

Exploring the process and challenges of Indonesian education students in the use of Canva media in project-based learning

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ABSTRACT

This study aims to explore the processes and challenges experienced by students of the Indonesian Education study program in utilizing Canva as a learning medium in PjBL. This research uses a descriptive qualitative research method with thematic interviews and data analysis techniques. This research not only explores the processes and challenges but also relates to the TPACK framework. The results show that students have been familiar with Canva since high school and that the frequency of use increases as the semester rate increases. Canva's use of media is considered to help in planning creative, efficient, and collaborative project outcomes. However, several challenges in its use still arise, especially those related to unstable Internet connections, weak coordination between group members, and limited premium access. These findings confirm that the use of Canva not only enriches students' learning experiences but also demonstrates the integration of technology, pedagogy, and content elements as described in the Pedagogical Knowledge and Technology Content (TPACK) framework. Through this integration, students learn to balance technological skills with pedagogical understanding and learning materials. Overall, Canva's implementation in PjBL contributes to strengthening 21st-century skills such as critical thinking, collaboration, communication, and digital literacy. This study recommends increasing digital infrastructure support and learning technology training for students so that the use of Canva in PjBL can be more optimal and sustainable.

Keywords: project-based learning, Canva media, creativity, collaboration, digital literacy, higher education, learning challenges

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RESEARCH & PUBLISHING



1. INTRODUCTION

Indonesia's education system has made significant progress in recent decades. Various learning methods and models are applied to learning activities to create a meaningful and interesting learning process for students. (Fidela & Fadilah, 2024) Basically, the learning process involves activities that include cooperation between teachers and students during learning (Amriani et al., n.d.). Students are the subjects, and teaching activities are the objects. (Supit et al., 2023). The learning process is an activity that involves teachers and students to achieve set goals. The activities carried out between teachers and students are highly determined by the teachers' roles. The job of a teacher is not only to deliver learning materials, but also to guide students so that they develop comprehensively in terms of both attitude and psyche. (Wulandari et al., 2023). In the learning process, every student faces various challenges. Challenges in learning are any form of obstacles or difficulties that students face during the process of acquiring knowledge, skills, attitudes, and experiences. Complexity in learning refers to a condition in which a learning process can be observed through the emergence of several problems that must be overcome to achieve the best learning outcomes (Syahputra et al., 2022). In the midst of rapid technological developments, the educational paradigm has changed. Students now have broad access to a wide range of online learning resources and platforms, which in turn influences the way they view the learning process in the classroom. Therefore, universities need to take proactive steps by presenting creative and innovative solutions to increase student engagement and create a more interesting and relevant learning experience (Santoso, 2023).

One of the approaches in learning that is commonly used at every level of education is the Project Based Learning (PjBL) approach. In general, PjBL is an innovative learning model that focuses on student participation during the learning process. This article focuses on students' exploration and challenges in using Canva media in Project-Based Learning. Project-based learning refers to an inquiry-based teaching method that engages students in building knowledge and completing meaningful projects (Guo et al., 2020). Project-based learning generally aims to develop various competencies, such as critical thinking, creativity, and problem-solving skills, as well as foster the ability to apply knowledge in real-life contexts. The implementation of PjBL is considered to be able to create a more meaningful, enjoyable learning process, as well as increase the motivation and active involvement of all participating parties (Dian & Noviati, 2021). The PjBL approach emphasizes the theoretical aspect and its practical application. Students are required to be actively involved in producing projects to gain meaningful and immersive learning experiences in the course. In addition, PjBL is a model that allows students to manage and complete projects independently (Nugraha, 2023). Project-based learning (PjBL) also emphasizes the active learning process through authentic real project activities. In this model, students engage in complex problem-solving investigations by holistically integrating various concepts and principles from a particular discipline. In addition, PjBL provides students with the opportunity to work independently, build their own knowledge, and produce real products as a result of a meaningful learning process (Nababan, n.d., 2023).

