

# The Use of Virtual Media to Improve Teaching Abilities for Pre-Service Teachers

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**Abstract**—Students in implementing school field introduction (PLP) often face teaching practice problems. Teaching practice skills are speaking skills in front of the class that is absolutely a need for students, especially FKIP students who will mainly become teachers in schools. This study aims to determine the possibility of using virtual media in improving student teaching skills. This study uses a literature study method from various sources related to virtual media and its relationship with increasing teaching skills and practices. In the end, this article reveals that the use of virtual media can be used to reduce student fear, nervousness, anxiety, fear of mistakes, and stage fright during microteaching or the teaching practice process.

**Keywords**—Virtual, Teaching ability, Microteaching, School Field Introduction (PLP).

## I. INTRODUCTION

The Education Personnel Education Institute (LPTK) conducts a teacher procurement program that includes academic education or the Bachelor of Education Program and the Teacher Professional Education Program (PPG). To foster readiness as prospective educators, students are given an apprenticeship program in schools, namely Introduction to School Fields, hereinafter referred to as PLP. PLP itself is an observation process carried out to study aspects of learning and management of education in educational units. One of the aspects that exist in PLP is an apprenticeship, namely teaching exercises in real classrooms at established partner schools. The thing that needs to be mastered in this practice is the ability to speak or public speaking in front of the class.

Fear is a common obstacle that students usually encounter when implementing PLP. From the results of unstructured initial observations, several problems

were found that needed more serious treatment. First, for students of Economics Education FKIP University of Lampung in semester VI, fear, anxiety, and stage fright are some of the problems most students face. From the results of the lecturer interviews, it was explained that this was true. Even though presentation exercises are routinely carried out at every meeting, students always experience nervousness which in the end can disrupt teaching materials, argumentative and coherent thinking patterns. This is certainly not very good considering that students of Economics Education FKIP University of Lampung are prospective teachers who will later go into schools and the community. Second, the teaching of microteaching courses as a prerequisite course for PLP is quite good and maximal, it's just that the teaching media is more centered on teaching practice with the audience as students, namely peers or classmates which is carried out in the microteaching laboratory.

From the explanation above, the spirit of this research is to develop a learning media based on the latest technology so that it can train and stimulate a student's self-confidence to increase readiness. In the world of technology, there is a very rapid development whose benefits can be felt in various sectors of life. One that is popular and interesting among teenagers is virtual reality (VR) based technology. The choice of VR-based learning media in this study is because apart from not being widely used in education, this technology can help students train their teaching skills to simulate a real or abstract classroom environment as a three-dimensional field.

This environment can be in the form of a group of audiences, namely virtual students where students seem to be in a real class or other similar environments. With this VR technology-based media, students can choose

any event they need. Students can also train independently without having to have many people with real sensations. Based on the explanation above, this paper takes the title "*The Use of Virtual Media to Improving Teaching Abilities for Pre-service Teachers*".

## II. LITERATURE REVIEW

### A. *Virtual Reality Media (VR)*

Media can be said as a tool or object used by the sender to the recipient to convey messages or information so that the recipient's understanding of something received will be following what was conveyed. According to Smaldino, Russell, Heinich, and Molenda (2005: 9) media is a means of communication and a source of information. Media can be said as learning media when it can provide messages with instructional purposes, for example, including videos and computer programs [1].

The function of learning media according to Billett (1996) is as a solution for training facilities in learning [2]. Apart from being a means of training and learning, according to (de Siqueira et al., 2016) Learning media with a focus on digital media can allow for fostering language skills, creativity, critical reading, and improving technical skills. The need for learning innovation can be done by developing learning media [3].

One of the learning media that can be used is virtual media. Virtual media in developed countries are starting to be widely used for learning and research. As stated by (Yi Xiao, 2000) using virtual learning media to enrich student experience has become the focus of many researchers [4]. (Burgess & Ice, 2011) of virtual learning is that virtual learning can be used by students to build individual and personal knowledge [5].

