The Influence of Online Self-Regulated Learning on BIPA Teaching Material Development Skills Using the Canva Application

(Pengaruh *Online Self-Regulated Learning* terhadap Keterampilan Pengembangan Bahan Ajar BIPA Menggunakan Aplikasi Canva)

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Abstract: Creating instructional materials is an essential responsibility for educators during the process of teaching and learning. Prospective instructors can learn skills in compiling instructional materials during their undergraduate studies. This technique entails the utilization of students' writing proficiency and autonomous capabilities in developing inventive instructional resources. The CANVA program is a useful tool for creating educational materials. Presently, higher education can be pursued through both traditional in-person instruction and online platforms. This project employs the Online Self-Regulated Learning (SRL) technique and utilizes e-learning tools to generate Indonesian language teaching materials for Foreign Speakers (BIPA). The research is to examine the influence of Online Self-Regulated Learning on the proficiency in creating BIPA teaching materials using the Canva application among aspiring Indonesian language instructors at Padang State University. This research employed experimental methodologies and quasi-experimental designs, specifically utilizing a posttest only control design. The group under study comprises students enrolled in the 2020 cohort of the PBSI Study Program. Purposive sampling strategies were employed to choose two classes as samples for this investigation. The research instrument is an assessment tool. The data analysis process included conducting normality and homogeneity tests on the data, followed by performing the Independent Sample T Test. The results indicated that the data did not follow a normal distribution, thus it was analyzed using Mann U Whitney non-parametric statistics. The test results indicate a notable disparity in the mean learning outcomes between students who employ the Online Self-Regulated Learning technique to create BIPA teaching materials using the Canva application, and students who utilize the assignment method.

| Keywords | canva aplication, learning materials, online self regulated learning (SRL) |

Abstrak: Membuat bahan ajar merupakan tanggung jawab penting bagi pendidik selama proses belajar mengajar. Calon instruktur dapat mempelajari keterampilan dalam menyusun bahan ajar selama studi sarjana mereka. Teknik ini memerlukan pemanfaatan kemahiran menulis siswa dan kemampuan otonom dalam mengembangkan sumber daya pembelajaran yang inventif. Program CANVA adalah alat yang berguna untuk membuat materi pendidikan. Saat ini, pendidikan tinggi dapat ditempuh melalui pengajaran tatap muka tradisional dan platform online. Proyek ini menggunakan teknik Online Self-Regulated Learning (SRL) dan memanfaatkan perangkat e-learning untuk menghasilkan bahan ajar Bahasa Indonesia bagi Penutur Asing (BIPA). Penelitian ini bertujuan untuk menguji pengaruh Online Self-Regulated Learning terhadap kemahiran membuat bahan ajar BIPA menggunakan aplikasi Canva pada calon pengajar bahasa Indonesia di Universitas Negeri Padang. Penelitian ini menggunakan metodologi eksperimen dan desain eksperimen kuasi, khususnya menggunakan desain kontrol posttest only. Kelompok yang diteliti adalah mahasiswa yang terdaftar pada Program Studi PBSI angkatan 2020. Strategi purposive sampling digunakan untuk memilih dua kelas sebagai sampel untuk penyelidikan ini. Instrumen penelitian adalah alat penilaian. Proses analisis data meliputi melakukan uji normalitas dan homogenitas data, dilanjutkan dengan melakukan Uji Independent Sample T Test. Hasil penelitian menunjukkan bahwa data tidak mengikuti distribusi normal, sehingga dianalisis menggunakan statistik non parametrik Mann U Whitney. Hasil pengujian menunjukkan terdapat disparitas rerata hasil belajar yang mencolok antara siswa yang menggunakan teknik Online Self-Regulated Learning untuk membuat bahan ajar BIPA menggunakan aplikasi Canva dengan siswa yang menggunakan metode penugasan.

| Kata Kunci | aplikasi canva, bahan ajar, online self regulated learning (SRL) |

INTRODUCTION

The swift advancement of digital technology has resulted in the accessibility of extensive information, becoming a crucial necessity across various sectors such as the economy, health, agriculture, transportation, science, management, and education (Kayaalp et al., 2022). Innovations in technology have tremendously influenced every aspect of the educational process, including formal as well as informal learning environments. For students, the use of modern technology has become an absolute necessity (Widi et al., 2022), because technology has become an integral part of lifestyle, not just a tool for generation Z (Seemiller & Grace, 2017). In today's productive classroom environment, the use and exploration of technology is the main impetus for forming a solid learning foundation (Koehler et al., 2013). Through this approach, students are expected to be skillful in using technology and are able to learn effectively (Schunk & DiBenedetto, 2016).

