PRELIMINARY ANALYSIS OF THE NEEDS OF PROSPECTIVE ELEMENTARY SCHOOL TEACHERS FOR HYPER CONTENT-BASED LEARNING MODELS TO IMPROVE BILINGUAL PROFICIENCY AS A 21ST CENTURY SKILL

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Abstract

The Indonesia government is seriously preparing their young generation to face the demographic bonus that predicted will be occur in the next 10 years. This demographic bonus needs a bilingual proficiency skill due to one of the main assets of global collaboration is the ability to communicate across cultures and nations in order to be able to collaborate with all parties and balance the needs and competition for work in a globalized world. The purpose of this study was to produce a hyper content media for improving bilingual proficiency of pre-service teachers in Indonesia. This type of research is Research & Development (R&D) model which used procedures of the ADDIE model. This research produced a valid a hyper content media for improving bilingual proficiency of pre-service teachers in Indonesia. The results of this research indicate that prospective elementary school teachers need special learning to improve their bilingual proficiency through the development of hypercontent media. The material given to prospective elementary school teachers includes language skills and good communication. The development of Bilingual Proficiency as 21st Century Skills is expected to equip prospective elementary school teachers to compete at the international level. The developed hypercontent media can be accessed from various digital sources online and offline. The forms of media developed are in the form of learning videos, ebooks, images, links and QR codes integrated in one mobile application.

Keywords: 21st Century Skills, Bilingual Proficiency, Hyper Content Media

INTRODUCTION

Indonesia is predicted to get a demographic bonus in the next 2030-2045. Demographic bonus is a situation where there is an increase in the population of a country in the productive age range, which ranges from 16 to 65 years. Based on data from the Central Bureau of Statistics (BPS), the total population of productive age or the workforce is 140 million out of a total of 270.20 million Indonesian people. Especially in 2030, this number is expected to increase rapidly. This situation is a big opportunity for Indonesia to improve performance in various government sectors, one of which is education (Mukri, 2018).

The government continues to make various efforts to prepare demographic bonuses to create quality and highly competitive human resources (HR), namely people who are healthy and intelligent, adaptive, innovative, skilled and with character (Kemenko PMK, 2022). The government's efforts that currently can be felt by the younger generation are the Merdeka

Learning curriculum which focuses on aspects of developing creativity and innovation in the study of problems (Yusri, 2022). Another effort that can be developed is improving 21st century skills such as the ability to think critically, creatively, collaboratively for the younger generation so that they have quality human resources. However, the current problem is the low foreign language proficiency of the majority of the younger generation in Indonesia. Ministry of Education and Culture data continues to show that the ranking of the quality of education in Indonesia is still below average based on the PISA (Program for International Student Assessment) assessment conducted by the OECD (Organization for Economic Cooperation and Development) to measure the ability of students in the 15 year age range. The purpose of the PISA study was to examine and compare the literacy achievement of school children in OECD countries, with the aim of surveying and photographing the quality of education. The results of the achievement of Indonesian students in scientific literacy from 2000 to 2018 have not progressed and are still in the lowest ranking (Dian, 2022).

The next fact is that Indonesian adolescents' bilingual proficiency is still low. Based on the report of the Education First (EF) educational institution, Indonesia has an English proficiency index of 466 in 2021. This score is in the low ability category and ranks fifth in Southeast Asia (Mahdi, 2022). This is very worrying because bilingual proficiency is the main capital of collaboration to balance work needs and competition in the global world.

Based on these problems, this research aims to develop media hypercontent for elementary school teachers. Elementary school teachers were used as research subjects with consideration of their role as "man of stage" in the world of basic education in Indonesia.

LITERATURE REVIEW

Hyper content

Hypercontent consists of two syllables, namely "hyper" which means actively connected and "content" which contains a collection of material text. Hypercontent is a concept that connects various materials together that are packaged in one particular digital technology program. With hypercontent, these materials are interrelated and connected, forming a unit that presents information in an integrated form. Hypercontent can be manifested in the form of display menus on a website page, which if clicked will take the user to other materials. (Prawiradilaga, 2017). Hyper content comes from the concept of hypertext, by changing the delivery pattern which tends to be linear to dynamic. Teaching has mostly been delivered orally, in class, or through text-based content. Recently, more and more evidence has outlined the pedagogical benefits of delivering content using visual media such as hypercontent (Hotimah, 2023).

