English Teachers' Readiness to Adopt Educational Technology: Professional Roles and Institutional Support

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ABSTRAK

Revolusi dunia 5.0 telah membawa perubahan besar dalam berbagai aspek kehidupan, termasuk pendidikan, sehingga menuntut kesiapan guru, khususnya guru bahasa Inggris, dalam mengadopsi teknologi pendidikan. Penelitian ini bertujuan untuk menganalisis pengaruh peran profesional guru dan dukungan institusi terhadap kesiapan guru dalam mengadopsi teknologi pendidikan. Pendekatan kuantitatif digunakan dalam penelitian ini, dengan pengumpulan data melalui kuesioner dan studi dokumen dari 33 responden. Data dianalisis dengan menggunakan metode regresi linier berganda untuk mengidentifikasi hubungan antar variabel. Hasil penelitian menunjukkan bahwa peran profesional guru memiliki pengaruh yang lebih dominan terhadap kesiapan guru, dengan koefisien regresi sebesar 0,553 dan kontribusi Beta terstandarisasi sebesar 0,765. Sementara itu, dukungan institusi juga memiliki pengaruh positif, meskipun lebih kecil, dengan koefisien regresi sebesar 0,220 dan Beta terstandarisasi sebesar 0,228. Secara keseluruhan, kedua variabel ini menjelaskan 85,6% dari variasi kesiapan guru. Temuan ini menunjukkan bahwa faktor individu, seperti peran profesional guru, memiliki pengaruh yang lebih signifikan dibandingkan faktor eksternal, meskipun dukungan kelembagaan tetap memainkan peran penting. Studi ini merekomendasikan agar pemerintah daerah dan sekolah mengembangkan program pelatihan berbasis teknologi untuk meningkatkan kapasitas guru dalam menghadapi tantangan pendidikan di era revolusi teknologi informasi.

ABSTRACT

The world revolution 5.0 has brought major changes in various aspects of life, including education, thus demanding the readiness of teachers, especially English teachers, in adopting educational technology. This study aims to analyze the influence of teachers' professional roles and institutional support on teachers' readiness to adopt educational technology. A quantitative approach was used in this study, with data collection through questionnaires and document studies from 33 respondents. Data were analyzed using multiple linear regression method to identify the relationship between variables. The results showed that teachers' professional roles had a more dominant influence on teachers' readiness, with a regression coefficient of 0.553 and a standardized Beta contribution of 0.765. Meanwhile, institutional support also had a positive, albeit smaller influence with a regression coefficient of 0.220 and a standardized Beta of 0.228. Overall, these two variables explained 85.6% of the variation in teacher readiness. The findings suggest that individual factors, such as teachers' professional roles, have a more significant influence than external factors, although institutional support still plays an important role. This study recommends that local governments and schools develop technology-based training programs to improve teachers' capacity to face educational challenges in the era of the information technology revolution.

1. INTRODUCTION

The world revolution 5.0 has brought significant transformations in various aspects of life, including the world of education (Ziatdinov et al., 2024; Bitangcol et al., 2024). The collaboration of technology in the learning process is becoming increasingly crucial to produce graduates who are competent and ready to face future opportunities. In this case, the readiness of English teachers to adopt educational technology is a determining factor for the success of technology implementation in schools (Purwanto, 2021; Sholihat & Amalia, 2019). This study analyzes the importance of English teachers' readiness to adopt educational technology by considering two main aspects, namely the professional role of English teachers and institutional support. Professional roles include English teachers' pedagogical, technological and social competencies in utilizing technology to improve learning quality (Kadek et al., 2024; Safriyani et al., 2024). The availability of reliable institutional technology such as computer devices, stable internet access, and relevant educational software is an important foundation in the integration of technology in learning (Ateş & Kölemen, 2024; Madhaniyah Nur Purnamasari et al., 2024). The

strength of institutional support, including school district policies that support the use of technology and training programs for English teachers will further enhance the adoption of technology in the learning process. Thus, English teachers can enable a more interactive and innovative learning environment, and provide students with the digital skills needed to face the challenges of the information and technology revolution (Demmanggasa et al., 2023; Izzati, 2021).

