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The Impacts of Preservice English Teachers' Self-efficacy of Using AI Towards Their Intentions of Teaching Writing Skills Using AI

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ABSTRAK

Penggunaan kecerdasan buatan (AI) di kelas semakin meningkat, khususnya dalam pengajaran menulis. Namun, karena efikasi diri yang rendah, banyak guru bahasa Inggris pra-jabatan yang enggan menerapkan AI. Penelitian ini bertujuan untuk menganalisis bagaimana niat guru bahasa Inggris pra-jabatan untuk mengajar menulis dengan AI dipengaruhi oleh tingkat efikasi diri mereka di lapangan. Dalam studi kuantitatif ini, 303 calon instruktur bahasa Inggris di sebuah institusi publik disurvei. Peneliti membuat dua kuesioner untuk mengukur niat berperilaku dan efikasi diri. Regresi Linier Sederhana digunakan untuk mengevaluasi hasil. Berdasarkan temuan penelitian, efikasi diri berpengaruh signifikan terhadap niat menggunakan AI untuk mengajarkan keterampilan menulis. Guru lebih cenderung menggunakan AI jika mereka merasa percaya diri dalam menggunakannya. Studi ini menyimpulkan bahwa peningkatan efikasi diri dalam AI di kalangan calon guru mempunyai dampak positif terhadap niat mereka untuk mengintegrasikan AI ke dalam praktik mengajar. Temuan ini menggarisbawahi perlunya program pelatihan guru dan lembaga pendidikan untuk fokus membangun kepercayaan diri dalam menggunakan AI, yang dapat meningkatkan praktik pengajaran.

ABSTRACT

The use of artificial intelligence (AI) in the classroom is growing, particularly when it comes to writing instruction. However, because of their low self-efficacy, a lot of pre-service English teachers are reluctant to apply AI. This study aims to analyze how pre-service English teachers' intentions to teach writing with AI are influenced by their level of self-efficacy in the field. In this quantitative study, 303 aspiring English instructors at an public institution were surveyed. Researchers created two questionnaires to gauge behavioral intentions and self-efficacy. Simple Linear Regression was used to evaluate the results. Based on the research findings, self-efficacy significantly influences the intention to employ AI to teach writing skills. Teachers are more likely to use AI if they feel confident in using it. This study concludes that increasing self-efficacy in AI among pre-service teachers has a positive impact on their intention to integrate AI into teaching practice. These findings underscore the need for teacher training programs and educational institutions to focus on building confidence in using AI, which can improve teaching practices.

1. INTRODUCTION

AI has become a huge phenomenon currently throughout the world, where currently AI has become the latest technological discovery that is almost discussed throughout the world and almost all industrial and educational sectors have applied AI technology to inside. Artificial Intelligence can be defined as a machine that can understand and learn logic like humans (Tiara Nur Fitria, 2021; Syahnaz & Fithriani, 2023). In writing classes, AI technology has been used to teach writing skills. Several previous studies show that AI can improve writing skills (Mediyawati et al., 2021), improve the quality of students' written products (Tira Nur Fitria, 2021), and help the writing process (Kangasharju et al., 2022). Although the role of AI can make it easier for pre-service teachers to teach writing. Previous study said it's difficult to prepare pre-service teachers for AI-based teaching (Samerkhanova & Imzharova, 2018). Because AI is a new technology being implemented in the world of education, especially teaching writing, many pre-service English teachers have little intention of integrating AI into their writing lessons (Özdemir & Hekim, 2018; Spante et al., 2018). Their lack of intention is because they have a low level of self-efficacy or lack confidence in their own abilities in using new AI technology.

In overcoming these challenges, high self-efficacy is needed by teachers in using this technology. Self-efficacy is a person's belief in their ability to complete something (Sintiani et al., 2018; Sumandal, 2023). People who have high self-efficacy will view all difficult tasks as challenges that must be mastered and they have high

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confidence in their abilities, compared to people who have low self-efficacy who view all difficult tasks as obstacles that must be avoided. Depending on whether the teacher has high or low self-efficacy, this will influence TAM or specifically the intention to use the technology. According to previous study the Technology Acceptance Model (TAM) is a popular research model that forecasts how each user would utilize and accept technology and information systems (Surendran, 2012). Then behavioral intention is a behavioral tendency to continue using a technology. Based on several earlier research, educators and prospective teachers are starting to implement artificial intelligence (AI) into their lessons as a result of AI's introduction into the field of education (Sumakul et al., 2022; An et al., 2023; Aljohani, 2021). But again, TAM greatly influences the use of technology in the world of education, and TAM itself is influenced by self-efficacy. There has been some research on this matter (Holden & Rada, 2011; Kukul, 2023; Joo et al., 2018; Peng et al., 2023).