Contemporary language educators are now expected to possess a broad spectrum of skills extending beyond the traditional 21st-century competencies like creativity, collaboration, critical thinking, and problem-solving abilities (Tafazoli, 2021b). Proficiency in digital literacy is increasingly recognized as a fundamental skill for educators in the modern era (Eshet-Alkalai, 2004; Kaçar, 2022). The integration of technology into teaching methodologies reminds crucial in the current classroom environemnt, equipping students with the necessary tools to navigate future challenges (Lachner et al., 2021). Enhancing the digital competencies of prospective educators is essential, as well as imparting strategies for applying these skills effectively within classroom settings (Tafazoli, 2021a).

In a broader scope, digital learning includes the use of various types of digital resources in teaching process starting from the planning, implementation, to evaluation stages in an effort to ensure student's learning progress (Burdick & Willis, 2011). The availability of digital learning materials is a key element in the learning process (Syafril et al., 2022). Educators or teachers are expected to utilize diverse digital learning resources and integrate them into the classroom environment. By integrating these tools to develop instructional materials or multimedia content, it enables teachers to enhance the learning outcomes. Moreover, due to the changes of students' characteristics and learning style nowadays, it compels teachers to adjust their teaching methodologies and learning materials accordingly (Avcı, 2022). Previous research has shown that students tend to prefer digital learning materials (Al-Qatawneh et al., 2019; Spica, 2022). This is due to the advantages of digital learning materials in terms of cost-effectiveness, portability, ease of use, as well as functionality such as the ability to search, copy, paste and navigate content quickly (Grissett & Huffman, 2019).

Utilizing and crafting digital teaching materials inherently entails a fusion of technological and pedagogical elements, as it necessitates deliberation on factors that affect the material efficacious and its impact on the student learning experience (Vilppola et al., 2022). Both manual and digital teaching materials have similarities, namely that they both present learning material based on the standard of competency and learning indicators, and include practical questions. The standard of competency and learning indicator are important because they help students understand the learning outcomes that are expected after the learning process ends (Rahayu & Haq, 2020). However, digital teaching materials have their own advantages because it allows them to be easily distributed via various social media platforms such as, WhatsApp, Telegram, Facebook and others (Mutiara & Emilia, 2022; Nurhayati et al., 2021).

In fact, there have been various digital tools used by teachers. One of which is Canva platform. Canva is a tool that is often used in developing digital teaching materials (Wijayati, 2022). This tool can be designed for various learning activities with specific objectives (Anwar, 2021). Canva facilitates students to create various creative materials online easily (Hadi et al., 2021). Compared to other design applications and editors, Canva stands out in design and provides ready-made photo design examples that can be used as templates (Rorimpandey & Fatwa, 2023). The components of this application are considered simple so they support visual learning and increase students' visual literacy (Adawiyah et al., 2019). In addition, Canva can

be accessed online for free or by subscription, and is easy to use for creating teaching materials (Alfian et al., 2022). Thus, Canva platform provides many benefits for teachers.

Canva is an online design platform offering a plethora of tools including presentations, resumes, flyers, posters, graphics, infographics, logos, bookmarks, banners, notifications, among others (Tanjung & Faiza, 2019). Its presentation categories span across a wide array of topics including innovation, education, technology, business, advertising, animation, agendas, and more (Astuti, 2021). Teachers can provide high-quality images or photos and media templates for Canva, which can then be flexibly resized. Using Canva does not take up much time in the creative process for teachers (Melinia & Nugroho, 2022). Canva offers the advantage of not needing to be installed on a computer since it is a web and cloud-based tool. It can also be used through a mobile application that is compatible with Android and iPhone devices (Salam & Adam Mudinillah, 2021).

Canva as a website is a visual media source that can be used as a world-class window for foreign languages, and Canva for Education is one of the newest media (Fauziyah et al., 2016). Canva serves as a visual media platform offering access to a vast array of resources beyond the confines of the language classroom, presenting an assortment of authentic materials readily available for use (Yundayani et al., 2019). With its appealing design and user-friendly features accessible on both smartphones and laptops, this application empowers educators and learners alike to craft teaching materials with enhanced creativity and efficiency (Maryunani, 2021). Using the Canva application is not only a learning medium, but can also improve student learning outcomes (Elsa & Anwar, 2021; Khoiriyah et al., 2022; Leryan et al., 2018; Rahmatullah et al., 2020; Wulandari & Mudinillah, 2022). Apart from that, using Canva can also increase students' learning motivation (Pelangi, 2020).