In the implementation of PjBL, students and lecturers often use technology. One of the most commonly used technologies is Canva. The relevance of Canva's media use to the project-based learning (PjBL) model lies in its ability to support an active, creative, and product-oriented student learning process. Canva is a platform that provides digital graphic design, various features, and AI-generated content that can make it easier for students to design works such as posters, flyers, presentations, and promotional materials. Through the design process in Canva, students not only hone their creativity but also develop 21st-century skills such as critical thinking, collaboration, communication, and problem-solving skills (HOTS). Canva, which is user-friendly, also increases motivation and independence to learn because it can be accessed anytime and anywhere, allowing students to manage their learning process freely. On the other hand, lecturers are also helped because Canva makes it easier to manage projects, provide feedback, and conduct assessments digitally and transparently. Thus, the use of Canva is very relevant to the characteristics of PjBL because it is able to enrich the learning experience, improve student skills, and produce products that are applicable in accordance with project-based learning objectives (Juwairia et al.,

2022). The use of Canva with the PjBL model is very close and mutually supportive, as Canva, an easy-to-use graphic design medium, allows aspiring teachers to develop engaging and interactive learning materials within the framework of learning-based projects. Canva supports the implementation of PjBL by providing tools that make it easier for students to design teaching materials, presentations, and other visual media that are important in delivering project results creatively and professionally (Nasution et al., n.d., 2023).

This study aimed to explore the processes and challenges faced by students in using Canva media in the Project Based Learning (PjBL) process. This research aims to explain how students go through the stages of the process of using Canva in project-based activities, starting from planning to presenting learning outcomes. In addition, this study examined various technical and non-technical challenges experienced by students, such as limited mastery of Canva's features, creativity, time management, and teamwork. Previous research by (Siswanjaya, 2021). explains exploring the use of Canva in project-based learning to improve writing skills and motivation in middle school students. The results showed that the application of Project Based Learning (PjBL) combined with Canva media increased students' motivation and writing skills. On the other hand, previous research by (Nur, n.d. 2024) discussing the experience of students of the Islamic Religious Education Study Program using Canva to improve the quality of presentations in the Media and Learning Technology course. This study explains that Canva can improve the visual aspect and student motivation in making presentations, especially in producing projects in PjBL. However, neither study discusses in detail the process and obstacles to using Canva in the context of project-based learning, especially for students. Most previous research on using Canva in learning has only highlighted the benefits and increased motivation to learn, without going into depth about the process of using it and the challenges students face when implementing it in project-based learning. The novelty of this study is the application of the TPACK framework, which analytically explains how students' experiences in using Canva can be linked to the simultaneous development of pedagogical and technological competencies. The connection of the TPACK framework with the exploration of the process and challenges of using Canva media is considered suitable for Indonesian Education students as prospective teachers of Indonesian subjects. Therefore, this study presents a gap by using the Technological Pedagogical Content Knowledge (TPACK) framework developed by Mishra and Koehler. This framework emphasizes the importance of integrating the value of knowledge in technology, pedagogy, and content in the learning process. From the perspective of TPACK, this study seeks to explain how students can combine understanding technology (Canva), pedagogical (PjBL), and learning materials in the learning process. The TPACK framework refers to the understanding of the subject matter to be taught, namely Pedagogical Knowledge (PK), which focuses on knowledge of instructional methods and learning processes, and Technological Knowledge (TK), which involves understanding and applying digital media effectively. In this article, the TPACK framework is used to interpret students' experiences in using Canva during Project-Based Learning activities. This research connects the TPACK framework by looking at the processes and challenges of students as prospective teachers of Indonesian subjects in the use of digital media (Canva) (Shambare & Simuja, 2024). See Figure 1