English teachers' readiness to implement internet-based technology is influenced by various factors, such as training, access to technology, and parents' participation in supporting learning. Similarly explored English teacher training, expanded access to technology and parents' participation also surfaced as important factors (Sari et al., 2023). Previous study described the professional attitude of English teachers manifested in the form of behavior, commendable and tested actions in carrying out their professional duties ((Gao et al., 2023; Kurniawan, 2021). Previous study explained that the professional duties of English teachers in supporting elements of professional development are conducting workshops (Kadwa & Alshenqeeti, 2020). Other study showed that English teachers have duties, functions and roles that are related and cannot be separated from one another, innovation in learning is supported by the competence of English teachers and institutional policies, encouraging the success of technology integration, being involved in MGMP (*Musyawarah Guru Mata Pelajaran*) activities as well as collaborating with peers and making time work (Munawir et al., 2022). The digital competence of English teachers is a determining factor in the successful utilization of technology in the classroom.

In the research of previous study explained the use of technology in English teaching for English teachers in Bantul Regency was carried out to increase the understanding and skills of English teachers in integrating technology effectively in the teaching process (Wahyu et al., 2024). Other study highlighted the importance of adequate technology infrastructure and institutional support, increasing the effectiveness of technology use in learning (Zulfikhar et al., 2024). In accordance with the results of their research, Wen & Hua (2020) stated that institutional support has a positive influence on motivation, and motivation has a positive influence on accountability. Other studies identified that significant creative potential, which can be enhanced through innovative learning approaches and strong institutional support (Pratiwi, 2021; Risakotta & Akbar, 2019). There is also study that emphasized that extensive adaptations in social structures and institutional support are needed for learning programs to run effectively, and also English teachers not only play a role as teachers, but also as mentors, facilitators, and role models for students (Polishchuk, 2024). Adequate technological infrastructure and strong institutional support are the keys to successful technology implementation in various fields, including education.

Previous study identified the supporting factors and challenges of becoming a professional English teacher, English teacher behaviors, pedagogical skills, and the diversity of learning activities through effective professional development as a commitment to ongoing improvement (Nazaretsky et al., 2022). Other study indicated that contextual factors such as institutional support, learning culture, and unbalanced workload can be significant barriers to increasing the adoption of online teaching (Lee et al., 2022). Previous study discussed the significant effect of school-based management and English teacher professionalism together on teacher performance in schools (Donnelly & Kyei-Blankson, 2014). In addition, there is study identified that there are many social (non-technological) factors that can affect the successful implementation of information systems as an organizational managerial tool, one of which is institutional support (Suyuti et al., 2023; Teng & Wang, 2021).

A review of the existing literature identified a research gap regarding the integration of technology in English language teaching practices, particularly in examining how teachers adapt pedagogically to the development of digital technologies and their impact on student engagement. Examining this aspect is important to ensure effective digital literacy development for teachers and students. While the role of institutional support has been recognized as significant, its correlation with the development of English teachers' digital competencies still needs to be investigated in more depth (Aditya et al., 2021; Kejia. & Qian, 2024). In another study, the dynamics of English teachers' collaboration in professional communities, such as subject teachers' meetings (MGMP), as well as the influence of non-technological factors such as school culture and teachers' motivation on technology adoption have not been comprehensively explored (Landa et al., 2023; Yusuf, 2024). Parents' involvement in supporting the use of technology in the classroom is also an area that is still rarely studied. The ongoing development of teacher competencies and the effectiveness of blended learning in the context of English language teaching are also topics that need further research.

This study aims to analyze the level of readiness of English teachers in adopting educational technology in schools, as well as to analyze the influence of professional roles of English teachers, including technological competence and institutional support in the form of infrastructure availability, school policies and support from principals and peers on the readiness. In addition, this study also aims to identify the factors that serve as obstacles and supporters of English teachers' readiness to adopt educational technology in the school.

