Virtual Reality Based Hypermedia Training for Teachers of MAN 2 Model Makassar

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Abstract

This Community Service Activity (PKM) aims to; (1) provide an introduction to teachers at MAN 2 Model Makassar regarding Virtual Reality learning media as an alternative IT-based learning media, and (2) train MAN 2 Model Makassar teachers to be able to utilize Virtual Reality-based learning media. The methods applied in this service program are the presentation method, the demonstration method, and the practical method. The presentation method is applied in the introduction of hypermedia software using the millers lab application, its benefits, and its application in making virtual reality-based media, demonstration methods regarding program operations and practical methods where teachers practice directly making learning media according to their respective subjects with the use of media-based virtual reality.

Keywords: Virtual Reality; Hypermedia; Technological Innovation; Covid 19 Pandemic

Introduction

In 2020 the whole world is experiencing the Covid-19 pandemic. The Covid-19 pandemic is crisis stricken health almost throughout corners of the world (Purwanto et al, 2020; Sholihin et al, 2020). Pandemic This impact on various fields, for one in education. To overcome plague Covid-19 pandemic all countries apply A the action of one with do social distancing movement viz distance designed social for reducing insider interactions more community widely (Tillman et al, 2019; Wilder et al, 2020). With there is social distancing then learning at school becomes hampered or not Can done in a manner direct, p this too effect on implementation activity education.

Covid-19 pandemic caused publication announcement Incident Outside Ordinary (KLB) in particular in field education, schools off, activities Study teach at school become distracted, learning that was originally done in a manner stared ahead for temporary No Can done (Lv et al, 2022; Çetin et al, 2023). To overcome the problem the need exists to change model design on activities Study teach to avoid learning with stare advance as effort for reduce deployment outbreak of the Covid-19 virus (Wang, 2017; Çetinkaya et al, 2021). The Ministry of Education and Culture issued a letter Circular No. 4 of 2020 concerning implementation policy education in an emergency one of the spread of coronavirus disease (Covid-19). Contents are Study from House with activity learning online or distance far. During the pandemic going on, online learning has been done almost all over the world (Goldschmidt, 2020; Sahin et al, 2020). During the Covid-19 pandemic, every school carried out activity education with learning distance far.

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MAN 2 Model Makassar also carried out Educational activities with learning distance far. MAN 2 Model Makassar is one of the leading madrasas in the city with constant holy growth and development to become the center of modern religious, social, science and language education. The objectives of MAN 2 Model Makassar are (1) to improve rate faith and piety participant educate; (2) forming participant smart student in a manner academic nor non-academic; (3) deliver participant educate going to to college public and private levels favorite; (4) deliver stock enough theory and practice to participant educate smart in a manner intellectual, emotional and spiritual; (5) train participant educate so you can practice religious teachings so have wise attitude in life daily; (6) deliver stock prowess life through developmental skills programs technology, sports, art, scouting, and works scientific in accordance with interests and talents participant educate (Yaoyuneyong et al, 2016; Okumuş et al, 2022).

Technology and information moment develop with fast. Utilization technology and information not only limited by means of communication or entertainment only, however can used in various ways fields, one of which is in fields education (Cherner et al, 2022; Mora et al, 2018). Utilization of technology information in the field of education is one of them as a learning medium to support the learning process in schools especially to support learning distance far. Learning media always follow development technology, starting from technology print, audio visual, computer until technology combined between technology print with computers (Marienko et al, 2020; Koutromanos et al, 2021; Fidan et al, 2019). Moment this is a learning medium where combined printing and computer technology can be embodied with Augmented Reality (AR) and Virtual Reality (VR) technology (Mustaqim, 2016). Learning media used at the time learning should be customized with development technology information that happened at the moment this. One of the learning media that can be applied in the appropriate learning process with development revolution Industry 4.0 is a learning medium based on Virtual Reality (Uys, 1998; Voronina et al, 2019).

VR technology is integration of digital elements that are displayed in a manner real (real-world data) and follow the environment in the real world as well as can be implemented on mobile devices (Arvola et al, 2018). Virtual reality helps in simulating something difficult to present in a manner direct in the real world (Turan et al, 2018). Excess main of virtual reality is experience that makes the user feel real world sensation in cyberspace (Pnata et al, 2017; Hidayat et al, 2021). Virtual reality environments in general serve visual experience, which is displayed on a screen computer or through A performer stereoscopic, but a number of simulations include additional information results sensing, like voice through speakers or headphones.

Activity Study usually taught at MAN 2 Model Makassar carried out face to face have now changed become online activities. Lots of unpreparedness happens Because in a short time, educators must adapt themselves with available technology so that they drain much energy from them. Beside that, participants students also experience bored Because method less online learning effective and consuming much internet quota. They
want a new method to give pleasure to learn and earn bandaged with technology. One solution for teachers and participants to educate is to use Virtual Reality technology as a learning medium. Taking advantage of this Virtual Reality media, of course will make learning more engaging, innovative, and delivering imagination more for students to learn. Of course, just combinations activity carry on with utilization of this medium needed prepared by the teacher (Rao et al., 2020).