Writing is important for students to master because it is an essential and complex skill (Utami et al., 2023; Setlight et al., 2023). Writing is one of the most important language skills which not only has an influence on native English speakers, but also has a big influence on thousands of ESL students around the world explains that traditional teaching methods have many weaknesses and limitations (Sharma & Puri, 2020; Valizadeh & Sahmaniasl, 2023). One way to overcome this is by using technology, one of which is Artificial Intelligence (AI). In today's digital era, using technology to teach writing has become commonplace and important. This is not without reason, because writing is a complex and important skill for students to master. Given its broad use in classrooms and its exponential expansion, the National Commission on Writing in America's Schools and Colleges proposes that technology become increasingly important to the writing process (Baaijen & Galbraith, 2018; Kalaw, 2017).

Previous study explains the meaning of Artificial Intelligence (AI) as a process of creating machines and modeling human thinking so that they can carry out cognitive tasks and work like humans (Tiara Nur Fitria, 2021). Other study also explains that AI is an automated machine that makes it possible to respond to questions, solve problems, devise plans, and carry out various other tasks which require human intelligence to perform (Coppin, 2004). Artificial Intelligence (AI) can work automatically from patterns or features in data which are the result of combining the presence of several data, repeated processing, and from intelligent algorithms. Machines that have been equipped with Artificial Intelligence (AI) make it possible to adapt to new input, gain knowledge through experience, and carry out activities like humans (Kateryna et al., 2020; Syahnaz & Fithriani, 2023).

Charles Babbage began working on a machine that showed behavioral intelligence in 1884, but his study stopped once it was determined that machines were not capable of possessing human intelligence (Huerta et al., 2018; Mijwel, 2015). Furthermore, in 1950, Claude Shannon proposed that computers could play chess. From there, research on artificial intelligence was conducted until 1960. In the 1950s, Alan Turing put forward the concept of a universal abstract machine called the Turing Machine, then it was only in 1956 that the name Artificial Intelligence first emerged from John McCarthy in The Dartmouth AI Summer Research Project (Mijwel, 2015; Zheng & Xie, 2016). Then between 1965 to 1970, there was a downturn in artificial intelligence research since not much work was done during this time. Major projects started using artificial intelligence (AI) in 1980. During this time, AI was applied in a variety of contexts, and by 2000, it was becoming more and more prevalent in daily life. While traditional methods of use were still used, the use of AI was expanding along with the advancement of technology.

According to previous study AI has advantages and disadvantages in education (Huerta et al., 2018; Martin & Grudziecki, 2006). The advantages include: an increase in adaptation of learning resources, can improve teaching jobs, greater customizability of curricular resources, and Improved educational services. Apart from that, the disadvantages of AI include increased student surveillance and potential privacy issues, can perpetuate existing algorithmic bias, inaccurate or misleading information, and can lead to unintended or unexpected consequences (Alkash & Al-Dersi, 2013; Koltay, 2011). As explained by previous study that writing is one of the challenging skills to teach and learn in ESL classes (Valizadeh & Sahmaniasl, 2023). This makes traditional teaching methods difficult to apply, because traditional teaching methods have many weaknesses and limitations. Therefore, the need for technology could be one solution to overcome these limitations and one of these technologies is Artificial Intelligence (AI). The advantage of using AI in learning writing skills is improved idea generation and increased efficiency in writing, while the disadvantage is that it can reduce authenticity and critical thinking in writing (Cardon et al., 2023; Qekaj-Thaqi & Thaqi, 2021).