2. METHOD

This study uses a quantitative approach to analyze the factors that influence the readiness of English teachers in NTB to adopt educational technology. Data were collected through a questionnaire adapted from a previous studies (Aziz et al., 2022; Makhaya & Ogange, 2019; Sadeghi & Sahragard, 2016), and the data were analyzed using multiple linear regression to identify the influence of the variables under study (Bowman et al., 2022; Rafif et al., 2023). The three main variables studied are teachers' readiness to adopt technology (Y), teachers' professional roles (X1) and institutional support (X2). The research procedure is show in Figure 1.
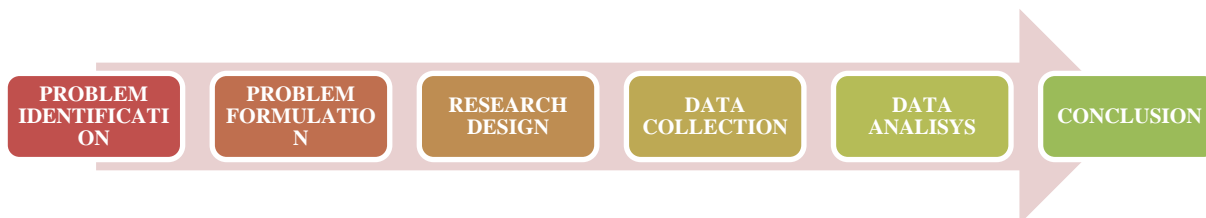

Figure 1. The Research Procedure

The research procedure involved five main stages (Susanto et al., 2023). First, problem identification was conducted to assess the constraints in the adoption of educational technology. Second, instrument development in the form of a questionnaire based on relevant research indicators. Third, data collection was conducted through distributing questionnaires to 33 purposively selected English teachers. Fourth, the data were analyzed using multiple linear regression techniques to test the relationship between variables. Finally, recommendations were made based on the research findings to support the development of training programs, infrastructure, and other supporting policies. The research indicator is show in Table 1.

Table 1. The Research Indicator

Variable	Indcator	Reference
English Teachers' Readiness in Adopting Educational Technology (Y)	Technology Pedadogical Content Knowledge (TPACK) construct	(Aziz et al., 2022)
	Technology Knowledge (TK) construct	(Humaera et al., 2023)
	The teacher negotiates his/her knowledge with colleagues and cooperates with colleagues in academic's matters	(Shibing, 2024)
Professional Role (X1)	The teacher respects and observes various cultural norms and customs. The teacher also adjusts the cultural differences and mismatches	(Ceruelos & Ledezma, 2022)
	General Perceived Ease of Use of e-Learning Technology	(Makhaya & Ogange, 2019)
	Institutional Support Factors for e-Learning Adoption	(Syahdan et al., 2022)
Institutional Support (X2)	Technical and Training support for Students and Staff for e-Learning Adoption	(Rustandi et al., 2024)
	Training and Access to Technical Support	(Rasche et al., 2023)

The research instrument consists of three main parts that reflect the research variables, namely teachers' readiness in educational technology (Y), teachers' professional roles (X1), and institutional support (X2). The indicators used were adapted from related literature to measure each variable. The results are expected to provide practical recommendations for local governments and schools in improving teachers' capacity through training, improving infrastructure and strengthening institutional support (Ngao et al., 2022).

3. RESULT AND DISCUSSION

Result

This section discusses the results of a study that aims to identify the factors influencing English language teachers' readiness in West Nusa Tenggara to adopt educational technology, teachers' professional roles, and institutional support. The analysis was conducted using multiple linear regression method to reveal the relationship between the research variables, namely English teachers' readiness (Y), professional role (X1), and institutional support (X2). Data were obtained through questionnaires designed based on relevant research indicators, as well as documentation studies from teachers and related parties. The results of this study are expected to provide an in-depth understanding of the factors influencing the adoption of educational technology by English teachers and generate policy recommendations to improve teacher competence through technology-based capacity building. Descriptive statistics can be seen in Table 2.