Bilingual Proficiency

Laura Greenstein stated that bilingual proficiency is one of the skills included in 21st century skills (Greenstein, 2012). Bilingual proficiency refers to the ability to read, write, speak and understand two languages at a high level of proficiency. It indicates a high level of fluency and competence in both languages. Bilingual proficiency can be achieved through various means, such as growing up in a bilingual environment, receiving formal education in two languages,

or extensive language learning and practice. It is important to note that bilingual proficiency encompasses not only speaking and listening skills but also reading and writing skills in both languages. It requires a deep understanding of the grammar, vocabulary, idiomatic expressions, and cultural nuances of both languages. CEFR stands for Common European Framework of Reference for Languages, which is an international standard used to assess a person's language proficiency or ability which is widely practiced in Europe (EF, 2023). CEFR applies to several languages, one of which is English. There are six levels in CEFR, namely: A1 Beginner, A2 Elementary, B1 Intermediate, B2 Upper Intermediate, C1 Advanced, and C2 Proficient (A1, A2, B1, B2, C1, C2) are widely accepted as the global standard for grading an individual's language proficiency (Tracktest, 2023). Bilingual proficiency or more specifically English proficiency can be developed through three main stages, namely immersion, maintain bilingual and transitional bilingual (Lindholm, 1991).

METHOD

This study uses a descriptive analytic approach in developing a form of learning product design. The location of this research is in the cities of Jakarta, Surakarta and Malang, Indonesia with research subjects 60 Pre-service students. This research was conducted to produce design guidelines for making digital modules with digital hyper content along with the assist of several applications. The learning module development is carried out with the ADDIE model approach which consists of the stages: analyze, design, development, implementation and evaluation.
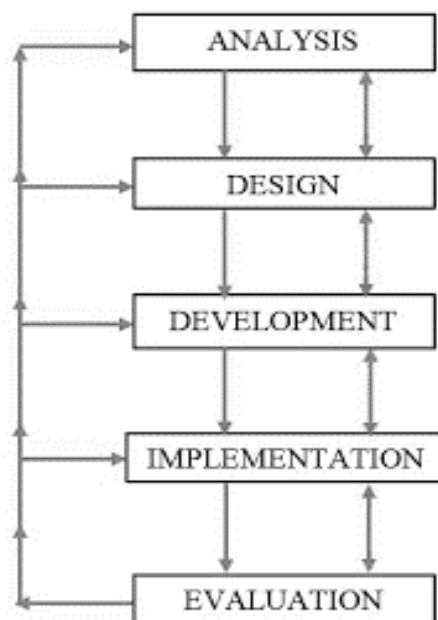
Figure 1: Hypercontent Development Procedure with the ADDIE Model

In the first stage, do an initial analysis of the initial abilities of students, namely prospective elementary school teachers. At this stage, you can see 21st century and bilingual abilities, the level of difficulty in developing 21st century skills and bilingual proficiencies, explanation of

material for 21st century abilities and bilingual proficiencies theoretically by providing material and practice questions, the process of teaching and learning activities using hypercontent, alternative models of training in support the learning process, and difficulties in learning 21st century skills and bilingual proficiency.

The second stage is to make a learning design that fits the initial needs of students. The learning design developed is in the form of hypercontent learning media which contains learning resources in the form of videos, images, links, ebooks and qr codes integrated in one mobile app.

The third stage is developing learning products that can be accessed anytime and anywhere as long as they are connected to the internet. This development stage goes through a revision process and is in accordance with the design made based on the initial needs of students, so the product is ready for use.

The next stage is implementation. At this stage the learning products developed will be tested on students and educators. Students will try to match the needs they want with the products that have been produced. Educators also conduct testing of the product and will produce a feasibility test for using the hypercontent media. Not only testing products in the form of applications, but learning materials used to improve 21st century skills and bilingual proficiency must also be tested. The trial was first carried out in small groups or small groups, then continued with group trials. This trial also involved design, media and learning experts.

The final stage of developing this learning is by conducting an evaluation. At this stage recommendations will be obtained regarding the application products and learning materials used whether they are suitable for use by the school or can provide a positive impact on the development of prospective elementary school teachers in improving 21st century skills and bilingual proficiency.

RESULTS AND DISCUSSION

The analysis phase includes the research phase of needs analysis, problem analysis, expected product and desired learning outcomes. The results of the needs analysis show that the majority of research respondents have difficulty mastering 21st century skills including foreign languages and they are interested in developing these skills. Data on the low foreign language skills of respondents are in accordance with the results of Maduwu's research (2016) which previously found that mastery of foreign languages, especially English, for Indonesians, Thais and Vietnamese is still low among other MEA member countries. The learning method expected by the respondents is in the form of a project method. The form of teaching materials that respondents wanted to develop their bilingual proficiencies skills was in the form of multimedia.

