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Student Teachers' Views on the Skills of Creating Hyper-conte Modules for Prospective Early Childhood Teachers

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Abstrak

Integrasi teknologi di kelas sangat penting untuk meningkatkan transfer informasi di kelas. Salah satu media terintegrasi teknologi yang dapat melatih kreativitas dan pemikiran komputasi guru-siswa adalah modul hyper content. Studi ini menyelidiki suara guru PAUD tentang manfaat e-modul hyper content setelah mereka menyelesaikan pelatihan e-modul hyper content mereka. Pengumpulan data dilakukan melalui kuesioner. Hasil penelitian menunjukkan bahwa 80% peserta merasa materi pelatihan kali ini sangat dibutuhkan untuk pengembangan karir ke depan, dan mereka merasa materi yang diberikan mudah sehingga keterampilan mereka dalam membuat media pembelajaran bagi anak usia dini berupa modul hyper content telah ditingkatkan.

Technology integration in the classroom is indispensably important to enhance the transfer of information in the class. One of the technology-integrated media that can train teacher-student creativity and computational thinking is the hyper content module. This study investigated the voices of PAUD teachers about the benefits of hyper content e-modules after they complete their hyper content e-module training. Data collection was done through a questionnaire. The results showed that 80% of the participants felt that the training material this time was very much needed for future career development, and they felt that the material provided was easy so that their skills in making learning media for early childhood education were in the form of hyper content modules have improved.

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INTRODUCTION

In the twenty-first century, students need competencies that enable them to adapt to new types of individual information and individual knowledge relations; therefore, the educational system must reflect on new ways of developing learners according to the so-called information and knowledge society (Kubiatko, 2016). In addition, the Covid 19 pandemic in the last two years has taught us to integrate digital technology into classrooms, ranging from higher to early childhood education. Thus, teachers training faculty should adjust their curriculum to train their student teacher to have digital competence. The student teachers, as future teachers, should be comfortable with digital technology and can integrate it into their regular educational practice. The impact of digital technology on learning spaces depends on the skills of teachers to use them, their ability to put information and technology at the service of new communication scenarios, and their skills to adapt to their student's cognitive and social characteristics. Teachers play a significant role in all educational reforms and innovations, as they are responsible for adapting their classrooms to whatever elements they have to offer, and digital technology is one of them. Thus, training in applying digital technology to teaching and learning is essential for student-teachers to ensure the implementation of information and technology in learning.

LITERATURE REVIEWS

According to Government Regulations Number 17 of 2010, "In organizing and managing education, units and educational programs develop and implement information communication technology-based educational information systems." The decree shows that using learning media as information technology in the learning process has become necessary. As a professional, educators are required to use innovative work in learning. Innovative work can be in the form of teaching materials and learning media that have innovative value for learning in schools. This innovative work can be obtained from sources such as the Internet and school supply stores. Educators can also do innovative work (*Kemendiknas*, 2010). One form of innovative work in the field of technology is the e-module. The electronic module (e-module) is the latest innovation from the print module, so this electronic module can be accessed with the help of a computer that has been integrated with software that supports accessing the e-module. The advantages of e-modules compared to print modules are that they are interactive, easy to navigate, display or load images, audio, video, and animation, and are equipped with formative tests that allow immediate automatic feedback. According to Sugianto et al. (2017), the electronic module makes the learning process engaging and interactive because it consists of audio-visual displays, sound, movies, and others.

An audio-visual display like this is very suitable in early childhood learning because it activates the two senses, namely the eyes and ears, and can present factual information. The student teachers of the early childhood education program should be

able to develop learning both in lectures when explaining course material that is their task for presentations, as well as developing e-modules to stimulate six aspects of early childhood development. According to Prawiradilaga et al. (2018), hyper content-based e-modules have the following characteristics:
1. Utilizing a variety of web pages, especially the type of wiki, makes it easier for students to understand some terms.
2. Using hypertext by using virtual links in the text, linking the text with other information from certain web pages.
3. Using a quick response code (QR code) to store more extensive information. QR codes functions to link directly to specific sites or channels.
4. Using YouTube video channels and cloud computing. On YouTube, many channels provide educational content on particular themes. Taking one of the playlists on YouTube will help teachers visualize traditional and religious ceremonies for students.

In addition to the four elements above, additional features can be added, namely: They were using 360 photos by utilizing Google Street View so that students do virtual tours of more traditional houses of worship. With 360 photos, students can do a room tour of each part of the photo and more. In addition, the data helps students visualize the photo more naturally.Studies have shown that hyper-content modules for early childhood education benefit improving HOTS abilities (Sutama, Astuti, Pramono, et al., 2021), teaching linguistic aspects (Ningsih & Mahyuddin, 2021), increasing creativity (Fitriani et al., 2022), improving computational thinking (Muthmainnah Harahap, 2022). The modules can be a digital learning resource in early childhood education study programs (Sutama, Astuti, & Anisa, 2021). There is limited evidence in the literature regarding students' opinions on the importance of digital skills in learning hyper-content modules for them.