Table 2. Descriptive Statistics

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Y	33	4667.00	10000.00	8585.8788	1076.95815	1159838.860
X1	33	2000.00	10000.00	8505.0606	1490.97214	2222997.934
X2	33	6000.00	10000.00	7954.5455	1113.57838	1240056.818

Table 2 showed information about the data characteristics of three variables, namely Y (English Language Teachers' Readiness to Adopt Educational Technology), X1 (Professional Roles), and X2 (Institutional Support), which were obtained from 33 observations. Variable Y (English Teachers' Readiness to Adopt Educational Technology) has a mean of 8585.88 with a data range of 5333, and a standard deviation of 1076.96, which illustrates the level of data distribution around the mean. The distribution of Y data tends to be skewed to the left with a skewness value of -1.259, and has a kurtosis of 4.197, which indicates a more leptokurtic data distribution. Variable X1 (Professional Role) with a mean of 8505.06 and a data range of 8000 shows greater variation with a standard deviation of 1490.97. The distribution of X1 data is also highly skewed to the left with a skewness value of -2.567 and a very high kurtosis of 10.785, indicating a more significant concentration of data around the mean. In contrast, the X2 variable (Institutional Support) has a mean of 7954.55 with a smaller data range (4000) and a standard deviation of 1113.58, which indicates a smaller spread of data compared to Y and X1. X2's data distribution tends to approach a normal distribution, with a skewness value of 0.537 which is slightly skewed to the right, and a kurtosis of -0.159 which indicates a relatively normal distribution. Overall, the data distribution characteristics of the three variables show different patterns, with Y and X1 tending to be left-skewed and more variable, while X2 has a more stable and near-normal distribution pattern. This analysis provides a basic understanding of the data patterns prior to further analysis. Model summary is show in Table 3.

Table 3. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.925[a]	0.856	0.847	4.21359
a. Predictors: (Constant), Institutional Support (X2), The Professional Role of English Teachers (X1)				

Table 3 showed that the R value of 0.925 indicates a very strong relationship between the predictor variables, namely English Teachers' Professional Role (X1) and Institutional Support (X2), and the dependent variable. Furthermore, the R Square value of 0.856 indicates that 85.6% of the variation in the dependent variable can be explained by the two predictor variables. The Adjusted R Square value of 0.847 provides a more conservative estimate, indicating that after adjustment, 84.7% of the variation in the dependent variable can still be explained by this model. The Standard Error of the Estimate value of 4.21359 indicates the average deviation between the value predicted by the model and the actual value. As such, the model has excellent predictive power, given the strong relationship between the independent and dependent variables and the high proportion of variance that can be explained by the model. The anova result test is show in Table 4.

Table 4. Anova

	Model	Sum of Squares	df	Mean Square	F	Sig.
				ANOVAª		
1	Regression	3178.855	2	1589.428	89.524	<0.001[b]
	Residual	532.629	30	17.754		
	Total	3711.484	32			

a. Dependent Variable: English Teachers' Readiness to Adopt Educational Technology (Y)

b. Predictors: (Constant), Institutional Support (X2), The Professional Role Of English Teachers (X1)

Table 4 showed that the regression model significantly explained the variance in the dependent variable, namely English Language Teachers' Readiness to Adopt Educational Technology (Y). The Sum of Squares Regression value of 3178.855 indicates that most of the variance can be explained by the predictor variables, namely Institutional Support (X2) and Teachers' Professional Role (X1), while the Sum of Squares Residual value of 532.629 indicates the variance that cannot be explained by the model. With an F-statistic value of 89.524 and a significance level (Sig.) of less than 0.001, it can be concluded that this regression model is statistically significant, so the two predictor variables together have a significant influence on the dependent variable. The coefficient result is show in Table 5.