### B. *Introduction to the School Field (PLP)*

PLP is one form of educational reconstruction carried out by the Educational Personnel Education Institution (LPTK) in organizing the Bachelor of Education Program through the issuance of Permenristekdikti Number 55 of 2017. Namely, PLP is a process of observation and apprenticeship conducted by students of the Bachelor of Education Program to study aspects of learning and management of education in education units. PLP is a stage in the process of preparing professional teachers at the Bachelor of Education level, in the form of assignments to students to implement learning outcomes through observing the learning process in schools/educational institutions, training in developing learning tools, and guided teaching and learning, as well as accompanied by reflective actions under the guidance and supervision of supervising lecturers and tutor teachers in stages. Introduction to School Field I (PLP I) is the first stage in the Introduction to School Fields for the Bachelor of Education Program, which is carried out in the third or

fourth semester. As the first stage, after PLP I, it will be continued with Introduction to School Field II (PLP II) in the higher semester.

PLP participants will not only teach but also educate. This education intends to instill moral values in students. To be able to educate, guidance is also needed that leads to the psychology of students and directs them physically. This is to achieve maturity in students physically and spiritually. PLP courses have a minimum weight of 4 (four) credits, which include:

- Planning; carried out by students under the guidance of Advisory Lecturers and Civil Service Teachers,
- Implementation; at Partner Schools in education units,
- Reporting the results of observations,
- Assessment and direct feedback; carried out by the Advisory Lecturer and the Civil Service Teacher.

## III. METHOD

The method used in this study is the literature review method, which is discussed systematically, specifically, which can identify, evaluate and synthesize as well as fully record the knowledge found by researchers, scientists, and practitioners. This method is used to collect relevant data about virtual media sourced from books, articles, and research journals published from 2000-2014.

There are seven stages in the preparation of this article, namely, determining the purpose of writing, selecting sources, selecting keywords, conducting a literature search, determining the criteria for inclusion of articles to be used, selecting references based on the criteria, and finally synthesizing the results. Data searches were conducted through Google Scholar, Research Gate, Science Direct, and Ebsco. From the search results, it is known that virtual media is useful in improving the teaching abilities of prospective.

## IV. RESULTS AND DISCUSSION

### A. *Results*

#### 1) *The Advantages Of Virtual Media*

Virtual media makes learning efficient. This was stated by Parson and Bignell (2015: 243) who said that virtual media can facilitate learning in many ways can be very effective teaching of virtual learning [6]. This is in line with the opinion according to Bojanova and Pang (2015: 216) virtual provides a place to support social networking, entertainment, business activities, and education [7]. VR technology can improve the students' abilities and gain the interest in learning by using generative learning strategies The advantages of virtual media according to Smaldino, Russel, Heinich, and Molenda (2005: 146) are as follows [1]:

- Safety
- Expansive
- Opportunities

Another advantage of virtual media is also stated by Widyarto and Latiff (2007: 284) virtual learning is a very cost-effective alternative [8]. The cost savings are because learning can be done only in the classroom but can present it as if it were in the place of the incident directly. According to Bojanova and Pang (2015: 255) through virtual media students can gain valuable learning experiences through exploration, self-discovery, and in particular, conducting experiments which if carried out in the real world take years to implement [7].

### 2) *Virtual media limitations*

Information and communication technology provides various possibilities to improve the quality of learning. The use of ICT can be utilized to improve and develop the professional abilities of lecturers/teachers, as a learning resource in learning, as a learning interaction aid, and as a learning platform [9]. One of the efforts to improve the quality of learning through the use of ICT in learning is the application of virtual online-based learning media.

In addition to the advantages provided, there are several limitations of virtual media, including the following,

- Problems with access to the Internet
- It is difficult to make students responsible for the learning process
- There is a need for training and technical assistance in its use for learning activities
- Information technology cannot replace the presence of other living things
- The use of virtual online-based media is too effective for productive skills and attitude development.