According previous study self-efficacy is a person's belief about their ability to do something to achieve desired goals that will influence their life (Albert Bandura, 1994). On the other hand, according to explained that self-efficacy is an ability and competency that is used to overcome all life's challenges (Saeid & Eslaminejad, 2016). How a person thinks, feels, behaves, and motivates themselves is determined through self-efficacy beliefs. People will view all difficult tasks as challenges to be mastered if they have high confidence in their abilities, rather than as obstacles to be avoided. As previously stated by Bandura above, self-efficacy is the conviction that one can take action to accomplish desired objectives that will have an impact on one's life. In the context of technology use, there is a construct called Technological Self-Efficacy (TSE). Other study explains the meaning

of TSE as the confidence in oneself to accomplish a new, technologically challenging task (McDonald & Siegall, 1992). This construct is generalizable across several specific technologies because it was designed to characterize general feelings regarding the ability to accept new technology.

Based in psychology research on the theory of reasoned action (TRA), Davis (1989) initially developed the technology acceptance model (TAM) (Fishbein & Ajzen, 1975; Masrom, 2007). Previous study explains that the Technology Acceptance Model (TAM) developed by Davis (1989), is a popular research model, which functions to predict the use and acceptance of information systems and technology by individual users (Surendran, 2012). TAM helps in the explanation and comprehension of usage behaviors when putting in place an information-rich system. One of the main ideas in TAM is behavioral intention, which describes a person's willingness to carry out a particular activity and is considered to be an immediate precursor to using behavior (Chen et al., 2012; Sharif Abbasi et al., 2011). TAM states that behavioral intention is mediated by perceived usefulness and ease of use, which act as a buffer against the impacts of external variables on usage intention.

The author attempts to review previous studies that have addressed the topic or theories of this research in this part. Previous study conducted research on the level of pre-service teachers' teacher efficacy and the factors influencing it (Farhadiba & Nunuk Wulyani, 2020). The findings indicated that the self-efficacy level of pre-service teachers was 3.31 (5-scale rating for highly effective) which is quite high. Then other study also carried out research on self-efficacy with the goal of ascertaining prospective teachers' perceptions of their own self-efficacy in using educational technology into their future careers (Caner & Aydin, 2021). It was discovered through statistical analysis of quantitative data that pre-service teachers generally showed high levels of self-efficacy for integrating technology. One could say that pre-service teachers are already rather confident when it comes to using technology. On the other hand, conducted surveys to examine the impact of social standing on the acceptance of AI technology by examining two factors: self-efficacy and intention to utilize AI (Hong, 2022).

The findings show that technological self-efficacy and acceptance are positively correlated; in other words, self-efficacy influences technology acceptance in a positive way. According to the findings of the studies mentioned previously, there is no explanation for the relationship between English teachers' self-efficacy and their plans to use AI to teach writing skills. The novelty of current study filled this knowledge gap by investigating the impact of preservice English teachers' self-efficacy in using AI on their intention to teach writing skills using AI. Specifically, the research looked at this relationship between the two variables. This study therefore analyze the impact of preservice English teachers' self-efficacy in using Artificial Intelligence (AI) on their intention to teach writing skills using AI. The novelty of this study is its focus on the impact of self-efficacy on intention to use AI in teaching writing skills, which has not been explored in the literature before.

2. METHOD

This research adopts quantitative research. Quantitative research design is a research design that intends to carry out a systematic, objective and exploratory process to obtain information that can be measured about the subject and is related to numbers, statistics and the relationship between events and numbers (Creswell & Creswell, 2018). This research took place at one of the state universities in Indonesia. The researcher chose the Faculty of Languages and Arts, specifically the Department of English Language Education to collect data in accordance with the research questions. The subjects of this research are 300 pre-service EFL teachers which will provide information according to the data required by the researcher. Then, using Purposive Sampling Technique, researchers will recruit participants. Purposive Sampling Technique is a sample selection that is carried out deliberately because of the qualities possessed by the participants (Etikan et al., 2016). Researchers use this technique by following several criteria, including the following: first, these pre-service English teachers have prior experience using AI in the context of writing; second, being able to implement AI to support teaching in the future; third, participants have already taken the PLP (Pengenalan Lapangan Persekolahan) program; fourth, if prospective teachers have not taken the PLP program, prospective teachers who have already participated in the KM (Campus Teaching) program can become participants; fifth, if prospective teachers have not taken the PLP and KM programs, then prospective teachers who have taken the Micro Teaching course can also become participants if they have met criteria number 1 and 2.

