JOURNAL REGY
RESEARCH IN EDUCATION AND TECHNOLOGY
Vol. 2 – No. 1, October (2023), Page: 42-45
P-ISSN (2963-0002) & E-ISSN (2963-0010)

DEVELOPMENT OF CANVA-BASED LEARNING MEDIA FOR THE MATHEMATICS SUBJECT OF FRACTIONAL NUMBERS

Vindo Feladi[1], Tasya Pricilia Debora[2*], Yagi Firanda[3], Katarina Patrisia[4], Ceni Febi Kurnia Sari[5]
[1,2,3,4]IKIP PGRI Pontianak, Pontianak, Kalimantan Barat, Indonesia
[5]Universitas Papua, Manokwari, Papua Barat, Indonesia

* Corresponding Author. E-mail: limsya052@gmail.com

Abstract

Students often have difficulty learning just by reading books. Mathematics is also one of the major difficulties for some students. For students to more easily understand the material, Canva-based learning media was created. Canva is an application that can be developed in the process of making Mathematics learning media, which needs media as an introduction to information from abstract learning material content. The Canva application provides a variety of interesting features that can make it easier for educators to create learning media, one of which is the availability of various templates that can be used in the process of designing learning media, one of which is Mathematics in MI/elementary school. This Canva-based learning media was created with the aim that students don't get bored easily and can more easily learn while playing. The method used in this research was demonstration learning by making it easier for students to learn independently. The instrument used in this research was a questionnaire. The research subjects consisted of 1 media expert, 1 material expert, and 18 students of the Information Technology Education Study Program, IKIP PGRI Pontianak. The test results showed that Canva-based learning media for Mathematics Subjects was declared feasible and can be applied to Mathematics Subjects with Fractional Operation Materials.

Keywords: instructional media, fractional operations, mathematics subject, Canva

INTRODUCTION

Mathematics is one of the subjects whose learning process requires a greater level of understanding because mathematics is not just a matter of arithmetic and not just memorizing, but its scope is much wider than most people's perception so far. Mathematics has an important role in various scientific disciplines and advances human thinking power namely improving the quality of education directed at improving the quality of Indonesian people as a whole through exercising the heart, thinking, feeling, and sports so that they have competitiveness in facing global challenges (Departemen Pendidikan Nasional, 2006).

Mathematics learning in schools is not only intended to achieve material goals, namely to equip students to master mathematics and apply it in everyday life but more than that, mathematics learning is also intended to achieve formal goals, namely to shape personality and organize students' reasoning so they can solve problems. Mathematical problem-solving is a process where someone is exposed to mathematical concepts, skills, and processes to solve mathematical problems (Roebyanto & Harmini, 2017).

Submitted	Accepted	Published
07-10-2023	20-12-2023	20-12-2023

Solving mathematical problems in school is usually realized in the form of story problems. Students' skills in solving story problems, especially those related to problem-solving aspects, are very useful in everyday life. However, not all students can easily work on story problems. Difficulties often experienced by students are difficulties when working on word problems because they are unable to understand the meaning of the questions and are confused when determining which arithmetic operations to use.

Usually, students need a very long time to solve story questions. Students often make mistakes when calculating and students are less careful when working on math story problems. The problem of low student mathematics learning outcomes and students' difficulties in solving mathematics story problems indicates that there are errors in the teaching and learning process so improvements are needed.

These mathematics learning problems are supported by research conducted in the Analysis of Class V Students' Mathematics Learning Difficulties in the Implementation of the 2013 Curriculum at Piloting Elementary Schools in Gianyar for the 2014/2015 Academic Year, it showed that students experienced difficulties with counting skills, difficulties in conceptual aspects, and difficulties in problem-solving aspects. Factors that cause learning difficulties generally include interest and motivation, teacher factors, social-environmental factors, and curriculum factors (Meler et al., 2015).

Students' difficulties in understanding Mathematics are often heard about and until now mathematics is still a serious problem for some people. Difficulty learning mathematics experienced by students will cause students to become less interested in studying mathematics. If you look at how important mathematics is in everyday life, it can be predicted that students will experience difficulties in their social life if they do not understand mathematics well.

A child with mathematical difficulties is characterized by weaknesses in the meaning of secondary number symbols associated with the word a number, irregular numbers, and area relations which are influenced by experience (Nancy & Susan, 2009). So, it can be concluded that learning difficulties are certain obstacles experienced by students in the learning process so that students cannot learn properly and the expected learning outcomes are not achieved.

The word learning media comes from the Latin "medius" which means "middle", intermediary, or introduction (Arsyad, 2013). In Arabic, an intermediary medium or messenger from the sender to the recipient of the message. In this sense, teachers, textbooks, and the school environment are media. Learning media is an integral part of the learning system, so the use of learning media influences student learning outcomes (Ramli et al., 2018).

The technology used for learning purposes is also known as media (Mahnun, 2012). More specifically, the definition of media in the teaching and learning process tends to mean graphic, photographic, or electronic means for capturing, processing, and reconstructing visual and verbal information. So, learning media is a tool to help the teaching and learning process, which means everything that can be used to stimulate students' thoughts, feelings, attention, and abilities or skills.

Canva is an online visual design and communication platform that can be accessed via website and application. Canva empowers everyone to be able to create designs as freely as possible according to their skills and publish designs that have been created in various places. Mathematics is generally defined as a field of science that studies patterns of structure, change, and space.

So informally it can also be called the science of numbers and numbers. In the formalist view, mathematics is the study of abstract structures that are defined axiomatically using symbolic logic and notation. Another view is that mathematics is a basic science that underlies other sciences. In addition, mathematics provides the language, processes, and theories that give knowledge form and power (Hariwijaya, 2009).