Unfortunately, teachers often appear to lack sufficient experience or skills in terms of professionalism, which results in a lack of capacity to use digital technology effectively in learning contexts (Koehler et al., 2013). To meet current educational demands, prospective teachers need to have skills in developing their own teaching materials by utilizing digital technology, one of which is through the use of the Canva application. To achieve this, prospective teachers need to be trained in these skills, especially in the context of teaching Indonesian. Indonesian language teachers are not only tasked with teaching students in the language, but also have career potential as teachers for foreign students studying Indonesian. In the course on developing Indonesian language teaching materials for foreign speakers (BIPA), students are expected to be able to develop teaching materials as a means of learning Indonesian.

In fact, the impact of COVID-19 and advances in science and technology have changed the learning process, especially at the higher education level, where learning can be done both face-to-face and online. In the context of developing BIPA teaching materials, researchers use Online Self Regulated Learning (SRL) using e-learning applications provided by universities to assist lecturers in teaching. This application is important in supporting online learning in this era. The importance of independent learning in online education has been highlighted by various studies (Broadbent, 2017; Hong et al., 2021). Independent learning is defined as students' ability to independently and proactively engage in the learning process and regulate their behavior and motivation to achieve learning goals (Doğan, 2022). This technique is a dynamic and purposeful process in which learners set their own learning goals and then strive to manage, control, and govern their thinking, motivation, and actions. They do their own learning with the guidance and constraints of their learning goals as well as the characteristics of their contextual environment (Khurshid, 2020).

Self-regulation skills in education refer to a set of qualities that promote students' independence in their learning pursuits (Almoslamani, 2022; Liu et al., 2022). These skills include many aspects of human cognitive functioning, motivation, metacognition, perception, and environmental awareness, all aimed at achieving the best possible learning results (Fawait et al., 2020; Vattøy, 2020). The importance of independent learning and learning strategies is explained through their relationship to student performance and learning success (Broadbent, 2017). In other words, students who use independent learning strategies effectively tend to show better performance (Fuchs et al., 2022). However, self-regulation strategies also apply in the context of online learning, with the exception of environmental adjustments, because online learning is often already structured, leaving little room for adjustments to the learning environment (Li et al., 2022).

A number of studies have highlighted the importance of developing independent learning skills in the context of e-learning, which can improve students' learning outcomes and academic achievement. Independent learning is a key element in successful online learning, where students follow learning plans, complete assignments, and push themselves to achieve high standards (Durnalı et al., 2022). Self-regulatory behavior enables students to efficiently utilize self-regulation skills in an online learning environment, providing them with confidence and certainty (Landrum, 2020). The importance of self-regulation is emphasized by individual characteristics that promote proficiency in using technology, a tendency for curiosity and discovery, and awareness of the benefits provided by online learning (Tabak & Nguyen, 2013). Participating in self-directed learning requires confidence, perseverance, and unwavering commitment to educational goals (Fadli et al., 2022). These attributes empower students to efficiently allocate their time and effort in acquiring the necessary materials for their educational journey (Izci, 2016). This also has an impact on curiosity, organization, self-motivation, self-control, enthusiasm, openness to learning, and comfort in facing uncertainty and change (Cho et al., 2017). Specifically, these are the individual's skills and abilities to manage the learning process (Zhoc & Chen, 2016).

Research regarding the development of Indonesian language teaching materials for foreign speakers (BIPA) has been carried out previously. Several previous studies, such as those conducted by Bursan & Fatimah (2019), developed teaching materials based on local culture, especially Makasar culture, through Computer Assisted Instruction (CAI). Meanwhile, Arumdyahsari et al., (2016) also developed teaching materials for Indonesian speaking skills for BIPA speakers. In addition, Nirmalasari (2022) developed coffee-based Indonesian listening teaching materials for BIPA students. Even though many of these studies have been conducted in different BIPA learning context, the research regarding the competency of prospective BIPA teaching students in developing teaching materials reminds underexplored. Therefore, this research cannot be considered a duplication or reduplication of previous research. Based on this explanation, the aim of this research is to determine the effect of Online Self-Regulated Learning on BIPA teaching material development skills using the Canva application for prospective Indonesian Language teachers at Padang State University.