In this research, researchers will be using survey data collection methods. Survey research is a data collection method that attempts to collect one or several variables taken from members of the population in research (Maidiana, 2021). In this research, the author will use a researcher-made instrument, where the researcher will develop two questionnaires for the sake of this research. The first questionnaire is about teachers' self-efficacy of using AI in teaching writing skills, and the second one is about the intention of using AI to teach writing skills. Questionnaires will be given to pre-service English teachers, and they will be asked to fill it out to collect all the necessary data. The researcher will speak with the department head before beginning this study to obtain permission to contact their preservice teachers. Then the researcher will explain the benefits and risks of participating in this research to the participants after the researcher has had the opportunity to approach the

participants. The questionnaire that will be used is a closed questionnaire (structured questionnaire) which is a questionnaire presented in such a form that the respondent is asked to choose one answer that suits his or her characteristics by placing a cross or checklist mark (Fırat & Laramee, 2018). The survey questionnaire form used is an online survey questionnaire form with a 5-point Likert Scale as measurement.

Then for data analysis used is Simple Linear Regression (SLR) analysis from Statistical Package for the Social Sciences (SPSS) software. The relationship between dependent and independent variables is found using the Simple Linear Regression approach to describe the data phenomenon or case being examined for control purposes and prediction purposes (Harlan, 2018). Before carrying out the analysis, statistical requirements must be met, namely prerequisite tests including normality test statistics, heteroscedasticity tests, and linearity tests. After carrying out all the prerequisite tests, a t-test is then required. The t-test displays the relative contribution of each independent variable to the explanation of the dependent variable (Ghozali, 2018).

3. RESULT AND DISCUSSION

Result

The study's research description results provide a broad description of the respondents, including their age and gender. Table 1 provides information on the number of female responders.

Table 1. Description Based on Gender

No.	Gender	Frequency	Percentage (%)
1	Woman	198 People	65.3%
2	Man	105 People	34.7%
Total		**303 People**	**100%**

Base on Table 1, which came to 198, or 65.3%. Then, 105 responses, or 34.7% of the total, were men. We may deduce that a greater proportion of female respondents than male respondents is present. Then Table 2 provides the following information related to the number of respondents aged.

Table 2. Description Based on Age

No.	Age	Frequency	Percentage (%)
1	18	2	0.7%
2	19	59	19.5%
3	20	120	39.6%
4	21	64	21.1%
5	22	49	16.1%
6	23	7	2.3%
7	24	2	0.7%
Total		**303**	**100%**

Table 2 show that respondent age of 18 was 2, with a percentage of 0.7%; the number of respondents aged 19 was 59, with a percentage of 19.5%; the number of respondents aged 20 was 120, with a percentage of 39, 6%; the number of respondents aged 21 was 64, with a percentage of 21.1%; the number of respondents aged 22 was 49, with a percentage of 16.1%; the number of respondents aged 23 was 7, with a percentage of 2.3%; and lastly, the number of respondents aged 24 totaled 2 with a percentage of 0.7%. It can be concluded that the age range of respondents is between 18 - 24 years with the highest respondents aged 20 being 120 people and the lowest at ages 18 and 24 years being 2 people each. Next, a description of the respondents based on the length of experience they have in using AI is included in Table 3.

Table 3. Description Based on Experience

No.	Age	Frequency	Percentage (%)
1	Less Than 1 Year	97	32%
2	1-2 Years	166	55.71%
3	More Than 2 Years	40	13.20%
Total		**303**	**100%**

Base on Table 3, the majority of respondents had used AI in writing for 1-2 years, with a frequency of 166 and a percentage of 55.71%. Experiences of less than a year, with a frequency of 97 and a percentage of 32%,

and experience of more than two years, with a frequency of 40 and a percentage of 13.20%, were the least common. Table 4 is a descriptive statistical analysis, where in this analysis the mean, standard deviation and variance are obtained.

Table 4. Descriptive Statistic Analysis

Variables	Minimum	Maximum	Mean	Std. Deviation	Variance
Self-Efficacy	21.00	39.00	30.00	4.121	16.980
Intention	20.00	40.00	30.00	4.150	17.219

Base on Table 4, data has been obtained for the mean of the Self-efficacy and Intention variables, which is the same at 30.00. Then the standard deviation for the Self-efficacy variable is at 4.121, and for the Intention variable it is at 4.150. And finally, the variant in the Self-efficacy variable is at 16.980, and for the Intention variable it is at 17.219. Table 5 provides result of simple linear regression.