P-ISSN (2963-0002) & E-ISSN (2963-0010)

Mathematical methods inspire thinkers in the social and economic fields. Mathematical calculations form the basis of engineering disciplines. Apart from that, mathematical thinkers gave color to the activities of painting, architecture, and music. In the world of banking and economics, mathematics supports the progress and decline of a country, because, in the current free market era, everything must be calculated and carried out mathematically.

With mathematics, we can develop everything according to our mindset. By its rules, mathematics is considered a science that requires humans to carry out a dynamic brain-thinking process. Mathematics requires a structured way of thinking. Therefore, the role of mathematics can be said to be in almost all aspects of life and supports efforts to advance human life. (Luthfi, 2015).

METHOD

This research used a case analysis method of private learning at home to obtain data and information regarding the evaluation of teaching and learning without learning media in elementary school mathematics subjects. The sample size used is a form of the wealth of information obtained (Purwanto et al., 2020). In this research, the respondents were 18 class B students in the 2nd semester of Information Technology Education, IKIP PGRI Pontianak.

The validators were 2 IKIP PGRI Pontianak lecturers and teachers at SD Negeri 31 North Pontianak. The data collection method for this research was by using Google Forms as an online questionnaire media for respondents and using validation sheets for validators, media experts, and material experts.

RESULTS AND DISCUSSION

The instruments used in this research were questionnaires and interviews. Questionnaire instruments are used to obtain data on user needs, media expert assessments, material expert assessments, and user response assessments. Interview instruments were used to obtain data on content needs and material needs.

The grids from the material expert, media expert, and user questionnaires were developed and adapted according to this research based on questionnaires that have been used in the development of learning media (Sulistiyarini et al., 2021).

After conducting a feasibility test on validators, media experts, and material experts. Media is said to be suitable for use with the suitability of the material and ease of use of the media. Developing Canva-based learning media can stimulate students to learn technology earlier. Canva is also very useful for educators to create modern information.

CONCLUSION

Mathematics learning media has a very big role for teachers, namely to convey basic mathematical concepts and for students to receive the knowledge that the teacher conveys to them. Innovative media, as an idea, practice, or media object that is considered new.

REFERENCES

Andrijati, N. (2014). Penerapan Media Pembelajaran Inovatif dalam Pembelajaran Matematika Sekolah Dasar di PGSD UPP Tegal. *Jurnal Penelitian Pendidikan UNNES, 31*(2).

Arsyad, A. (2013). *Media Pembelajaran*. Jakarta: Rajawali Press.

Departemen Pendidikan Nasional. (2006). *Peraturan Menteri Pendidikan Nasional Republik Indonesia No. 22 Tahun 2006 tentang Standar Isi*. Depdiknas.

Elvira, R. T., & Faiza, D. (2019). Canva sebagai Media Pembelajaran pada Mata Pelajaran Dasar Listrik dan Elektronika. *Jurnal Vokasional Teknik Elektronika Dan, 7*(2), 79-85.

Hariwijaya. (2009). *Meningkatkan Kecerdasan Matematika*. Yogyakarta: Tugu Publiser.

Luthfi, M. A. (2015). Analisis Tingkat Berpikir Kreatif Siswa dalam Menyelesaikan Soal Bangun Ruang Sisi Datar pada Siswa Kelas VIII A-1 Mts Negeri Munjungan. *UIN SATU Tulungagung Institutional Repository,*

P-ISSN (2963-0002) & E-ISSN (2963-0010)

13-15.

Mahnun, N. (2012). Media Pembelajaran (Kajian terhadap Langkah-Langkah Pemilihan Media dan Implementasinya Dalam Pembelajaran). *An-Nida, 37*(1), 27-34.

Meler, I. G., Darjiani, N. Y., & Negara, I. A. (2015). Analisis Kesulitan-Kesulitan Belajar Matematika Siswa Kelas V dalam Implementasi Kurikulum 2013 di SD Piloting se-Kabupaten Gianyar Tahun Pelajaran 2014 / 2015. *E-Journal PGSD Universitas Pendidikan Ganesha, 3*(1), 1-11.

Nancy, C. J., & Susan, C. L. (2009). Socioeconomic Variation, Number Competence, and Mathematics Learning Difficulties in Young Children. *Developmental Disabilities Research Reviews*, 60-68.

Purwanto, A., Pramono, R., Asbari, M., Hyun, C. C., Wijayanti, M. L., & Putri, R. S. (2020). Studi Eksploratif Dampak Pandemi COVID-19 terhadap Proses Pembelajaran Online di Sekolah Dasar. *EduPsyCouns: Journal of Education, Psychology, and Counseling, 2*(1), 1-12.

Ramli, A., Rahmatullah, R., Inanna, I., & Dangnga, T. (2018). Peran Media dalam Meningkatkan Efektivitas Belajar. *Lembaga Penelitian dan Pengabdian kepada Masyarakat Universitas Negeri Semarang*, 5-7.

Roebyanto, G., & Harmini, S. (2017). *Pemecahan Masalah Matematika untuk PGSD*. PT Remaja Rosdakarya.

Sulistiyarini, D., Ramadhani, D., & Sabirin, F. (2021). Developing Serious Video Games for Data Communication Courses. *Jurnal Teknologi Pendidikan, 23*(11-22).

Triningsih, D. E. (2021). Penerapan Aplikasi Canva untuk Meningkatkan Kemampuan Menyajikan Teks Tanggapan Kritis melalui Pembelajaran Berbasis Proyek. *Paper Knowledge Toward a Media History of Documents, 15*(1), 128-144.

P-ISSN (2963-0002) & E-ISSN (2963-0010)