Or in its application we can conclude into 3 main limitations, namely:

- Cost
- Complexity
- Limited titles

### 3) *Virtual Media Development Function*

Virtual media not only can attract new worlds but also can improve the quality of education by unlocking more learning potential than ever before. Given that reading books or just listening to the subject matter delivered often feels boring, the use of VR for education is very appropriate to make lessons come alive, and this is something that deserves to be prioritized in the world of education today considering the younger generation.

This student is more interested in learning using technology media than just using traditional media. VR allows learning to tap into the emotional core of students in new and exciting ways.

The purpose of developing virtual media according to Bojanova and Pang (2015: 235) is that virtual is carried out to fulfill pedagogical learning becomes interesting, interactive and supports students in seeking experiences [7]. According to Parson and Bignell (2015:243), the learning process will be easier when using virtual learning so that it can improve students' ability to understand the subject matter and the objectives of learning can be achieved [6].

## *B. Discussions*

### *1) Media Virtual Reality*

Virtual Reality is a powerful technology to solve today's world problems. For educational purposes in general, virtual reality has been proposed as a significant breakthrough to help the learning process. This technology can help create interactive simulations for users to experience the environment as in real situations. This makes users think as if they were present even though it was only virtual.

VR-based technology is still very rarely used in the world of education. Given the enormous benefits of VR technology, it will be very possible if this technology is applied, one of which is in the development of public speaking skills. Previous research was conducted by Mel Slater et al. a group of researchers from a joint university in London, the UK in their article "An Experimental Study on Fear of Public Speaking Using a Virtual Environment" [10]. This research applies virtual environment technology, a type of technology that almost resembles VR technology, only the reality that appears is less real than VR. The results of this study found that this technology can train students to reduce nervousness, anxiety, and stage fright when doing public speaking activities.

### *2) PLP Readiness Efforts Using Virtual Reality Media*

The Introduction to Schooling Environment course is a learning tool that will lead undergraduate education students to recognize, observe, study, analyze aspects of education which can include learning planning, learning processes, assessment of learning outcomes, analysis of learning outcomes, reporting learning outcomes, education management, education administration, teaching, and educational staff as well as educational relations with the community and government. After participating in PLP activities, students are expected to be able to strengthen their academic competence in education and fields of study accompanied by critical thinking skills and higher-order thinking skills through the following activities:

- Examine the curriculum and learning tools used by teachers;

- Reviewing the learning strategies used by the teacher;
- Examine the evaluation system used by teachers;
- Assisting teachers in developing lesson plans, learning media, Student Activity Sheets, teaching materials, and evaluation tools;
- Examine the use of information and communication technology in learning;
- Teaching exercises with the guidance of civil servant teachers and PLP supervisors, to experience the learning process firsthand, as well as strengthening the identity of prospective educators;
- Carry out the tasks of mentoring students and extracurricular activities; and
- Assisting teachers in carrying out the tasks of teacher administration work.

A minimum of one author is required for all conference articles. Author names should be listed starting from left to right and then moving down to the next line. This is the author sequence that will be used in future citations and by indexing services. Names should not be listed in columns or group by affiliation. Please keep your affiliations as succinct as possible (for example, do not differentiate among departments of the same organization).

With this Virtual Reality media, FKIP students who are prospective students can do teaching exercises. This virtual reality media is an effort that is very suitable to minimize the concerns experienced by students during the implementation of the teaching practice process.

#### V. CONCLUSIONS

Apprenticeship activities that must be passed by prospective teachers require a high sense of self-confidence. This is useful for minimizing fear during real teaching practice. One aspect that must be

considered during apprenticeship is the public speaking of prospective teachers.

In the development of increasingly modern technology, virtual reality-based virtual media is very helpful in improving students' public speaking, especially in the field of education. Even so, this media is still very rarely used. If the prototype of this virtual-based micro-teaching model is developed, it can help the readiness of prospective educators before entering the educational environment when the apprenticeship is carried out.

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