Table 5. Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
				Coefficientsª		
1	(Constant)	21.339	5.495		3.883	<0.001
	The Professional Role Of English Teachers (X1)	0.553	0.064	0.765	8.600	<0.001
	Institutional Support (X2)	0.220	0.086	0.228	2.558	0.016

a. Dependent Variable: English Teachers' Readiness to Adopt Educational Technology (Y)

Table 5 showed the results of linear regression analysis to examine the effect of Teachers' Professional Role (X1) and Institutional Support (X2) on English teachers' readiness to adopt educational technology (Y). The results of this analysis provide important insights into the factors that influence teachers' readiness in the context of implementing educational technology. The constant value (intercept) of 21,339 indicates that if there is no influence from variables X1 and X2, the average teacher readiness in adopting educational technology is at the level of 21,339. This constant value is statistically significant with a p value of <0.001, thus providing a strong basis for understanding the role of additional independent variables in increasing such readiness.

Discussion

The professional role of English teachers (X1) has the most dominant influence on readiness to adopt educational technology. The regression coefficient for this variable is 0.553, which means that every one unit increase in teachers' professional role will increase teachers' readiness by 0.553 units. With a standardized Beta coefficient value of 0.765, X1 contributes the most compared to other variables. In addition, this result is highly statistically significant, with a t-value of 8.600 and a p-value of <0.001. Institutional support (X2) also has a positive influence on teacher readiness, although its contribution is smaller than that of X1. The regression coefficient for X2 is 0.220, which means that every one unit increase in institutional support will increase teacher readiness by 0.220 units. The standardized Beta value for X2 is 0.228, which indicates its effect on the dependent variable is smaller than that of X1. Nevertheless, this result remains statistically significant with a t-value of 2.558 and a p-value of 0.016.

This analysis demonstrates that the variable Professional Role of English Teachers (X1) has a more dominant influence on English Teachers' Readiness to Adopt Educational Technology (Y) than the variable Institutional Support (X2) (Puspandari, 2023; Rofiah et al., 2024). With a regression coefficient of 0.553 and a standardized Beta coefficient of 0.765, X1 contributes significantly to Y, as indicated by a t-value of 8.600 and p < 0.001. In contrast, X2 has a regression coefficient of 0.220 and a standardized Beta coefficient of 0.228, which shows a smaller influence on Y, although still significant with a t-value of 2.558 and p = 0.016. Overall, the two variables X1 and X2 together explain 85.6% of the variation in Y, as reflected in the R Square value of 0.856.

However, the larger contribution of X1 indicates that individual factors, such as teachers' professional roles, have a stronger influence compared to external factors such as institutional support. Therefore, efforts to improve teachers' readiness to adopt educational technology need to prioritize strengthening teachers' professional roles, while maintaining institutional support as a significant supporting factor (Ahmad et al., 2024; Rofi'i et al., 2023). The results of this study are in line with the findings which showed a significant effect of teachers' professional roles on technology readiness (Puspandari, 2023). This study also strengthens the findings who identified the positive influence of institutional support, although the contribution was smaller (Alejandro et al., 2024). The strength of this study lies in its in-depth analysis of the internal and external factors that influence teacher readiness, as well as its contribution to understanding the important role of strengthening teachers' professional capacity. The implication is the importance of strengthening professional roles and institutional support for technology adoption. Future research is recommended to explore other factors, such as personal motivation and access to technology, and expand the scope of the study with a larger sample.

4. CONCLUSION

Based on the results of the study, the readiness of English teachers in West Nusa Tenggara in adopting educational technology is significantly influenced by teachers' professional roles and institutional support. Teachers' professional roles proved to have a greater influence on their readiness than institutional support. Therefore, to improve teachers' readiness to adopt educational technology, the first step is to strengthen their professional roles. This can be done through training that focuses on technology-based pedagogical competencies as well as rewards for learning innovation. On the other hand, support from educational institutions is still needed, especially in terms of providing adequate technology infrastructure, technical assistance and policies that support the use of technology in learning. An integrated approach, combining individual teacher competency improvement with continuous institutional support, is expected to be more effective in improving teacher readiness. Further research is also recommended to explore other variables such as individual motivation and organizational culture that may contribute to teachers' readiness to adopt educational technology.

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