Canva App Differentiated Learning Bases on Math Learning

Siti Aisyah Hasibuan[*], Maruman Hasibuan

Program Studi Pascasarjana Tadris Matematika, Universitas Islam Negeri Syekh Ali Hasan Ahmad Addary Padangsidimpuan, Sumatera Utara
E-mail: sitiaisyahhsb9@gmail.com

ARTICLE INFO	ABSTRACT
Keywords: Learning Media; Canva App; Differentiated Learning.	This study aims to analyze the use of the Canva application as a differentiation-based learning medium in Mathematics subjects. The background of this research is based on the needs of teachers in presenting learning that is varied, creative, and in accordance with the different characteristics of students. Differentiated learning emphasizes meeting students' learning needs based on interests, learning styles, and ability levels. Canva, as an interactive digital design platform, offers a variety of features that support teachers in compiling visual, engaging, and easy-to-understand teaching materials. The research method used is a qualitative approach. The results show that the use of Canva can increase student involvement, strengthen concept understanding, and provide space for creativity in solving math problems. In addition, this application makes it easier for teachers to adjust the material according to individual student needs, so as to create an inclusive learning atmosphere. In conclusion, Canva can be used as an alternative differentiated learning media that is effective, innovative, and relevant to the development of educational technology.
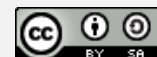
INTRODUCTION

The cutting-edge changes of 4.0 and human progress 5.0 affect various areas of life, achieving aggravation and mechanical advancement, recalling guidance. Studying tutoring will intersect with teachers who continuously depend on the formation of a quality future of the nation in accordance with the development of the times and the improvement of science, development, and expertise. In today's anxious times, teachers should be able to adapt and learn to encourage, manage, and create learning. Teachers should also focus on students' needs in progress to recognize open learning according to the new game plan of Preparation and Cultural Assistance (Mulyana, 2019)

The Independent Curriculum gives educators the flexibility to make quality findings that are in accordance with the prerequisites and learning environment of students. The self-teaching program also plans to recognize critical and reasonable learning in fostering faith, piety to God Almighty, and good individuals and encourage students' creation, taste, and karsa as a substitute for Pancasila character. (Dinn & Dkk, 2024) In mathematics, thoughts are interrelated. That is, other mathematical thinking, so its application will have an impact on students' perceptions that can decipher other mathematics subjects at a more significant level.

These thoughts must be interrelated with each other. Accepting that there are decisions that go out of the path between materials, it will be irritating to follow a strong desire (Nizar, 2019) Therefore, teachers need a learning medium to deliver material to students. According to Ashar (2012), one of the functions of media is as a source of learning, during the learning process, media becomes a learning resource for students (Rizki Syafira, 2020).

The media used is the Canva application. The canva app is one of the items that gives various components, for example, different types of packages, print styles, gifts, interface packages, normalized IDs, and others. Canva can move images, accounts, sounds, there are various features such as progress, liveliness, hyperlinks, and several others. These components can be changed by the client. Canva is very easy for anyone to use and anywhere according to their needs. With the aim of making it easier for students to understand the material with a very charming appearance. The learning media in the Canva application is seen as effective for students in working on calculation problems in science subjects. The Canva application as a computing learning medium can support the benefits and motivation of students' learning. This is considering that in the Canva application there are many charming designs, presenting more changes in shapes, images, assortments, and letters so that it can make it easier for educators to make learning media to calculate in various designs, be it presentations, e-modules, lks, standards, and so on. With interesting learning media, students will be more enthusiastic about learning and get a very valuable learning experience, especially in learning mathematics. (Miftahul Jannah dkk., 2023).

In addition, one of the important parts of an independent instructional setting is an isolated understanding, which looks at the student's specific qualifications In addition, providing a valuable open door for development that suits their needs and interests. Separate learning is a perspective that sees that each student has different needs and requirements. The main goal of separate learning is to ensure that each student can demonstrate their true limits of ability. who are generally outrageous and feel driven in the instructional experience by handing over moves that move according to the needs that drive the student. The most important thing is that we as educators must look at students because each student has a different character, learning style, potential, and stance. So, before conducting teaching and instructional engagement with homeroom teachers, knowing the preparation of students' needs is important. Compiling these needs can be obtained by conducting a fundamental assessment, more precisely a non-mental illustration assessment.

