

DEVELOPMENT DESIGN OF VIRTUAL REALITY FOR OPENING CRIMINAL TRIAL SIMULATION IN LEGAL PRACTICE COURSES

**Madiha Dzakiyyah Chairunnisa¹, Purwaningdyah Murti Wahyuni², Megafury
Apriandhini³, Nadia Nurani Isfarin⁴, Avelyn Pingkan Komuna⁵, A. Rachmat
Wiarawan⁶**

^{1, 2, 3, 4, 5, 6}Universitas Terbuka (INDONESIA)

Abstract

Legal Practice Courses as a practical course in the Law Study Program of FHSIP Universitas Terbuka. This course aims to hone students' high-level skills through solving various legal cases or what is known as High Order Thinking Skill, which is abbreviated as HOTS. In addition, this course aims to hone students' skills in compiling various documents in court proceedings as well as mastering debating techniques in the answer process in court. Another basic thing that is equally important is to provide students with understanding and experience on how the trial goes. Students need to understand that the course of the trial must comply with legal rules or guidelines (both the Criminal Procedure Code and the Civil Procedure Code). Presenting a trial simulation learning experience directly during a pandemic is a challenge for lecturers of the Practice Experience course in the Legal Studies Program. If at normal times, students can make direct observations at court hearings, then during a pandemic, students make indirect observations through various broadcasts and online trial documentation. To answer these challenges, there needs to be a breakthrough by using artificial intelligence in the form of virtual reality in practical experience courses. The use of virtual reality is focused on simulating the opening of a trial in which several roles are played, including the Registrar, the Panel of Judges, the Defendant, the Public Prosecutor, and Legal Advisor. With the simulation using virtual reality, it is hoped that students will find it easier and clearer to understand the flow of the trial and provide a different, higher quality experience than just making observations online through various broadcast media.

Keywords: virtual reality, trial simulation, legal practice courses

1 INTRODUCTION

The practice of legal proficiency is a must (*conditio sine qua non*) for every student who has entered the last semester of the law study program to achieve learning outcomes to provide mastery of the concepts and practice of resolving legal cases both in litigation and non-litigation. The Law study program of Universitas Terbuka has offered courses in Practice Experience using 2 learning models, direct observation to courts and online tutorial practice. In the learning process students are provided with guidelines in the Legal Experience Practice. However, to further hone the skills of students in the procedural process, it is necessary to have a procedural simulation to provide a complete understanding and picture of the actual procedural practice.

The impossibility of implementing face-to-face learning during the Covid-19 pandemic finally forced stakeholders in the education sector to issue policies to carry out online learning where this learning certainly requires the use of information technology as the medium. Universitas Terbuka as a pioneer of open and distance higher education has used technology for a very long time in the implementation of learning. One form of the learning model at Universitas Terbuka besides face-to-face is by opening an asynchronous online tutorial service.

As explained above, in normal situations students can carry out direct observations at court, but when the Covid pandemic broke out students were only given the option of indirect observation through various media and online documentation of the trial process. So, to answer this challenge, a breakthrough is needed by utilizing artificial intelligence in the form of virtual reality in practical experience courses. The use of virtual reality is planned to be focused on simulating the opening of a criminal trial in which there will be several roles played including the role of Registrar, Council Judge, Defendant, Public Prosecutor and Legal Counsel. Of course, this will be an interesting experience that has never existed in practical learning before.

2 METHODOLOGY

The research method in this article is based on action research (participatory actions research) (M. Atwi Suparman, 2005) which combines legal research and research in the education sector. This inductive-deductive study is to find certain criteria in the analysis of designing virtual reality applications in learning legal practice for prospective law enforcement students. This research has a goal to produce a product that is novel and then test the effectiveness of the product. The steps of the research consist of three stages, namely:

- 1) Pre-production which includes the concept, design, or initial design. This stage begins with the define stage which contains various steps of background analysis and problem formulation. Next, a flowchart design (Heldina, 2021) and a moodboard are made. Flowcharts contain flowcharts that describe the steps and sequences to carry out a process in a program. While the Moodboard is a composition of images, visuals, and objects to be created.
- 2) Production Phase, starting the development of virtual reality applications.
- 3) Post-Production Stage, after the application is completed, a trial is carried out on students of the UT FHSIP Law study program.