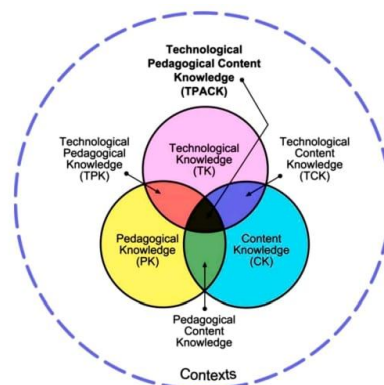


Figure 1. TPACK Framework adapted from <https://www.tpack.org>

Therefore, the research "Exploring the Process and Challenges of Indonesian Education Students in the Use of Canva Media in Project Based Learning" is presented as a novelty by examining in depth the experience of students in carrying out learning projects. This research is expected to provide a more in-depth and comprehensive picture of the processes and challenges experienced by students in utilizing Canva media in the application of the Project Based Learning (PjBL) model. Through the findings of this research, it is hoped that it can be clearly seen how students undergo the stages of planning, implementing, and completing project-based learning activities with the support of Canva. In addition, this study aims to display various obstacles that arise during the process, both technical, such as limited mastery of Canva's features, and non-technical, such as cooperation, creativity, and time management. This study is expected to make an empirical and theoretical contribution to the development of learning strategies while enriching the understanding of TPACK integration in the context of higher education in Indonesia.

2. METHOD

This research uses a descriptive qualitative approach that aims to describe students' experiences, perceptions, and challenges in using Canva media in project-based learning. Qualitative research is used to investigate, discover, describe, and explain the results of research (Nasution, 2023). This approach was chosen because it could reveal the meaning and subjective views of students on the effectiveness of using Canva to support learning activities. The research participants amounted to 17 students from the Indonesian Language Education Study Program, consisting of 4 1st semester students, 10 3rd semester students, and 3 5th semester students. Participants were selected through purposive sampling, considering their active involvement in implementing project-based learning using Canva in various courses. Data were collected through in-depth interviews in a semi-structured format conducted in October 2025. Interviews were conducted in a hybrid manner, namely 60% offline on campus and 40% online via voice calls and WhatsApp video. Each interview lasts 30-45 minutes and is recorded, recorded using a digital device with the consent of the participants. The interview guide covered several key aspects, including the initial time of Canva, the frequency of use in PjBL activities, Canva's role in supporting collaboration, efficiency, and project quality improvement, and the benefits and difficulties students experienced during the use of the media. The data collection technique using interviews is used to find problems that need to be researched, and also when the researcher wants to know things from the respondents in more depth and the number of respondents is small (Sugiyono, 2013) Interviews were conducted online and offline according to the availability of participants, recorded with the permission of the informant, and then transcribed verbatim for analysis purposes.

The data analysis process is carried out using thematic analysis referring to important steps, namely reading the data repeatedly to understand the content of the interview, identifying the initial code, grouping the code into themes and subthemes, interpreting the relationships between themes, and compiling a descriptive narrative that represents the findings. To maintain the validity of the data, the researcher triangulated the sources by comparing the findings of students across semesters and by asking several informants to review the results of the researcher's interpretation to match their intended meaning. This step provides credible and relevant data to comprehensively describe the use of Canva in project-based learning implementations (Naeem et al., 2023)

3. RESULT AND DISCUSSION

This section presents the results of research obtained through in-depth interviews with 17 students of the Indonesian Language and Literature Education Study Program who were involved in the implementation of project-based learning using Canva media. Of the total informants, there were 4 1st semester students, 10 3rd semester students, and three fifth-semester students. The interviews focused on two main aspects: exploring the use of Canva media in the project-based learning process and the challenges students face during the implementation of the media. The interview data was analyzed

thematically to identify students' patterns, experiences, and perceptions of the effectiveness and barriers to using Canva in learning activities. Based on the results of the analysis, several key findings were found that reflect how students used Canva as a creative medium while facing various technical and contextual obstacles in project-based learning. The results are presented descriptively, accompanied by direct quotes from the participants.