Based on observation, MAN 2 Model Makassar were obtained that problem priority in Learning Education distance far is from not yet optimal use of learning media based on Virtual Reality. This is very unfortunate. Remember almost all teachers and students in the school have their own cell phone smart. Potency cellphone cleverness should be used by teachers and students to support the learning process. During this cellphone clever, more much utilized for less purpose are productive, even negative by teenagers (Yu et al., 2022). Responding that thing about the teachers about their limitations have, then team devotion public have an idea for introduce, utilize and use learning media based Virtual Reality as one of alternative learning media for support quality implementation of the learning process in the era of the Covid-19 pandemic. Based on results analysis such, then activity business in enhancement understanding and deep teacher skills using learning media Deep Virtual Reality based form series activity training with the theme "Virtual Reality-Based Hypermedia Training for Man 2 Model Makassar Teacher " quick carried out.

**Method**

There are three applied methods in the service program: method presentation, method demonstrations, and methods practice. Method presentation applied in the introduction application Millealab, its benefits, and its application in making learning media based on Virtual Reality (Karacan et al., 2021; Kavanagh et al., 2017). Method Demonstration about operationalization of programs and methods Practice where the teachers practice in a manner directly making learning media in accordance with eye lessons each with utilization of the Millealab program.

As for the steps that have been taken in PKM activities covers a number of stages namely: (1) Preparation, stage preparation is the stage beginning before implementation of PKM. In stage This There is a number of thing to do, ie Internal coordination, carried out by the team For plan implementation in a manner conceptual, operational, and job descriptions of each member, manufacture PKM instruments, such as sheet presence, questionnaire, sheet work, preparation consumption, publication, location, documentation, and so on; (2) Execution training, stage This is stage the training provided to the teachers of MAN 2 Model Makassar. Implementation training This covers presentation material, practice making learning media virtual reality based, assignment practice, mentoring, evaluation and refinement learning media works based on virtual reality by the team, and reflection and closing of the PKM program.
Results and Discussion

Devotion team in implementing partnership programs public this is the first time this has been done is intertwined communication with partners. Partners in this PKM are MAN 2 Holy. The Devotion team does communication with Head MAN 2 Model Makassar School. Activity This means to do discussion beginning related dedication performed. From the results discussion is obtained agreement about timetable implementation activity devotion to society. Target implementation devotion to the public This is a teacher of MAN 2 Model Makassar.

Activity Virtual Reality Based Hypermedia Training for Teachers of MAN 2 Model Makassar held on August 1, 2023. Activities in this PKM program covers providing workshops and training to teachers at school, as well mentoring making products until the product is done and gets used as expected. Analysis of other needs for training and acquiring the solution covers timetable implementation activity 4 meetings held online via zoom online Synchronous and Asynchronous and participants having training commitment for continuous participant training.

Figure 1. Doc. Opening of PKM; sharing with participant

This started with sharing with the teachers of MAN 2 Model Makassar Dalam face learning in a pandemic era such as this. The results of sharing with teachers are making learning media Not yet use Virtual Reality concept. Making learning media with Virtual Reality is new for teachers of MAN 2 Model Makassar so they are interested in following activity Virtual Reality based hypermedia training. Timetable implementation PKM activities for teachers of MAN 2 Model Makassar are presented in the table following. Activity implemented online via zoom Synchronous and Asynchronous. Implementation activity training for these teachers held with timetable as following:

a. First meeting wednesday, August 25, 2023

PKM activities began with making accounts on Google and Apps Millea Lab as well as next with installing Application Millealab on the computer and smartphone of each participant.
Table 1. Meeting I

<table>
<thead>
<tr>
<th>Pert. I</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>08.00 – 09.00</td>
<td>Opening</td>
</tr>
<tr>
<td>Wednesday, 25 August 2023</td>
<td>09.00 – 10.00</td>
<td>Email Creation</td>
</tr>
<tr>
<td></td>
<td>10.00 – 12.00</td>
<td>Make account at millealab</td>
</tr>
<tr>
<td></td>
<td>12.00 – 13.00</td>
<td>Rest</td>
</tr>
<tr>
<td></td>
<td>13.00 – 15.30</td>
<td>Install application Millealab</td>
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<tr>
<td></td>
<td>15.30 – 16.00</td>
<td>Q&amp;A Session</td>
</tr>
</tbody>
</table>

b. Second meeting Thursday, August 26, 2023: At a meeting on the 2nd day filled with activity practice making learning media virtual reality based.