This study aimed to see the perceptions of PG-PAUD students regarding training in making hyper-content e-module materials in preparing for their future PAUD teacher candidates. Incorporating student voices is vital in designing digital skills enhancement in the curriculum for prospective early childhood educators. Therefore, the curriculum is designed to understand the benefits for these students. This research focused on how PAUD students perceive digital skills to create hyper-content e-modules for the PAUD PG curriculum after attending the training and what benefits students feel after participating in the training to create hyper-content e-modules. This study aimed to prove whether the experience provided during the training can change the participants' mindset about the importance of digital skills related to the manufacture of e-modules for early childhood education teachers. Watson (2006) stated that what teachers believe will affect how they act in the classroom. The teachers' mindset affects their belief in the advantages of using certain technologies in their classrooms.

METHODS

The participants of this activity were 20 fourth-semester students teacher at a teacher training faculty who were selected using the purposive sampling method. The selected participants were all 4th-semester female students aged 19-20. These participants would participate in the Independent Learning-Teaching Campus activities in the teaching assistant program for three months in Kindergarten the following semester. Those selected were those having no digital skills taught in training. Previously, students would attend training/workshops on creating hyper-content modules, such as making 360 photos, using QR codes, creating 3D images, and creating hyper-content links. The output of the training was to create a hyper-content module for teaching preschoolers

After completing making e-modules, participants were asked to give their opinion regarding the benefits of creating hyper-content-based e-modules for early childhood education candidates by responding to a survey used a Likert scale of 1-5 followed by an open interview. Questions were given regarding training materials, the benefits of workshops related to improving their digital skills, and the importance of training materials in their learning. The data would be presented descriptively.

RESULT AND DISCUSSION

The opinions of PG PAUD students regarding skills in making e-modules were classified as follows:

	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The materials about the hyper-content module should be a topic in the digital competence course.	-	10%	-	65%	25%
2	The Scope of learning in this training class fulfills my need to learn.	-	-	-	70%	30%
3	Creating a hyper-content e-module is compulsory for student teachers of early childhood education.	-	-	-	55%	45%
4	Future Early Childhood Education Teachers do not need to learn how to do hyper-content module.	5%	50%	35%	10%	-
5	The materials I learned during the training can assist me in developing my digital skill in designing teaching media.	-	-	-	40%	60%

6	Digital skill training does not enhance my learning process.	15%	40%	30%	15%	-
7	Learning about a hyper-content module made me aware of self-potential.	-	5%	-	50%	45%
8	The Skill of creating hyper content module content benefits my future teaching practicum.	-	10%	40%	30%	20%
9	Learning to create hyper-content module content is boring.	60%	20%	10%	10%	-
10	I do not need to create a hyper-content module to teach preschoolers.		30%	30%	30%	10%

Table 1. The opinions of PG PAUD students regarding skills in making e-modules

The importance of hyper content module training for student teachers' learning

The study results showed that more than 80 percent of participants felt that the skill of making hyper content e-modules was still very much needed for their career development as student teachers' candidates for early childhood education. All participants felt that this research had improved their skills in using technology, especially in creating digital media in the form of hyper content e-module.

> Making hyper-content-based learning media can assist me in making learning media for students, as learning can be more fun and memorable for children. (Student #19)

> This e-module can make it easier for readers to understand the material through a QR code and live videos. (Student#15)

Apart from that, all the participants felt the skills needed to teach early childhood. The self-motivation of prospective teachers and awareness of the importance of mastering the skills are essential aspects that encourage prospective teachers to use ICT in their teaching activities (Amhag et al., 2019).

On the other hand, participants were also concerned about some technical issues, such as their unsupportive computer specification that may hinder the process of making the module contents and the lack of internet access in school.

Hyper content module Training for Personal Growth

They also felt that the training materials were presented systematically and easily understood. The skill is compulsory in today's era. There are so many phenomena of the emergence of educational-based platforms that become promising jobs from an

economic and social perspective. The skills of making e-modules can be applied directly to students and create educational content according to the interests of the trainees that can cultivate students' self-potential.

> After participating in this hyper-content-based learning media workshop, I became confident to develop my talent in the digital field. (Student#3)

> After attending this workshop, I feel that I have a new potential development, especially in the technology field. (Student#8)

> I get many benefits from following this module. Previously, I did not know some editing applications, so here I can learn to edit and gain much knowledge. (Student #5)

> I hope we can get more training about making 3D images. (Student#1)

E-modules all participants have made the contents of a module that required the participants to utilize their digital skills. All participants could complete the expected e-modules. The training output was in line with the work of Prensky (2001), who stated that the current generation of students is part of a generation born and raised in the digital era. The participants have integrated digital technology into daily activities. They do not consider technology an enemy because they use it quite skilfully in their daily lives. With the time constraint, the participants could successfully produce hyper-content e-modules as expected. The training has impacted participants' digital skills and personal growth. However, some participants (10%) do not find learning hyper-content modules paramount to their learning goal. It can still be concluded that material about making hyper-content e-modules deserves to be included as learning material in courses encouraging digital teacher-based skills in early childhood classrooms.

CONCLUSION

Training on making e-modules was considered very useful and needed by PG PAUD study program students to improve their skills in utilizing technology to develop learning media and future career development. Hopefully, there will be a follow-up to the workshop, a study on the success of the hyper-content module that students have produced in supporting early childhood learning.

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