3.1 The Beginning of Canva Media Use by Students

Most students stated that they had been using Canva media since high school. They used Canva not only for school needs but also for other needs that require Canva's media contribution to make work easier. One of the informants revealed the following:

"I started using Canva in high school, where I had to make presentation tasks that were interesting. So, the first time I used it was to make presentation slides." (Student 1)
"I started using Canva since junior high school because at that time assigned to make infographics or posters" (Student 2)

This quote shows that when students were first assigned by their teachers to create slides, many of them immediately recognized Canva to create presentation assignments because it was easier, and the templates in Canva had an attractive look and could be used immediately without having to struggle to change many elements. It also shows that they have covered the basic understanding of Technological Knowledge (TK) before entering college. Early familiarity with Canva's media use is in line with the TPACK framework which emphasizes the ability to adapt and learn new technologies and as an integration of technology in learning (Koehler et al., 2013). Many positive comments were expressed by students regarding the beginning of using Canva for learning activities. Canva's practical appearance and easy selection of presentation templates to produce slides as a form of PjBL were the initial reasons for students to use the media. Thus, students' initial experience in using Canva not only builds technological habits but also fosters their readiness to implement technology-based media.

3.2 Frequency of Use of Canva in Each PjBL Activity

The frequency of Canva media use in student PjBL activities also varied significantly. Informants from Semesters 3 and 5 tended to use Canva quite often for creating digital media-based projects. In addition, they also use Canva media within the scope of organizational activities or Student Activity Units (UKM). Meanwhile, 1st semester students use Canva at a lower frequency because there are no project assignments that require the use of digital media. The quote below shows that the higher the semester level, the more intense the use of Canva in learning activities, because this is also related to the complexity of the assignments given by the lecturer:

"I use Canva almost every week, especially for presentations or assignments that require visuals. You can say at least once a week" (Student 6)
"If in the first semester it is not too frequent, usually only for certain tasks that require design" (Student 11)

This shows that the semester level can affect the frequency of Canva media usage in PjBL according to the needs of its user. From the TPACK perspective, this situation illustrates the improvement of students' Technological Pedagogical Knowledge (TPK) to adapt the use of technology to certain learning strategies or needs. Concept (TPK) is the reciprocal relationship between technology and pedagogy. This knowledge allows an understanding of what can be done with technology to achieve specific pedagogical goals (Koehler et al., 2013). Thus, the frequency of using Canva not only makes it easier to work on projects but also strengthens students' competence in integrating technology

meaningfully in the learning process. In addition, the habit of using Canva and consuming digital media regularly can also hone 21st century skills, namely, digital literacy skills. Digital literacy plays an important role in honing 21st century skills because it helps students make effective use of technology during the learning process. Not only does it have an impact on students' ability to manage information, but it can also improve the quality of learning through more interactive and collaborative learning methods (Arifin et al., 2024).

3.3 Canva's Support for Collaboration, Efficiency, and Quality of Student Projects

Many positive comments expressed by student informants encouraged the author to explore more deeply related to support, collaboration, efficiency, and quality of student projects in the use of Canva media in PjBL activities. All student informants in Semesters 1, 3, and 5 stated that using the *interface* when using Canva for the first time was quite easy because of its easy-to-understand appearance, even though it was difficult. They can adapt to this through tutorials available on social media. One student said:

"It's really helpful! The collaboration feature is the coolest, you can edit together with friends at the same time, so it's faster to complete and the ideas are more numerous" (Student 7)

The quote shows that the use of Canva media is very helpful for collaboration between friends in producing slides or projects for PjBL. From the perspective of the TPACK framework, collaboration between friends in using Canva for PjBL shows students' ability to leverage technology to support interaction and cooperation and reflects collaborative pedagogical mastery of technology (Koehler et al., 2013). In addition, the use of Canva is seen as a form of time efficiency because of its ready-made design so that you can shift the focus to the content of the slides and do not need a lot of time to think about the design of the project from the beginning. They also mentioned that the use of Canva can help them adapt to the learning objectives or instructions of the lecturer because it can adjust the design of the slides template to the theme requested by the lecturer. In addition to the slideshow project, they often use other features, such as infographics or posters, in PjBL activities. One of the informants revealed the following:

"Yes, because in Canva we can customize the existing templates with the creativity we have, then in Canva there is also an AI feature that makes it easier for us to produce images that we imagine or want without having to draw them" (Student 4)

The quote shows that the use of Canva media in PjBL helps them increase their creativity in coming up with ideas and putting them into slides or projects in learning activities. The use of Canva media in producing projects or slides is considered to provide creative freedom through various AI-generated templates and features that make it easier for students to adapt the design to learning needs. In addition to its use that helps increase creativity, student informants also revealed that the use of Canva media makes them more confident when presenting their slides or projects to the audience. Furthermore, the use of Canva also increased students' confidence in conveying project results because of its professional and easy-to-understand design. This was conveyed by one of the following participants:

"It is very effective! With an attractive and easy-to-understand design, tasks are easier to perform and deliver. The project becomes more value-added" (Student 17)

This quote confirms that the use of Canva media in PjBL contributed to improving the quality of students' final products. According to them, it is effective because it contains an attractive, easy-to-use, simple design, and can be a plus. In addition, in PjBL activities, especially discussion activities, the use of Canva media is also considered helpful because it can display important points of material that can be conveyed to the audience. Overall, Canva's support in PjBL activities does not only make it easier for students to save time or improve the quality of project results. However, it also plays a role in facilitating

students to work together, as well as producing programs that are relevant to learning objectives. Thus, the use of Canva media is in line with the main principles of PjBL, which are oriented towards the results of the study and the active participation of students. The emphasis on collaborative aspects in this study is an important key in analyzing the use of Canva in the successful implementation of PjBL. In line with the concept of (Kokotski et al., 2016) which emphasizes that one of the 6 successful PjBL approaches is effective collaboration between students, because through interaction and cooperation, students carry out the learning process, put forward ideas, develop creative solutions, and build a deeper conceptual understanding.

3.4 Benefits and Difficulties Encountered During the Use of Canva Media

Canva is used in learning activities, especially PjBL. Student informants often experience a variety of experiences that include benefits and difficulties during their use. Most of them felt the benefits during their use because they were helpful in slowing down the process of working on projects or slides and helping them express their creativity without being constrained for too long. One of the student informants revealed the following:

"Canva has been very helpful in making our presentations not only beautiful but also easy for the audience to understand. The clean and professional layout makes the information conveyed more clearly." (Student 1)

This statement is sufficient to show that Canva's media plays a role in helping student informants during the PjBL process. Students find it helpful because Canva offers ready-to-use designs and supports effective idea delivery. However, students also faced challenges while using Canva, especially related to technical limitations and differences in digital capabilities between group members. One of the student informants revealed the following:

'Most times it's difficult because of the internet connection, because if the internet is slow, Canva is cloud-based and a bit slow. In addition, the limited use of premium features or elements so that we also want to express creativity.' (Student 9)

'If group work is sometimes confused about the task, you can all edit at the same time. Sometimes the design is even changing/messy because there is no agreement' (Student 3)

The excerpts above show some of the difficulties and technical obstacles the participants experienced while using Canva in PjBL. Personal Internet access is a frequent obstacle, and coordination issues in collaborative work are a real challenge in implementing Canva in PjBL. These challenges show that the integration of technology in learning requires not only the availability of digital tools but also the readiness of users in digital literacy. These obstacles reflect an inverse comparison with the concepts of the TPACK and PjBL frameworks, especially in optimizing Canva's features effectively. The visible obstacles show that the success of PjBL is not only determined by the media used, but also by the ability of students to communicate, share roles, and work together.

3.5 Experience of Using Canva Media During the PjBL Implementation Process

During the process of implementing PjBL using Canva, students expressed various experiences. Most of them stated that the use of Canva media helped them deliver the material in a clearer, neater, more confident, and more structured manner.