Overall, as the name implies, the assessment of non-mental characteristics hopes to investigate the student's essential boundaries and deduce the student's underlying condition as it relates to the student's social and surrounding environment. Considering the results of an investigation conducted by Siti Aisyah HSB entitled "Implementation of Differentiated Learning in Mathematics Learning of Ranked Number Material in Class VII of SMP N 1 Batahan", a basic non-mental indicative examination, out of 18 respondents, there were 9 students who liked the transport of cut material by watching accounts who said that movement through the account was very interesting because there were pictures, sound, and the influence of actions. In addition, there were 6 students who liked the transportation of the material by listening through voice saying that by listening it would further develop students understanding the material presented. There are 3 students who like to transport parts in a sensational way, this is for students who are easily broken in class. Therefore, the author raised an article titled "Canva Application for Differentiated Learning Basis in Mathematics Learning".

METHODE

The method in this article uses library research This is a technique to gather information by understanding and concentrating on the hypotheses of various writings related to examination. There are four stages of writing concentration in research, specifically preparing essential hardware, preparing functional book references, sorting out time and perusing or

educofa@uinsyaha.ac.id

jotting down research materials. Information gathering uses an approach to source and build from various sources such as books, diaries and completed checks. The writing materials obtained from various references are fundamentally dissected and must be from top to bottom to help their suggestions and thoughts (Nina Adlini et al., 2022). However, using a writing survey strategy has obstacles, the biggest of which is the potential tendency in the selection of archives and the absence of accuracy of the data obtained if the report used is invalid and precise. Therefore, those directing the examination should give careful consideration to the reliability and validity of the material remembered for the writing survey.

RESULT AND DISCUSION

Meria Ultra Gusteti, Neviyarni has conducted a research entitled "Differentiated Learning in Mathematics Learning in the Independent Curriculum" with the results of (1) isolated learning can be composed with several learning models, for example, Problem-Based Learning (PBL), Task-Based Learning (PjBL) and various models designed specifically for students' learning styles; (2) isolated learning is really engaging and can improve student learning outcomes; (3) isolated learning can be used in Science learning because it can require students to encourage needs that are appropriate to students' tendencies, learning styles, profiles, and learning status (Gusteti & Neviyarni, 2022)

Yuda Ardi Saputra and Ayu Rizki Susilowati also conducted a study entitled "Differentiated Learning Towards Improving the Learning Outcomes of Students with Attention Deficit Disorder and Hyperactivity (Gpph)" obtained results: that isolated learning can improve the learning outcomes of students with Hyperactive Thinking and Behavior Disorder (GPPH) grade V elementary school. An examination of the odd mid-semester learning outcomes of GPPH students as pre-cycle data shows that the usual learning outcomes achieved are still low and have not reached the KKM. Right after carrying out cycle I through isolated learning in the classroom, there was a climactic development of student learning outcomes even though not all subjects were affected. This is a reflection material for researchers to conduct cycle II research. The results obtained after carrying out cycle II are an expansion in the perfection of the learning consequences of the two GPPH students basically in all subjects. In addition to mental learning outcomes, the point of view/proximity to home and the psychomotor capacity/ability of GPPH students have also undergone real changes and renewal. This can be seen from how the students are centered on the developing experience and sort through the material given even though they really need extraordinary direction and direction (Ardi Saputra & Rizki Susilowati, 2023)

Khulisoh has conducted a study entitled "The Application of Differentiated Learning in the Independent Curriculum in Elementary Schools" with the result that isolated learning is a procedure that sees that each student has different prerequisites and limitations. In isolated learning, students are given different options in terms of learning materials, performance systems, and assessments. Isolated learning is an approach to learning that is expected to meet the needs of students individually by providing an open door for development that matches their ability level, interests, and learning styles. Isolated learning strategies combine the use of a variety of frameworks, devices, and resources that allow students to learn in a way that works best for them. The use of isolated learning procedures in the Independent Instructional program must be in accordance with the norms of isolated learning; (1) a learning environment, (2) a quality instructional setting, (3) constant examination, (4) responsive teaching, and (5) organization and routine in the review lobby. A teacher should have the option to carry out isolated learning within the review corridor by devising a model plan with an isolated strategy that consolidates the four things to consider, explicitly using different materials, using different methods, using different techniques, and using different materials. The use of isolated learning in the Independent Instructional program must provide an important meaning and benefits that can be felt directly by students (Sulistyosari dkk., 2022).