This research has several urgencies that can be considered as it was depicted in the following. First, this research provides insight into the effectiveness of using digital media in the context of developing teaching materials, one of which is the CANVA website. Second, the ability to learn independently is an important skill at this time, especially for students who have implemented online learning assisted by e-learning. Third, the current development of BIPA means that we need to prepare professional teaching staff to be able to develop their own teaching materials as an important part of their professionalism.

METHOD

In order to collect the data, this study employed quantitative research methods and utilized experimental and quasi-experimental research approaches. This study employed a posttest only control design, which aimed to compare the treatment effects of two groups: the control group and the experimental group. The experimental group is a cohort that got involved in the intervention, whereas the control group does not. The research sample consisted of students from the PBSI Study Program, namely from the class of 2020. These students were divided into five distinct courses. Two classes were selected as research samples using purposive sampling techniques. The reasons for selecting the sample include the class being at the same semester level, having a similar level of ability, and being a class studying the BIPA package. The data collection method involves a performance test, where students are assigned to create BIPA teaching materials.

The research instrument used in this study was adopted performance tests as an evaluation method. This test is designed with a structured format in three different parts. First, the context section presents brief information about the tasks to be carried out, including the teaching materials, function and structure of the teaching materials to be developed, and so on. Second, the instructions section provides detailed guidance on how to develop teaching materials, which can be adapted to the level of understanding and topic of the BIPA material to be studied. Third, the assessment rubric section presents the assessment criteria that will be used to assess the quality of the teaching materials that have been developed. This instruction provides clear

guidance for students about the assessment standards that will be applied by lecturers, as well as a clearer picture of the quality expected from the teaching materials they produce. Once the instrument is developed, the test is validated by experts. In the context of this research, performance test instruments are used to evaluate students' abilities in developing teaching materials for learning Indonesian for Foreign Speakers (BIPA). By using a structured format, the instrument provides clear guidance for students about what is expected in developing teaching materials, as well as the assessment criteria that will be used by lecturers to assess their work. Validation by education experts also adds confidence to the validity and reliability of the instrument.

The experimental class used an e-learning application by implementing Online Self-Regulated Learning in developing BIPA teaching materials using the Canva application, while the control class employed onlythe assignment method. This research did not conduct a pre-test because performance tests are an aspect of skills that are difficult to carry out before learning. The statistical analysis steps used to process research data involve first testing the normality of the data, assessing the homogeneity of the data, and testing the Independent Sample T Test. If the prerequisite tests are not met (not normal or not homogeneous), then a nonparametric test is carried out using the Mann-Whitney U test. Data analysis is carried out using the SPSS application.

Table 1
Research design

Class	Treatment	Post-test
Control		O1
Experiment	X	O2

The hypothesis of this research is as follows.

H0: There is no difference in the average learning outcomes of students who use Online Self-Regulated Learning on BIPA teaching material development skills using the Canva application compared to students who are given assignments.

Ha: There is a difference in the average learning outcomes of students who use Online Self-Regulated Learning on BIPA teaching material development skills using the Canva application compared to students who are given assignments.

RESULTS AND DISCUSSION

In this research, results were found in the form of student performance tests from post-test trials in two groups, including the control group and the experimental group. The results of this research can be explained as follows. First, a statistical description of the data that has been processed using SPSS is carried out. Descriptive statistical analysis of this research data is presented in Table 2.

Table 2
Data Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Control Class	26	80	90	82.88	0.689
Experiment Class	24	80	95	88.38	0.814

Based on Table 2, there is a striking difference between the average learning outcomes in the control class and the experimental class. To validate the existence of significant differences, it is necessary to carry out statistical tests on student learning outcomes using SPSS. The second step involved testing the normality of the trial data, which used the Shapiro-Wilk test with a significance level of 0.05. After the data is processed using SPSS software, the output results are shown in Table 3.

Table 3
Data Normality Test

	Group	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Learning outcomes	1	.333	26	.000	.742	26	.000
	2	.271	24	.000	.859	24	.003
a. Lilliefors Significance Correction							

The results of the Shapiro-Wilk test in Table 3 indicate that the score data for both groups, the control class posttest data (0.000) and the experimental class posttest (0.003), do not follow a normal distribution with a significance level of less than 0.05. Therefore, considering this data, it can be inferred that the posttest data for both the control class and experimental class are samples that do not follow a normal distribution. The third stage involves conducting a homogeneity test on the trial data to ascertain if the two populations originate from the same variation. The homogeneity of the data in this study was assessed using the Levene test, which was conducted using the SPSS programme. Table 4 contains the findings of the homogeneity test.

