMS Microbiology Letters, 368*(2), 1–10. https://doi.org/10.1093/femsle/fnaa203

Orús, C., Barlés, M. J., Belanche, D., Casaló, L., Fraj, E., & Gurrea, R. (2016). The effects of learner-generated videos for YouTube on learning outcomes and satisfaction. *Computers & Education*, 95, 254-269

Park, K. A., Bavis, J. P., Nu, A. G., & Park, K. A. (n.d.). *Branching Paths: A Novel Teacher Evaluation Model for Faculty Development Department of English , Purdue University Center for Faculty Education , Department of Educational Psychology , Quad City University Author Note James P . Bavis is now at the MacLe.*

Pattier, D. (2021). Teachers and youtube: The use of video as an educational resource. *Ricerche di Pedagogia e Didattica*, *16*(1), 59–77. https://doi.org/10.6092/issn.1970-2221/11584

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, *2*(3), 923–945. https://doi.org/10.1007/s42438-020-00155-y

Reina, A., García-Ortega, H., Hernández-Ayala, L. F., Guerrero-Ríos, I., Gracia-Mora, J., & Reina, M. (2021). CADMIO: Creating and Curating an Educational YouTube Channel with Chemistry Videos. *Journal of Chemical Education*, *98*(11), 3593–3599. https://doi.org/10.1021/acs.jchemed.1c00794

Rohwer, A., Young, T., & Van Schalkwyk, S. (2013). Effective or just practical? An evaluation of an online postgraduate module on evidence-based medicine (EBM). *BMC Medical Education*, *13*(1). https://doi.org/10.1186/1472-6920-13-77

Salazar, D., Aguirre-muñoz, Z., Fox, K., & Nuanez-lucas, L. (2010). On-line Professional Learning Communities: Increasing Teacher Learning and Productivity in Isolated Rural Communities. *Journal of Systemics, Cybernetics and Informatics*, *8*(4), 1–7.

Shaw, D. (2017). Accomplished teaching: Using video recorded micro-teaching discourse to build candidate teaching competencies. *Journal of Interactive Learning Research*, 28(2), 161-180.

Suparman, M Atwi. 2012. *Desain Instruksional Modern.* Jakarta: Penerbit Erlangga

Taşdelen, B. (2019). Views of Instructors Teaching in Open and Distance Learning About Learning Applications: The Use of Youtube as A Learning Source in Open and Distance Education. *The Journal of International Scientific Researches*, *4*(3), 234–240. https://doi.org/10.23834/isrjournal.621402

Widayat, W., Praharjo, A., Putri, V. P., Andharini, S. N., & Masudin, I. (2022). Responsible Consumer Behavior: Driving Factors of Pro-Environmental Behavior toward Post-Consumption Plastic Packaging. *Sustainability (Switzerland)*, *14*(1). https://doi.org/10.3390/su14010425

Zeni, J. (1998). A guide to ethical issues and action research. *Educational Action Research*, *6*(1), 9–19. https://doi.org/10.1080/09650799800200053.