Happy Tias Hapsari, Riyadi, and Tri Budiharto also conducted a study entitled "Development of E-Flipbook-Based Learning Media Through Canva on Time Unit Materials for Grade III Elementary School Students" It was found that the development of e-flipbook-based learning media was significantly and feasiblely articulated in the time unit material obtained through the survey stage and major improvement. The end result of media repair results in one thing that can help (Wise Learning Unit of Time). It can be used by teachers to convey material and can be used by students to expand their perception of the material. The learning media made was declared original because it had been tested by two material experts with a result of 86.52% in the fantastic class and two media experts with a result of 85.5% in the amazing class. The sign of assistance of one media is articulated reasonably, considering the students' assessment of the media which gets 95.66% results in the phenomenal class. The speculative impact of this study is that the point of assistance of one media is authentic both in terms of material and media quality, which can be used as a source of insight in further learning and investigation. Meanwhile, a useful consequence is that help point one media as a charming modern book containing pictures, stories, tests, and evaluation questions can be used anytime and anywhere (Hapsari dkk., 2023).

In addition, F N Miftahul Janah, H Nuroso, Mudzanatun and E Isnuryantono conducted a study entitled "The Use of Canva Application in Mathematics Learning Media in Elementary Schools" obtained the results that the use of Canva application learning media can be used as one of the references in the use of application media that is suitable in inventive instructional experiences, especially in numeracy learning, because the Canva application is one of the new and captivating stages and very creative, thus in general it will be able to be used for a strong learning medium. With different design features, Canva offers the ease and presence of mind to create material related to the material related to the math subject that is hypothetical, tangled so that it is not too complicated for students to internalize. With the use of Canva learning media, there is an expansion in motivation, science training, and student learning outcomes so that it is feasible to use it in developing experiences to deal with math constraints figuring out how to develop further, in addition to it may be a reference for teachers in choosing learning media to assign student work in the review corridor. (Miftahul Jannah dkk., 2023).

Dyan Yulianaa, Achmad Baijurib, Arico Ayani Supartoc, Siti Seitunid and Sheilla Syukriae have conducted a study titled "The Utilization of Canva Application as a Creative, Innovative, and Collaborative Learning Video Media" with the results of the Canva application which is really used as a vehicle for making inventive, imaginative, and important learning notes, so that it can help educators in delivering material and clarifying students in sorting through the material Learning. Canva can be used to coordinate learning media as notes. Canva Plan is very easy to use and offers a wide variety of plan designs that you can use, from free to paid (expert). In addition, the use of Canva is also more talented considering how Canva provides a wide variety of design plans at no cost (free) and open in several types, namely web, android, and iphone, so it is enough to use a mobile (gadget) to create a learning account. Likewise, Canva can make it easier for educators to deliver learning materials to students through animated and fun learning accounts.(Yuliana dkk., 2023)

Yuyun Asnawati and Sutiah conducted a study titled "Canva App-Based Animation Video Media Development to Increase Student Learning Motivation" It was found that video media empowered by considering Canva apps in learning can generate motivation and learning achievement and are suitable for use in instructional experiences. Considering the disclosure of this survey, the development of a vivified account that consolidates the Canva app is underway with an important season of small recording that has been followed by media experts and subject matter experts later, offered opportunities by students who are then evaluated for the recording opportunities created. The results of the help assessment from media experts and subject matter experts reveal the eligibility level of Canva's app-based movement account. The score of 93.33% with an extraordinary grade was obtained from the results of the assessment of media experts, and 74% was obtained from the results of the

assessment of material experts with the grouping of mostly extraordinary. This shows the authenticity of using imagined video content created using Canva's tools for useful purposes.(Asnawati, & Sutiah, 2023).

Yani Supriani, Giyanti and Zuyyin Syafana have also conducted a study entitled "Development of Interactive Digital Comic Using the Canva Application to Improve Students' Creative Thinking Skills" with the result of getting an overall score from the beginner level of 37,625 with an ideality level of 94% with the norm of "Impressive". Meanwhile, the media expert test obtained a general score from six media assessments of 27.63 with a romanticization rate of 92% with the norm of "Extraordinarily Good". Thus, it can be said that the Waspada Modernization Comic media is suitable for use at SMP N 21 Serang City. Considering the final result of the evaluation calculation of the chronic data overview of progress in a limited scale trial, it will be seen that the overall improvement record is 0.46. Considering the augmentation action, the invitation is associated with the moderate class. So there is a big improvement from before using the Komik Pintar Bernalar learning media and after using the Komik Pintar Bernalar media on the straight line material at SMP N 21 Sekolah Serang.(Supriani dkk., 2023)