Table 4
Data Homogeneity Test

Learning Outcomes			
Levene Statistic	df1	df2	Sig.
.054	1	48	.818

Based on the above table, Table 4 shows that the average post-test data has a significance value of 0.818. If the probability value or significance level is higher than 0.05, then it can be inferred that the population's variance is uniform. The next stage is to use non-parametric statistics, specifically the Mann-Whitney U test, to determine the average difference between two unpaired samples (control and experimental classes on post-test results), based on the data's normality and homogeneity tests. The following results are obtained from calculations made with the SPSS application.

Table 5
Mann U Whitney Test

Test Statistics[a]	
	Learning Outcomes
Mann-Whitney U	82.000
Wilcoxon W	433.000
Z	-4.661
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Group	

The test findings indicate that the Asymp.sig value obtained (2-tailed) was 0.000, which is below the significance level of 0.05. Thus, it can be inferred that there is a significant difference in the average learning outcomes of students who participate in Online Self-Regulated Learning to create Indonesian language teaching materials for Foreign Speakers (BIPA) using the Canva application, compared to students who only receive assignments.

Research findings suggest that there is a difference in the average learning outcomes between students who use Online Self-Regulated Learning to create Indonesian language teaching materials for Foreign Speakers (BIPA) with the Canva program, compared to those who only get assignments. Several researches have investigated self-regulated learning in online learning settings (Broadbent, 2017; Cho & Shen, 2013), and some have claimed that it is associated with good learning experiences, increased engagement, and an effective learning process (Viriya, 2022). Therefore, students that flourish in online learning are those who are very skillful in effectively utilizing self-regulation throughout their learning process (Sun & Rueda, 2012). In an online learning environment, great responsibility is required from

students to control their own learning process (Wang et al., 2013). They are asked to plan their studies, manage their time, and determine the best way to engage with the course material efficiently. Thus, independent learning plays an important role in controlling individual learning and supporting students to engage independently and actively in the learning process (Bol & Garner, 2011; Kara et al., 2020).

Researchers believe that Self-Regulated Learning (SRL) plays a key role in learning success, as it has been revealed by several studies (Hao, 2016; Hartley & Bendixen, 2011). Online learning provides numerous advantages, such as developing students' self-directed learning skills, enabling them to actively engage in the teaching and learning process as well as participate in interactive and adaptable learning experiences. Online learning also enables students to assess and analyze their learning progress (Diningrat & Ngussa, 2022). According to Moos & Bonde (2016), people who have independent learning skills are able to recognize their own actions and evaluate their performance based on these behaviors. They also tend to observe themselves in the learning context, identify their shortcomings, and work to improve them (Özdal et al., 2022). Implementing independent learning is also thought to foster student creativity (Lemmetty & Collin, 2021), which aligns with the enhancement of individual competencies like creativity, communication, and collaboration in professional settings (Toh & Kirschner, 2020). In this way, it is hoped that individuals can take greater responsibility for their own learning and development (Bansal, 2021).

As per Barnard-Brak et al., (2010), individual academic performance tends to fluctuate in accordance with their level of SRL skills; for instance, a minimal and disorganized independent study approach consistently correlates with lower academic achievement. Similarly, a study conducted by Zalli et al., (2020) in Malaysia demonstrates that SRL strategies such as time management, planning, and self-evaluation significantly influence student satisfaction with their learning experiences. Since self-regulation encompasses personal cognitive, metacognitive, motivational, perceptual, and environmental dimensions aimed at achieving learning objectives (Fawait et al., 2020), it facilitates students' independence in their learning process. This approach is also apt for individuals seeking to self-regulate their learning, as it necessitates assuming independent responsibility for their learning from educators and leveraging available online resources (Rasheed et al., 2020).