Table 2. Meeting II

<table>
<thead>
<tr>
<th>Pert. II</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>09.00 – 10.00</td>
<td>Practice Create Media Learning Session 1 based Virtual Reality</td>
</tr>
<tr>
<td>Thursday, 26 August 2023</td>
<td>10.00 – 12.00</td>
<td>Practice Create Media Learning Session 2 based Virtual Reality</td>
</tr>
<tr>
<td></td>
<td>12.00 – 13.00</td>
<td>Rest</td>
</tr>
<tr>
<td></td>
<td>13.00 – 15.30</td>
<td>Practice Making Learning Media Virtual Based Reality session 3</td>
</tr>
<tr>
<td></td>
<td>15.30 – 16.00</td>
<td>Q&amp;A Session</td>
</tr>
</tbody>
</table>

c. Third meeting Wednesday, September 1, 2023: At a meeting on the 3rd day filled with activity practice virtual reality based games.

Table 3. Meeting III

<table>
<thead>
<tr>
<th>Pert. III</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, 1 September 2023</td>
<td>09.00 – 10.00</td>
<td>Material Create Games with Application session 1</td>
</tr>
<tr>
<td></td>
<td>10.00 – 12.00</td>
<td>Material Create Games with Application session 2</td>
</tr>
<tr>
<td></td>
<td>12.00 – 13.00</td>
<td>Rest</td>
</tr>
<tr>
<td></td>
<td>13.00 – 15.30</td>
<td>Practice Making Games</td>
</tr>
<tr>
<td></td>
<td>15.30 – 16.00</td>
<td>Q&amp;A Session</td>
</tr>
</tbody>
</table>

d. Fourth meeting Thursday, September 2, 2023: For the meeting final in PKM activities are filled with accompaniment making learning media virtual reality based, continued with representative participants simulating practice teaching assisted hypermedia based on virtual reality that has been made.

Table 4. Meeting IV

<table>
<thead>
<tr>
<th>Pert. IV</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, 2 September 2023</td>
<td>09.00 – 10.00</td>
<td>Accompaniment Making Learning Media Virtual Reality Based</td>
</tr>
<tr>
<td></td>
<td>10.00 – 12.00</td>
<td>Simulation Practice Teach with use Hypermedia Based on Virtual Reality</td>
</tr>
<tr>
<td></td>
<td>12.00 – 13.00</td>
<td>Rest / Pray / Eat</td>
</tr>
<tr>
<td></td>
<td>13.00 – 15.30</td>
<td>Simulation Practice Teach with use Hypermedia Based on Virtual Reality</td>
</tr>
<tr>
<td></td>
<td>15.30 – 16.00</td>
<td>Q&amp;A Session</td>
</tr>
</tbody>
</table>
Based on the table activities that have served, got understood that during four days implementation activities, participants given material about email creation, create account on millealab, install application millealab, practicum create learning media virtual reality based, create games with application, simulation practice teach with using virtual reality based hypermedia. At the end activities, the teachers are obliged to make results practice, create learning media based on Virtual Reality, create games with applications and simulations and teach using virtual reality based hypermedia (Akçayır et al, 2017). Activity This is going on smoothly and interactive. During four days conducting workshops online, participants were active and enthusiastic to follow all activities and materials provided. this seen from the seriousness of the participants in notice exposure material from PKM team, and activeness participant in ask if feel not enough understand with submitted material.

![Figure 2. Doc. Practice making learning media](image)

For known level success activity devotion this, done evaluation to participant training. Evaluation to participants done after material lectures, discussions and practice finished given. Evaluation This For reveals whether the teachers at MAN 2 Model Makassar have capable ability to create learning media based on Virtual Reality, create games with applications and simulations teach with using virtual reality- based hypermedia. Obstacles faced by the participants in follow training This among others is constraint occasional signal not enough support, factor teacher ages vary so that There are participants with easy understanding material, but some others rather slow in understanding presented material.

Besides that, condition facilities and infrastructure from each school are different, so between One participant differs from the others in practicing learning media based on Virtual Reality in their respective classes. Lack of experience in creating learning media causes the participants hampered for creating learning media. Virtual Reality-based learning media as an alternative learning media to support the quality of the implementation of the learning process in the Covid-19 era
After dedication, it is hoped that the teacher can position learning media as one component important from a learning process. Learning media own strategic role in effort acquisition results optimal learning. Learning media roles is important in increasing effectiveness and efficiency. Teachers are always required to be able develop and use tools learning available in schools in accordance with demands for development of the times. Besides it, after training This expected the teacher has known appropriate learning media with development technology Information in the Age of Revolution Industry 5.0 ready applied in learning. Documentation of PKM activities can be seen in the picture below.

**Figure 4. Doc. Simulation teach using virtual reality based hypermedia**

**Conclusion**

The conclusion of this PKM activities are: (1) MAN 2 Holy welcomed kind and supportive whole Community Partnership Program (PKM) activities seen of active and enthusiastic participants _ in follow all activities and materials provided; (2) Training making learning hypermedia Virtual Reality- based for essential teachers Because can support career in facing the Revolutionary Era Industry 5.0; (3) Assistance in making learning hypermedia essential Virtual Reality based because of the whole manufacturing process done online sometimes confusing for teachers.
Acknowledgment

References