Graph 1: Level of developing 21st century skills and bilingual proficiency

In graph 1 the results of the initial analysis, it was found that 16 respondents as prospective elementary school teachers had no difficulty in developing 21st century skills and bilingual proficiencies. While 44 respondents experienced difficulties in developing 21st century skills and bilingual proficencies. This means that learning is needed that discusses related to discussion or special material for 21st century abilities and bilingual proficiencies.
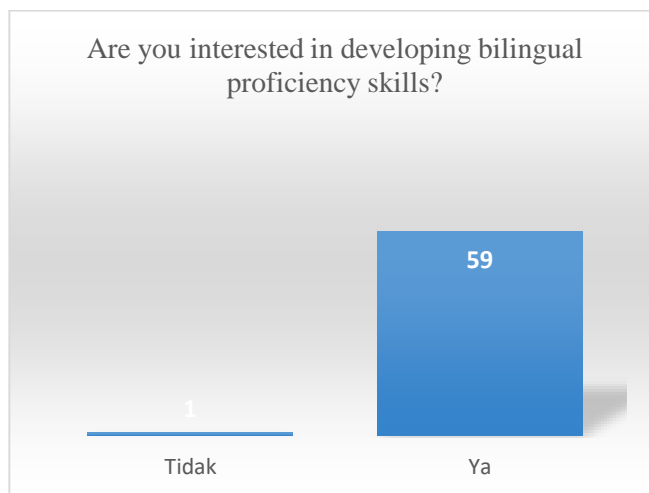

Graph 2: Interest in Learning 21st Century Skills and Bilingual Proficiency

It can be seen in the graph 2, that prospective elementary school teachers are very interested in learningPd to improve their 21st century skills and bilingual proficiency with hypercontent media. There were 59 respondents or 99% of prospective elementary school teachers who were very interested in learning to improve their 21st century skills and bilingual proficiency and only 1 respondent who was not interested.
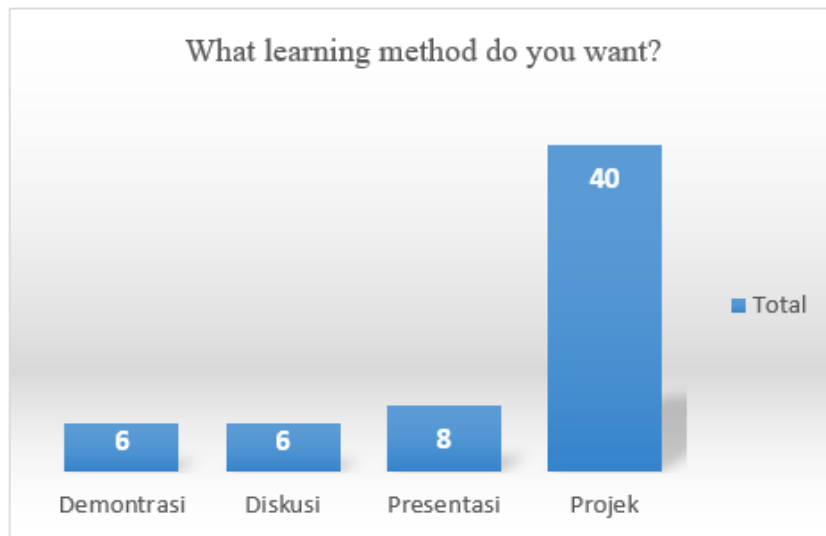
Graph 3: Desired Learning Method

In graph 3 there are 40 respondents who want learning methods with projects. While 8 respondents wanted a learning method with presentations, 6 respondents with discussions and demonstrations. This shows that prospective elementary school teachers prefer project-based learning methods.
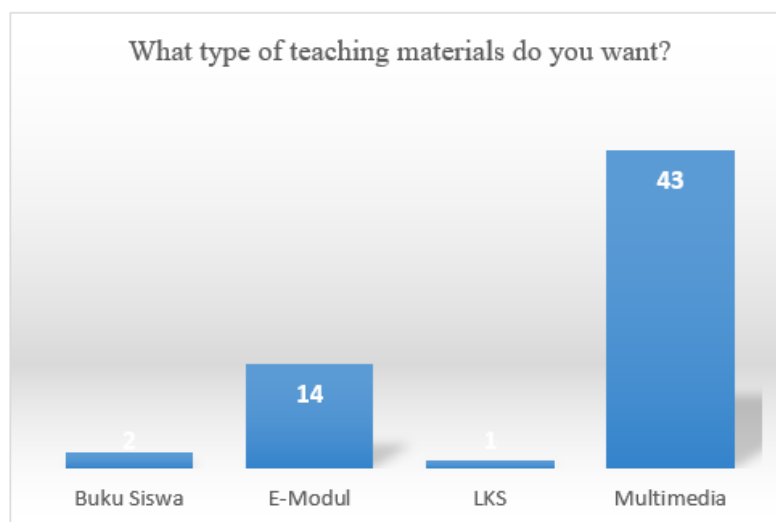
Graph 4: Type of Teaching Materials