3 FINDINGS AND DISCUSSION

3.1 Virtual Reality

One form of technology that is starting to be widely used in learning is the use of Virtual Reality (VR) technology. VR itself is a technology that allows users to interact with the virtual world environment, so that users feel like they are in that environment (K.G. Herlangga, 2016). The experience felt by the user is like being in the real world even though it is only a virtual display. This is because VR is a computer-based technology that combines special input and output devices so that users can interact deeply with the virtual environment as if they were in the real world. (Antoni Musril Day, 2020).

This technology is proven to be able to make the learning process more effective, efficient, and very timesaving. VR technology can be said as a way in which several illustrations and learning images appear in the form of three-dimensional media or better known as 3D. By using VR, hoped that the concept of interacting in the learning process will become easier. Even several studies that have been conducted by several researchers reveal that now only with a smartphone and the help of Google Cardboard can display the world of virtual reality (Soni, 2020). With VR, students will be taken to another dimension whose visuals resemble the original form as in the real world when in fact they are still in the same place.

VR as a learning media will have a contribution to improve student learning, especially for students at Universitas Terbuka law study programs. The use of VR as a tool in the learning process will attract the attention of students so that it can increase learning motivation besides that the learning methods will be more varied, making students not bored because with VR students are able to feel how the trial simulation is even though they are not in real court.

3.2 Practical Experience In Court Proceedings as a Practical Course in the FHISIP UT Law Study Program

Practical Experience In Court Proceedings is a learning activity with experience (experimental learning) for students to apply various knowledge, attitudes, and skills in learning as a whole and integrated in real situations. This course has 4 credits. Every student of the FHISIP UT Bachelor of Law study program is required to carry out the Legal Experience Practice (PPB). PPB is implemented through two modes, namely direct observation and through online practice or known as praton. Students are given the choice of whether to use the mode of going directly into the field or through online practice.

The practice material for procedural experience is more emphasized on practical material in the form of procedural stages, legal documents, and the latest cases in various fields of law. Legal documents used as lecture materials can be used, among others, to:

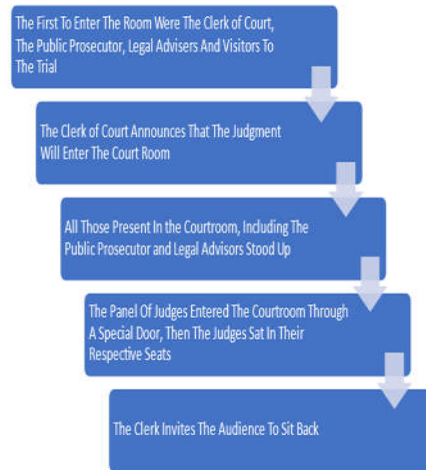
1. Explain the format of certain legal documents that apply in the world of legal practitioners.
2. Indicate what elements are needed in the preparation of a legal document, and what their functions are.
3. Examine the legal terminology used in it.
4. Shows the weaknesses and strengths of a document compared to similar documents produced by different institutions/people.
5. Demonstrate how to obtain facts and legal provisions for the preparation of certain documents.
6. Make an analysis of a legal issue disclosed in a document.

33 Virtual Reality Development Design Simulation Opening of Criminal Trials

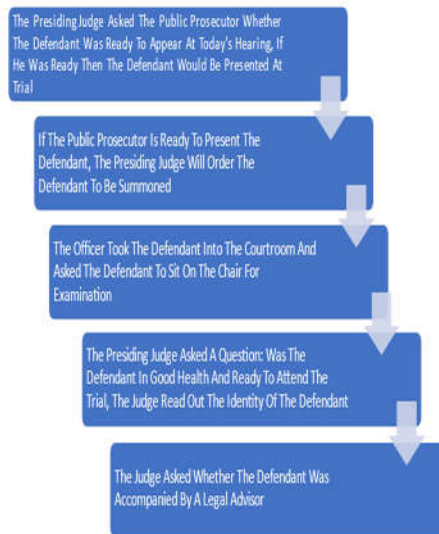
In its development, Virtual Reality for simulating the opening of early criminal trials begins with an initial design by creating a scenario of the opening stages of a criminal case trial, establishing the roles that will appear in the VR consisting of three judges, prosecutors, defendants, advisers, lawyers, witnesses, and clerks. In addition, the concept of the shape of the courtroom that will be used is also designed.