Table 5. Simple Linear Regression Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Rgression	4289.411	1	4289.411	1417.888	0.001
	Residual	910.589	301	3.025		
	Total	**5200.000**	**3-1**			

Base on Table 5, information on the estimated F value = 1417.888 at a significance level of 0.000 < 0.05. This suggests that the regression model can be used to predict the variables related to self-efficacy, or, to put it another way, that the Intention variable (Y) is influenced by the Self-Efficacy variable (X). Then Table 6 shows the degree of influence that the Self-Efficacy (X) variable has on the Intention (Y) variable, which can be used to calculate the correlation coefficient.

Table 6. Correlation Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.908	0.825	0.824	1.739

Base on Table 6, the amount of the correlation or relationship (R), which is 0.908, can be explained by looking at the Simple Linear Regression test's Correlation Coefficient table below. The output indicates that the independent variable (self-efficacy) has an 82.5% influence on the dependent variable (intention), with a coefficient of determination (R Square) of 0.825. Meanwhile, the remaining 17.5% is influenced by other variables that are not in the research or were not researched. The result of decision making and formula testing is show in Table 7.

Table 7. Decision Making and Formula Testing

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.562	0.735		3.484	0.001
	Self-Efficacy	0.915	0.024	0.908	37.655	0.001

Based on Table 7, the results of the multiple linear regression test, the basis for decision-making in this test is that Ha is accepted if Asymp. Sig. < 0.05 means there is an influence of the independent variable on the dependent variable. Based on the output above, the significance value (Sig.) is 0.001, less than < probability 0.05, so it can be concluded that Ha is accepted and Ho is rejected, which means that pre-service English teachers' self-efficacy in using AI (X) has an impact on pre-service English teachers' intention to teach writing skills (Y).

The constant value (β0) was obtained at 2.562 units, the self-efficacy coefficient (β1) was 0.915 units. Interpretation of the results of simple linear regression analysis can be explained as follows: first, a constant of 2.562 units means that if the self-efficacy (X) value is zero, then the intention (Y) is 2.562; and second, the regression coefficient value of self-efficacy (β1) is 0.915, meaning that self-efficacy influences intention (Y), more specifically it has a positive impact. This means that every increase in Self-Efficacy (X) affects the Intention variable (Y) which increases by 0.915, so it becomes 3.477 (2.562 + 0.915).

Discussion

Based on the results this study found that pre-service English teachers' self-efficacy had a positive contribution to pre-service English teachers' intention to use AI to teach writing skills. The results support the findings of previous research which states that teacher self-efficacy has a positive relationship and contribution to the intention to use AI in teaching (Al Darayseh, 2023; Sumandal, 2023). Based on this research's findings, self-efficacy influences behavioral intentions; moreover, the impact is a positive impact, where there is an increase in each addition of self-efficacy which influences behavioral intentions. These results are in accordance with Bandura's self-efficacy theory which states that self-efficacy is a person's belief in their own ability to do something to achieve a goal (Lai et al., 2021; Niehaus et al., 2012). The higher a person's level of self-efficacy, the more they will view AI technology as something that must be conquered and mastered, which ultimately leads to an increase in their intention to adopt AI technology into teaching when they have mastered it (Kibirige & Teffo, 2014; Koltay, 2011). However, on the other hand, if someone has low self-efficacy, they will tend to avoid learning AI technology because they consider AI as an obstacle that is difficult to learn, which will lead to their lack of intention to adopt AI technology into teaching.

To overcome these challenges, high self-efficacy is needed because a person's level of self-efficacy will influence whether a person will use AI to teach writing or not. If someone has low self-efficacy in using technology, that person will be less likely to use technology (Chung et al., 2010; Czaja et al., 2006; Ozdamli & Ozdal, 2018). Depending on whether the prospective teacher has high or low self-efficacy, this will influence the Technology Acceptance Model (TAM) or more precisely the prospective teacher's intention to use AI, both of which are the effects investigated in this research. The results show prospective teachers' self-efficacy in using AI influences prospective teachers' intentions to use AI to teach English writing. This is in line with research findings from who found that teachers' intentions to use technology were influenced by their self-efficacy (Amri & Alasmari, 2021). Research from other study also showed similar results where teacher ICT integration in office was found to be influenced by four factors, one of which was self-efficacy (Hismanoglu & Hismanoglu, 2011; Musliha & Revita, 2021). In this way, the findings obtained are in line with the previous research that has been mentioned.