What teaching materials are suitable for use by teachers to develop 21st century skills and bilingual proficiencies can be seen in graph 4. It can be seen that 43 prospective elementary school teachers are very suitable for using multimedia-based teaching materials. Then 14 elementary school teacher candidates are more suitable to use e-modules and the rest use

student books and LKS. This has an impact on the development of learning products that will be developed must be multimedia-based because they are in accordance with the initial needs of prospective elementary school teachers.

The project learning method is the method most desired by respondents during learning with hypercontent media. Project-based learning (PBL) is a teaching method that uses projects or activities as a means of learning. This method is designed to engage students in real-world problem-solving and critical thinking, while also developing their skills in collaboration, communication and creativity. PBL is an effective way to promote active learning and student-centered instruction, as it allows students to take ownership of their learning and work on projects that are relevant and meaningful to them. In PBL, students work in groups to complete a project that requires them to apply the knowledge and skills they have learned. PBL is a student-centered approach to learning that emphasizes collaboration, communication, and creativity. It is an effective way to promote active learning and engage students in real-world problem solving. By implementing PBL, teachers can help students develop the skills they need to succeed in the 21st century and enhance problem solving skills (Kokotsaki, 2016).

The majority of respondents chose to use teaching materials in the form of multimedia. Multimedia refers to the computer-assisted integration of text, drawings, still and moving images (videos), graphics, audio, animation, and any other media in which any type of information can be expressed, stored, communicated, and processed digitally. It is a form of communication that uses a combination of different content forms such as text, audio, images, animations, or video into a single interactive presentation and has its own principles (Mayer, 2017). The use of multimedia can help achieve academic achievement and attitude during classroom learning (Shah, 2015).

The needs analysis data forms the basis for the process of designing a hypercontent prototype to improve bilingual proficiency skills. At this stage a hypercontent prototype design is produced in the form of a mobile application, the selected material content is content that can be set up by projects and storyboards for multimedia applications. The application development process, content development is completed at this stage. Material contents are set into electronic books that are integrated in one mobile application. The results of the study revealed that electronic books (ebooks) have advantages in terms of practicality and competitiveness compared to printed books (Syahbana, 2021). Ebook is a digital form of printed book enriched with text, images, audio or video (Munif, 2013).

Figure 2: Prototype "Hypercontent Learning Model (HELM)"

The results of this hypercontent-based learning media product can be accessed anywhere and anytime. In Figure 2 you can see a variety of learning resources, ranging from videos, ebooks, pictures, tutorials, qr codes and links. Hypercontent which means providing a variety of learning content from various digital sources that are integrated in one application. This product also contains learning materials related to the development of 21st century skills and bilingual proficiencies. In the ebook there are two modules, namely modules for students and teachers. Each module can be accessed via a mobile phone device and connected to internet access. If you want to access learning resources online, students must download the material first. This learning media is very suitable for the initial needs of prospective teachers to develop 21st century skills and bilingual proficiencies.

CONCLUSION

The 21st century skills and bilingual proficiencies of prospective elementary school teachers are still very low, so an appropriate learning model is needed to improve these abilities. The learning media that is often used by prospective elementary school teachers is multimedia, so that hypercontext media which contains various types of digital learning resources is very suitable to be applied to help elementary school candidates.

Hypercontent media in this study was successfully developed using the ADDIE development model for prospective elementary school teachers in Indonesia. The resulting hypercontent is very valid and practical after going through a series of validation and testing processes. Through hypercontent, bilingual proficiency, especially English, for elementary school teacher education students increases. The interest of prospective elementary school teachers in improving 21st century skills and bilingual proficiencies is very high. They really hope for special learning to improve 21st century skills and bilingual proficiencies through hypercontent media. Besides that, the expected learning method is through a base learning project.

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