"It was an amazing experience! Using Canva makes you more confident because it looks cool and neat. So the audience is also more interested in the material I bring." (Student 15)

'The presentation looks more interesting! So that self-motivation to design even better' (Student 11)

The quote shows that the use of Canva can increase confidence in presenting project results. Engaging visualizations make it easy for them to convey the content of the projects they have produced. Overall, the results show that the use of Canva media plays an important role in supporting the implementation of PjBL among students. Canva not only facilitates collaboration and time efficiency, but also encourages creativity and improves the quality of project results. However, technical challenges, such as limited premium access and Internet connections, are still obstacles that need to be considered to optimize its use. However, not all student experiences are without obstacles. Some students revealed their own challenges, especially network challenges, premium features, and weak coordination between friends. Discrepancies in design ideas and a lack of communication lead to poorly coordinated project changes.

'Sometimes it is difficult to bring ideas together, especially if they all have their own design styles. Once, the result changed because another friend edited it without telling me first' (Student 16)

This quote illustrates that using Canva in a collaborative context can present social and technical challenges. In general, students' experiences using Canva in PjBL are quite diverse, their experience also confirms that the application of technology in project learning requires readiness from the technical side, and users.

4. CONCLUSION

Based on the results of interviews with 17 students of the Indonesian Language Education Study Program, it can be concluded that the use of Canva media in the implementation of project-based learning (PjBL) makes a significant contribution to increasing student effectiveness, collaboration and creativity. Most students have known and used Canva since high school, and the frequency of use increases with higher semester levels. Canva is considered to make it easier for students to tailor project designs to their learning objectives and help them save time because of the availability of a variety of easy-to-use templates. Canva's collaborative features have proven to support teamwork in project development, allow students to contribute simultaneously, and speed up assignment completion. In addition, using Canva encourages the emergence of creative ideas, boosts confidence, and adds value to student project outcomes through attractive and professional visuals. From the perspective of the TPACK framework, the results of the study show that students have been able to integrate three main aspects in the learning process, namely (kindergarten), (PK), and (CK). Students' preparedness as future teachers in the twenty-first century is reflected in this integration, as they must not only be tech-savvy but also enhance their pedagogical approaches in creating educational materials using digital media. Technical limitations that restrict design exploration are still present for students, including reliance on Internet connections, a lack of group coordination, and restricted access to premium features. Educational institutions can help remove these obstacles by offering more reliable support for digital infrastructure and advanced instruction on how to utilize Canva's features, including inventive ways to use the free version. Canva's integration at every project stage—from planning and execution to evaluation—can also improve a collaborative approach between instructors and students. Overall, Canva plays an important role as a digital medium that supports project-based learning. These media serve as design aids and as a means of collaboration, creativity, and efficiency that enrich students' learning experiences in the context of 21st century learning. Thus, this study indicates that the use of Canva media in PjBL activities of prospective teacher students has the potential to strengthen the development of TPACK competencies, especially in the aspect of TPK that connects the use of technology in learning. Further research is suggested to explore the integration of Canva with other digital platforms, such as Learning Management Systems (LMS) or AI-based interactive media, to expand its use in the context of more adaptive and innovative learning.

Ethical Approval

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Ethical approval was obtained from the Research Ethics Committee of Universitas Islam Negeri Syarif Hidayatullah Jakarta

Informed Consent Statement

All participants were informed of the purpose of the study, and informed consent was obtained prior to data collection. Participation was voluntary, and all responses were kept confidential and used solely for academic research purposes.

Authors' Contributions

FAPA contributed to the research conceptualization, development of the research framework, supervision of the study, and preparation of the final manuscript. KKM conducted the interviews, organized the qualitative data, and performed the thematic data analysis. SB contributed to the literature review, preparation of the research instruments, and drafting of the results section. H assisted in validating the data findings, providing theoretical insights related to the TPACK framework, and reviewing the overall manuscript for final submission.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Data Availability Statement

The data presented in this study are available on request from the corresponding author due to privacy reasons.

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