The following steps will be carried out in the process of opening a criminal trial:

- a) On the day of the trial that has been determined by the judge/judge panel, the trial for examining criminal cases is opened. The procedure is as follows: The Panel of Judges Entering the Courtroom:

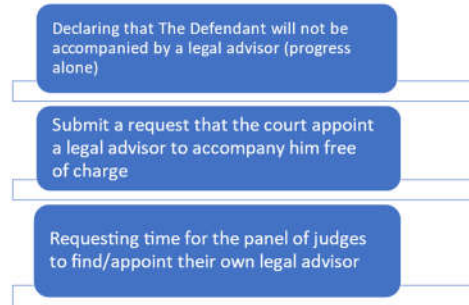


b) Calling the Defendant to Enter The Courtroom

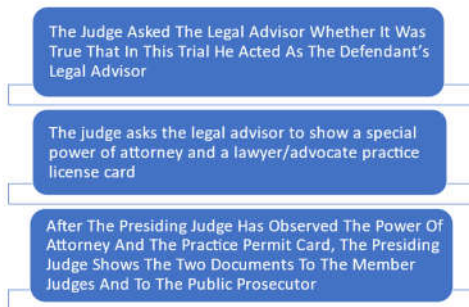


c) Legal Counsel Confirmation

If the defendant is not accompanied by a legal advisor, the judge affirms the right of the defendant to be accompanied by a legal advisor, then the judge gives the defendant the opportunity to take the following positions:



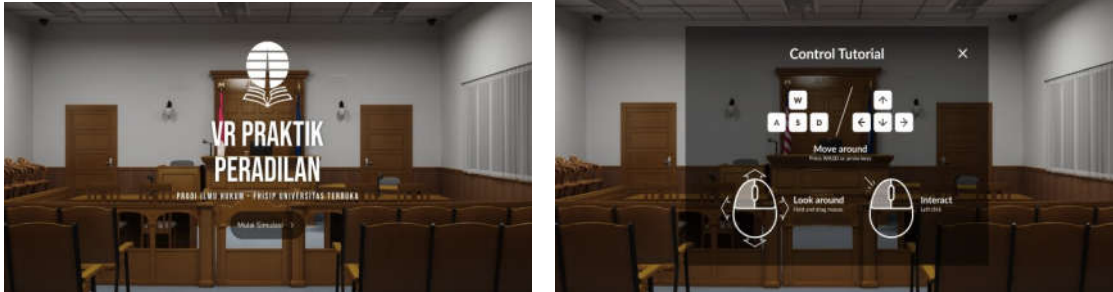
If the defendant is accompanied by a legal advisor, the next process is:



The following are story guidelines for scenarios for the Judicial Practice Virtual Reality application

1. User Guide

At this stage the user is presented with information by the system so that he can operate the VR Tour Website. Some of the information includes: Welcome page and user control.



2. Explanation of The Role in Judicial Practice

At this stage, the user will see an explanation of what roles are in a Judicial Practice, along with a description of each of the clothes worn. Users can view information from each role, there are 3D people with their respective clothes accompanied by information. The roles include Courtroom Officers, Registrars (Clerk), Chief Judge, Public Prosecutor, and the Defendant.

3. Gamification 1 – Role Determination Quiz

At this stage, the user will be presented with an explanation/case study, then answer what role is appropriate in the description of the question. After answering correctly, the user will run the scenario according to the answer from the user.