The development of Indonesian language learning teaching materials for foreign speakers (BIPA) requires language skills from prospective student teachers, especially in writing skills. Regarding these language skills, various studies show that Self-Regulated Learning (SRL) can improve several aspects of students' writing performance (Mahmud & German, 2021). A study by Ariyanti et al,. (2018) found that independent learners tend to put more effort into learning to write, which results in better writing results. In the context of affective learning, SRL is also related to motivation and seeking help, which is crucial for students in completing assignments such as writing a thesis (Mbato & Cendra, 2019). Research by Wijaya (2021) showed that the continuous incorporation of SRL internalized by academic writing advisors can produce complementary internal and external motivation, which in turn helps students achieve success in academic writing, which is important for their future careers. Pionera et al., (2020) revealed that students exhibiting low levels of Self-Regulated Learning (SRL) also demonstrate proficient writing skills, sometimes surpassing those of students with high levels of SRL. This suggests that students with lower SRL levels still possess the potential to undergo substantial improvements in achieving learning outcomes, particularly in the realm of writing skills.

The utilization of the CANVA program for the creation of instructional materials has gained significant popularity among educators. Several prior studies have demonstrated the benefits of utilizing this program for the creation of educational materials. For instance, Puspita et al., (2022) discovered that the utilization of CANVA yielded positive results in enhancing reading comprehension abilities specifically for informative literature. Similarly, Usman et al., (2023) demonstrated that teachers exhibited favorable reactions and displayed significant enthusiasm in creating language teaching materials using this application. This was mostly due to the enhanced creativity of the generated teaching materials, which effectively stimulated student motivation in the learning process.

Additionally, this study also emphasizes the utilization of CANVA in creating instructional resources for non-native language learners. Andrianto et al., (2021) examined the utilization of

infographics or CANVA media to investigate the attributes, cultural understanding, and tourism of grade 6 BIPA pupils at the Surabaya European School. In addition, Simanjuntak et al., (2022) created teaching resources for BIPA level A1 that specifically emphasize the culture of North Sumatra. These materials were built utilizing the CANVA application. In addition, Rahmawati & Daulany (2023) demonstrated the utilization of CANVA in creating instructional resources for those who are not native speakers. Their research demonstrates that the utilization of CANVA facilitates students' comprehension of the subject due to its visually appealing and comprehensible image or video format. In addition, this program can be utilized to enhance instructor creativity and foster the acquisition of diverse abilities necessary for pupils in numerous domains of life.

CONCLUSION

This study examines the dynamics of learning at the tertiary level, which has undergone a considerable transition to online learning. An instance of this is Padang State University, which has extensively implemented e-learning software to facilitate the process of online education for both students and instructors. An example of this application may be seen in the course "Development of BIPA Teaching Materials," where an Online Self-Regulated Learning technique is utilized. The research findings indicate a notable disparity in the mean learning outcomes between students who employ this methodology and those who adhere to the standard assignment method. This research advice emphasizes the significance of utilizing the Online Self-Regulated Learning approach as a substitute for online learning. By employing this method, educators can foster student autonomy in the educational journey, bolstered by the advice provided by online learning platforms. This approach is expected to be more efficient than using only conventional assignment techniques.

In addition, it is imperative to enhance comprehension about the implementation of Online Self-Regulated Learning within the framework of online education. The development of a sophisticated learning model by leveraging additional applications that are compatible with this methodology should be further investigated. Therefore, the full potential of Online Self-Regulated Learning in enhancing students' learning abilities and academic performance at the tertiary level can be maximized. Future research could investigate the potential application of this strategy to enhance several skills, including speaking, listening, and understanding grammar, within the framework of learning Indonesian for Foreign Speakers (BIPA). Therefore, the utilization of Online Self-Regulated Learning in online education will continue to advance and prove valuable insight for educational practitioners and researchers in the future.

While this research offers valuable insights into the efficacy of the Online Self-Regulated Learning approach for learning Indonesian as a foreign language (BIPA), particularly in creating BIPA teaching materials using the Canva application, it is important to acknowledge certain limitations. The scope of this research is confined to a single university and a specific course, thereby limiting the applicability of the findings to that particular environment. Furthermore, this study did not thoroughly examine the impact of external factors, such as unreliable internet access or students' level of technological preparedness, on learning outcomes, despite the emphasis on online learning. In addition, the measurement solely emphasizes student learning outcomes and does not take into account students' subjective feedback or experiences with the learning approach employed. Future study might enhance the understanding of the efficiency of this learning strategy in different educational environments by taking into account these constraints.

DECLARATIONS

Author contribution	:	Vivi Indriyani leads and is responsible for all research projects on Muhammadiyah figures in East Java. He also wrote the manuscript and collaborated with the second and third authors. Hasri Fendi and Rohaidah participated in writing the article. Three authors approved the final manuscript

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