The findings in this study can show that self-efficacy has an influence on pre-service English teachers' intentions to use AI to teach writing skills. This influence exists because self-efficacy can encourage prospective teachers' intentions to use AI or other technology in teaching so that more support in teaching can be obtained. This is what triggers whether someone decides to integrate AI or technology in teaching or not. Like research conducted by other study which found that prospective teachers generally showed a high level of self-efficacy in integrating technology (Falck et al., 2018; Radovanović et al., 2015). The higher the level of self-efficacy a person has, the higher the person's intention or willingness to integrate AI or other technology. This is supported by study who stated that behavioral intention is a description of a person's willingness to carry out certain activities and is considered a direct precursor to using behavior (Sharif Abbasi et al., 2011).

While the study's findings can be regarded as a moderate contribution to the solution of this issue, more research is necessary to identify the other aspects that affect teachers' intentions to utilize AI to teach writing skills. Therefore, it is hoped that further research can find other factors that influence teachers' intentions, especially in the use of AI in teaching writing skills. However, until other, more accurate research is conducted, the regression model used in this research can be used to consider that self-efficacy influences intentions. Thus, self-efficacy has an impact on intentions which can encourage pre-service English teachers' intentions to use AI in teaching writing so that teaching success also increases. So self-efficacy can be taken into consideration in increasing prospective teachers' intentions to use AI in teaching writing skills.

Several implications can be drawn based on the focus of this research which highlights the impact of pre-service English teachers' self-efficacy in using AI on pre-service English teachers' intentions in using AI to teach English writing skills. According to previous study people tend to adopt AI technology because they have a high level of self-efficacy, this is because they believe the technology is very useful and easy to use (Jawas, 2019; Radovanović et al., 2015). This proves that there is a positive influence between self-efficacy and behavioral intention to adopt AI technology so all programs in the English education department must be able to encourage prospective teachers to be able to use technology in their learning. When prospective teachers have high self-efficacy and believe in their ability to adopt technology, especially AI, into teaching their writing skills, their intention to adopt AI into teaching writing skills increases. This will result in ease in teaching English writing skills for prospective teachers who are less confident in their competence in teaching these skills because they have been helped and made easier by AI technology as a result of their high intention to adopt AI due to their high self-efficacy in using AI, which where this will be followed by improving the quality of learning.

Then, various kinds of obstacles and difficulties in teaching writing skills are caused by a lack of support from multiple aspects, following the opinion of study state that teachers can be helped and their performance will increase with the support of technology for teaching (Hadi et al., 2021). Some of the obstacles and difficulties in writing, such as finding writing ideas, using correct vocabulary, and checking spelling, can be helped by adopting

technology, one of which is AI. If this is maximized well, there will be an increase in the intention to adopt AI technology with various kinds of support that can be utilized. Self-efficacy of pre-service English teachers has an impact on the intention of pre-service English teachers, self-efficacy is able to encourage the intention of pre-service English teachers to use AI in teaching. With the help of AI technology, it will be easier for pre-service teachers to teach and be able to improve the quality of pre-service teachers in teaching.

4. CONCLUSION

This research suggests that increasing prospective English teachers' self-efficacy in utilizing AI can have a positive impact on their propensity to teach writing skills through AI. This research highlights how important it is for teacher education programs to include AI guidance and assistance to give preservice teachers the confidence they need in using AI to teach writing skills. This study also emphasizes how important it is to consider self-efficacy when analyzing the application of AI in the classroom. The weakness of this research is that there are still other factors that can influence behavioral intentions, therefore more research is needed to determine other elements that drive self-efficacy. Thus, other variables that have an impact on increasing behavioral intentions still exist and can improve the quality of this research. Suggestions that can be given based on research findings, debates, and conclusions are that future research should perhaps focus on experienced educators rather than prospective teachers to get a clearer picture of the teaching process.

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