Lukman Pardede, Jelita Vini Oktavia Sirait, Ruth Anggreni Siagian, Putri Elga Marbun, and Febrina Damanik coordinated a research titled "The Use of Canva Application as a Work to Form the Creativity of SMK Karya Serdang Students" with the result that the encouraging inspiration included the Canva Application as a Work to Awaken the Imaginative Soul of SMK Karya Serdang Students. 1. On February 5, our social service activities have seen the Normal Program at SMK Karya Serdang until additional notice, namely the Imagination Room program in grade 10, with Indonesian, Urban Planning and Tutoring subjects. Imagination Space is a methodology to improve and facilitate students' ability to convey works or works that have high imagination. In Indonesian, we coordinate visual programming classes using the Canva app, which combines expertise and improvement. Thus they will make improvements to the words that are put together with the game to ask students to be innovative. It is expected that they will be able to solve and review well and practice probabilities. Activity Outcomes The end result of this improvement is that students can know and can create a virtual performance stage to demonstrate the capacity of students. Likewise, students must be talented, in this way further develop fine motors, precision, certainty in electronic execution. Dreamtime Space Program On February 7, 2024, we have recalled one of the performance assignments of SMK Karya Serdang students. The result of the learning program that is clearly visible is the Dreamtime Space Learning Experience. Where the dreamtime space program is a program that offers the expected opportunity to students to describe different moments and students and educators become extraordinarily assembled individuals. Quality Training revolves this progress around students. With this program, students can summarize stories with energy and have a confusing story. The result of this learning program is that students can have a key area of strength for a serious local to have the confidence to deliver an inventive soul through enhanced media. 3. Mathematical Thinking Room Program On February 8-10, 2024, we have remembered one of the performance programs of SMKS Karya Serdang students.

One of the models taught is Mathematical Thinking Space learning. Where this learning is an activity to hone and adapt students at the level of conjuring numbers without mumet energy so that in general science can be appreciated by all students. This Quality MKWK Training Gathering highlights this development in twelfth (12) grade students. The revelation we present is by introducing key reflections on progress, ends, duplication, and division. With the procedures used, learning while playing phenomenally helps students in sorting out the best learning. Impact of Activities 1) The consequence of this learning program is that the substitute students have the option to find out important reflections about progress, guarantees, expansion, and division which will mostly be seen as common to help the substitute students of SMK Karya Serdang, especially grade 12 in working on additional learning impressions. 2) Students have the decision to supervise the problem where we

recognize that the students of SMK Karya Serdang are better prepared to deal deliberately and adequately with the problems that exist in daily attendance.(Pardede dkk., 2024).

Rahmatullah, Inanna, Andi Tenri Ampa also conducted a study entitled "Canva App-Based Audio Visual Learning Media" with the result that the use of general media-based learning media is fundamental in supporting the implementation of development experiences both separately and on the web. In addition, the primary results in the same way communicate that the created media is completely grounded for use in instructional experiences. The level of possibility should be seen according to an alternative point of view, such as an attractive setting, as well as the clarity of the substance of the material presented in the media. Meanwhile, from the results of the field starters, it is contemplated that the presentation of material with interesting media can grow student learning outcomes. The arrangement of learning materials needed by teachers in the instructional experience is part that has an impact on progress by using the right media so that students feel perfect and truly master the material. (Rahmatullah dkk., 2020).

Ani Rohma and Ummu Sholihah conducted a study titled "Development of Audio Visual Media Based on the Canva Application of Limas Room Building Materials" with the result that the learning media for building limas rooms using material media in limas room building materials is really expressive, valuable and reasonable to be applied to learning at Al Azhaar Kedungwaru Integrated Islamic Elementary School, Tulungagung Regency. These media can provide inspiration for students to learn. This can be seen from the results of media and material readability tests, comprehension tests, and media achievement tests.(Rohma & Sholihah, 2021)

Considering the assessment of the finished article, the results show that the canva app is really suitable for use and can be changed according to the student's learning style in isolated recognition while at the same time learning science. The use of isolated learning considering learning styles as work to solve the problem of various substitutes can quite affect students both at the elementary, middle school, and choice school levels in instructional experiences. By implementing isolated learning in the classroom as an effort to solve the problem of various substitutes so that horse play and greater learning can be done. For students with visual learning styles, the media used is a learning account or learning comics or flipbooks, students with a learning style with hearing skills, the media used is general media, for sensation, the effort is made to create or string images related to the material and a few moments later collect them in a video using the Canva application.

CONCLUSION

Differentiated learning is a useful learning strategy or learning strategy in which educators use a grouping of preparation methodologies to meet certain prerequisites of each student according to their needs. This need can be through existing data, learning styles, interests, and knowledge about the subject. Therefore, the canva app is undoubtedly reasonable to use and can be adapted to the learning style of isolated students to recognize as well as learn science. The use of isolated learning by considering learning styles as a work to solve the problems of various underprivileged students can clearly affect students at both the elementary, secondary school, and choice school levels in the instructional experience. Referring to some of the articles that the author has explained above, the author suggests conducting research with the title of the development of a differentiated learning base canva application on one of the mathematics materials.