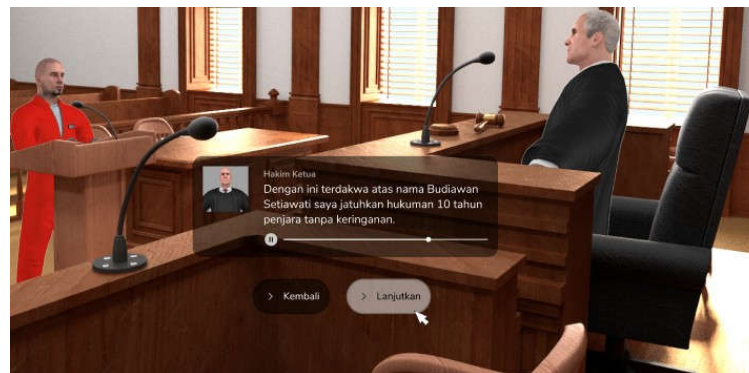
4. Gamification 2 - Material Comprehension Quiz

At this stage, the user will get one question regarding the basic concept of Judicial Practice in the form of multiple choice to hone the knowledge possessed by the user.



5. Closing

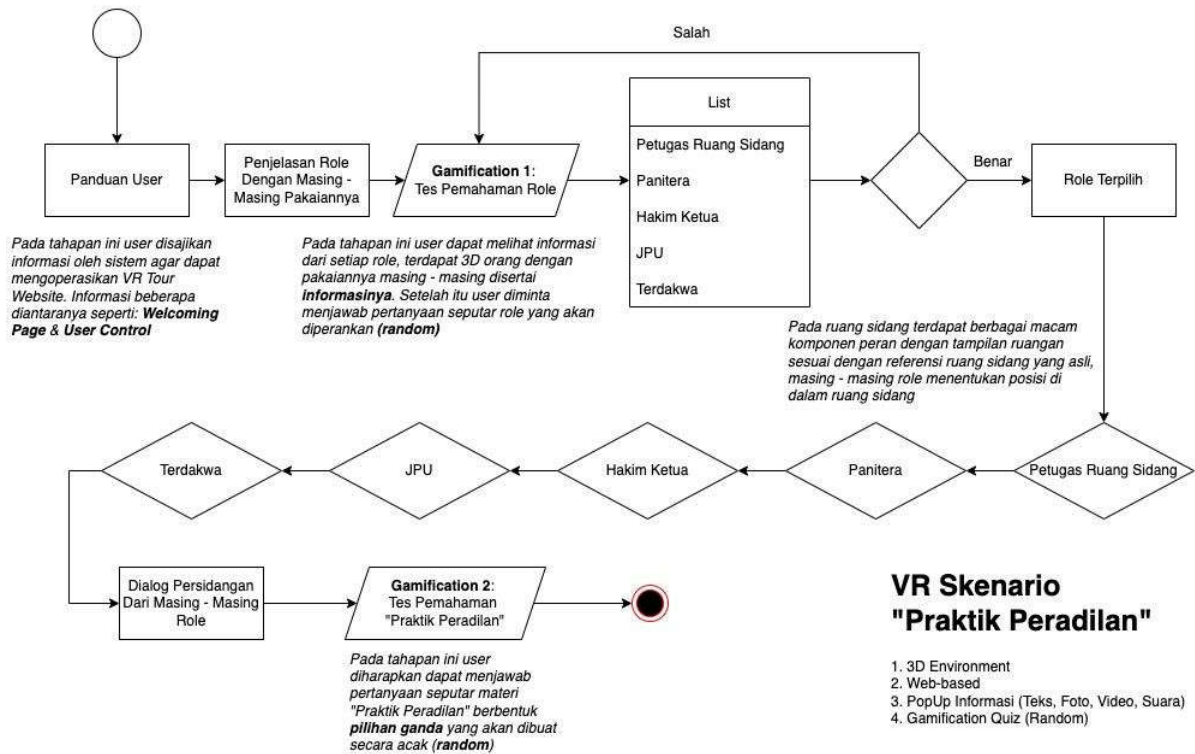
This stage is the final stage for the user to perform a VR scenario of Judicial Practice. Users will be given the option to end the scenario, or start again from the beginning with a different role choice



Flowchart & Moodboard

1. Flowchart

Berikut adalah gambaran dari aplikasi VR Praktik Peradilan yang akan dibangun:



2. Moodboard

The following is an overview of the Judicial Practice VR application that will be built:



With the simulation using virtual reality, it is hoped that students will find it easier and clearer to understand the proceedings of the trial and provide a different, higher quality experience than just making online observations through various broadcast media.

4 CONCLUSION

The applied approach to the Legal Studies Program has used several subject instruments. It begins with procedural law courses that study examination procedures in court (criminal and civil). The procedural law course focuses on theory and procedural processes along with its developments. As an effort to take a more applicable approach, courses in Event Experience Practice are provided. In the Practical Experience course, students will be faced with cases that exist or are designed to then analyze and prepare legal documents.

In its development, in helping students understand the practice of event experience, learning media are developed that utilize technological developments in the form of virtual reality (vr) simulations of opening criminal trial trials. it is hoped that students will be able to better understand the concept of learning in the practice of trial experience, especially the proceedings or trial processes that apply in indonesia and be able to experience the process as in the real world even though it is in a simulation in cyberspace through virtual reality

ACKNOWLEDGEMENTS

In developing this judicial practice virtual reality application, the legal study program through the PRIPTJJ research assignment has collaborated with vendors who are able to provide and develop virtual reality. The vendor that is partnered with is smarteye.id which is under the company pt. Metranet. Smarteye.id, as a service company that focuses on developing augmented reality (AR) and virtual reality (VR)

REFERENCES

- Heldina G. Almira, Azwardi, Mustaziri. (2021). *Penggunaan Teknologi Virtual Reality pada Media Pembelajaran Mata Kuliah Fotografi Dasar*. Jurnal Laporan Akhir Teknik Komputer Vol. 1 No. 2.
- Hari Antoni Musril, Implementasi Teknologi Virtual Reality pada media pembelajaran perakitan komputer, Jurnal Nasional Pendidikan Teknik Informatika : JANAPATI Vol .9 Nomor 1, Maret 2020).
- Harkrisnowo, H. (1995). Beberapa Catatan Mengenai Mata Kuliah Pendidikan dan Latihan Kemahiran Hukum. *Hukum dan Pembangunan*, 399-407.
- Herlangga, K. G. (2016). Virtual Reality dan Perkembangannya. Retrieved from Codepolitan:<https://www.codepolitan.com/virtualreality-dan-perkembangannya>.
- Nazir. Mohammad. (1985). *Metodelogi Penelitian*. Jakarta: Ghalia Indonesia
- Reksodiputro, M. (1994). Laboratorium Hukum Sebagai Wadah "Pendidikan kemahiran Hukum" "Pendidikan Hukum Dengan Pendekatan Terapan" Dan "Penulisan Hukum". *Hukum dan Pembangunan*, 485-490.
- Sihombing, U. P. (2014). *Pendidikan Hukum Klinis (Clinical Legal Education) Dalam Implementasi UU Bantuan Hukum*. Jakarta: The Indonesian Legal Resources Center.
- Suparman, M. Atwi. (2005). Desain Instruksional. *"PEKERTI Mengajar di Perguruan Tinggi*. Dirjen Dikti. Pusat Antar Universitas untuk Peningkatan dan Pengembangan Aktivitas Instruksional
- Ariatama. Soni dkk. (2020). Penggunaan Teknologi *Virtual Reality* (VR) sebagai Upaya Eskalasi Minat dan Optimalisasi Dalam Proses Pembelajaran Secara *Online* Dimasa Pandemi. Semnas FKIP 2021, SEMINAR NASIONAL PENDIDIKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN, Universitas Lampung 16 Februari 2021, Bandar Lampung.
- Tri Fardani. Afri (2020). Penggunaan Teknologi Virtual Reality Untuk Sekolah Menengah Pertama Pada Tahun 2010-2020. E-Tech, Volume 08 Number 01 2020. ejournal.unp.ac.id