BIBLIOGRAPHY

Ardi Saputra, Y., & Rizki Susilowati, A. (2023). Pembelajaran Berdiferensiasi Terhadap Peningkatan Hasil Belajar Peserta Didik Gangguan Pemusatan Perhatian dan

Hiperaktivitas (GPPH). *Jurnal Didaktika Pendidikan Dasar*, *7*(2), 743–758. https://doi.org/10.26811/didaktika.v7i2.1152

Asnawati, Y., & Sutiah, S. (2023). Pengembangan Media Vidio Animasi Berbasis Aplikasi Canva Untuk Meningkatkan Motivasi Belajar Siswa. *Journal of Islamic Education*, *9*(1), 64–72. https://doi.org/10.18860/jie.v9i1.22809

Dinn, W., & Dkk. (2024). *Kajian akademuk kurikulum merdeka*. pusat kurikulum dan pembelajaran badan standar, kurikulum, dan asesmen pendidikan kementerian pendidikan, kebudayaan, riset dan teknologi.

Gusteti, M. U., & Neviyarni, N. (2022). Pembelajaran Berdiferensiasi Pada Pembelajaran Matematika Di Kurikulum Merdeka. *Jurnal Lebesgue : Jurnal Ilmiah Pendidikan Matematika, Matematika dan Statistika*, *3*(3), 636–646. https://doi.org/10.46306/lb.v3i3.180

Hapsari, H. T., Riyadi, R., & Budiharto, T. (2023). Pengembangan media pembelajaran berbasis e-flipbook melalui canva pada materi satuan waktu untuk peserta didik kelas III sekolah dasar. *Didaktika Dwija Indria*, *11*(4), 1–6. https://doi.org/10.20961/ddi.v11i4.76724

Miftahul Jannah, F. N., Nuroso, H., Mudzanatun, M., & Isnuryantono, E. (2023). Penggunaan Aplikasi Canva dalam Media Pembelajaran Matematika di Sekolah Dasar. *Jurnal Pendidikan Dasar*, *11*(1). https://doi.org/10.20961/jpd.v11i1.72716

Mulyana, H. E. (2019). *Menjadi guru penggerak merdeka mengajar*. Bumi Aksara.

Nizar, A. (2019). *Pendidikan matematika realistik pendekatan alternatif dalam pembelajaran matematika*. citpustaka media.

Pardede, L., Sirait, J. V. O., Siagian, R. A., Marbun, P. E., & Damanik, F. (2024). Penggunaan Aplikasi Canva Sebagai Upaya Untuk Meningkatkan Kreativitas Siswa Smks Karya Serdang. *Jurnal Pengabdian kepada Masyarakat Nusantara (JPkMN)*, *5*(2), 1996–2002.

Rahmatullah, R., Inanna, I., & Ampa, A. T. (2020). Media Pembelajaran Audio Visual Berbasis Aplikasi Canva. *Jurnal Pendidikan Ekonomi Undiksha*, *12*(2), 317–327.

Rohma, A., & Sholihah, U. (2021). Pengembangan Media Audio Visual Berbasis Aplikasi Canva Materi Bangun Ruang Limas. *Jurnal Pendidikan Matematika Universitas Lampung*, *9*(3), 292–306. https://doi.org/10.23960/mtk/v9i3.pp292-306

Sulistyosari, Y., Karwur, H. M., & Sultan, H. (2022). Penerapan Pembelajaran Ips Berdiferensiasi Pada Kurikulum Merdeka Belajar. *Harmony: Jurnal Pembelajaran IPS dan PKN*, *7*(2), 66–75. https://doi.org/10.15294/harmony.v7i2.62114

Supriani, Y., Giyanti, G., & Syafana, Z. (2023). Pengembangan Interactive Digital Comic Menggunakan Aplikasi Canva untuk Meningkatkan Kemampuan Berpikir Kreatif Siswa. *JKPM (Jurnal Kajian Pendidikan Matematika)*, *8*(1), 167. https://doi.org/10.30998/jkpm.v8i1.14779

Yuliana, D., Baijuri, A., Suparto, A. A., Seituni, S., & Syukria, S. (2023). Pemanfaatan Aplikasi Canva Sebagai Media Video Pembelajaran Kreatif, Inovatif, Dan Kolaboratif. *Jurnal Pendidikan Teknologi Informasi (JUKANTI)*, *6*(2), 247–257. https://doi.org/10.37792/jukanti.v6i2.1025