

Teachers Readiness in Using Technology

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Abstract

The Covid-19 pandemic, which was previously epidemic ultimately caused several changes in the field of life, one of which is the field of education. The learning method by utilizing technology is felt to be quite effective so that it is still being used today. Based on this phenomenon, this research was conducted to be able to provide an overview of the readiness of teachers to change by using technology in teaching. This research was conducted on 395 teachers in Indonesia with an accidental sampling technique. The scale used is the readiness to change scale made by Kurniawan (2013) based on the dimensions of Holt (2007). The results of the analysis show that the teacher's readiness to change using technology in teaching is in the high category, which means that the teacher is quite ready to deal with changes in the teaching process. Furthermore, analysis based on the dimensions of the variable readiness to change shows that the dimensions of appropriateness and managerial support are in the high category, while the dimensions of change, self-efficacy and personal valance are in the medium category.

Keywords: Covid-19; Pandemic; Readiness to Change; Teacher; Technology

1. Introduction

Over time, technology continues to develop. The development of this technology ultimately makes many changes in life. One of the areas affected by these technological advances is education. Today, many schools are already using technology in their teaching and learning activities. Classrooms that were originally filled with blackboards, where the teacher explained the material using chalk or markers, have now become more sophisticated, and schools now use projectors to present teaching materials from the teacher.

In addition, the COVID-19 pandemic, which was endemic throughout the world, ultimately forced the world of education to use technology, not only as a learning support but as an alternative way to be able to continue the learning process using remote learning methods. The situation, which made it impossible to carry out face-to-face learning in class, caused the government to finally implement learning methods carried out remotely from home using internet technology. With this learning method, mobility and distance between individuals can be minimized so as to reduce the risk of contracting the COVID-19 virus. This is in accordance with government instructions calling for all students to be housed from early childhood to high school or vocational school and carry out learning and teaching activities from home, counting March 16, 2020, through a curriculum that has been prepared by the provincial government online (Prakoso, 2020).

The decision made by the government ultimately made the use of technology in teaching and learning activities during the COVID pandemic a necessity, and then after the "new normal" era where the pandemic era was under control, it turned out that the use of technology in learning media was effective and possible to continue. However, the use of technological media in learning is not without obstacles. As reported by Rajasa (2010), there are many problems following distance learning policies using technology, and there are still many schools that are not ready to implement them. One of the reasons is that schools do not yet have an online learning system

because teachers are not familiar with technology and because the facilities are not evenly distributed among their target students.

Teachers, as the main actors in learning, are required to package learning based on technology and media so that it can be accessed by all students. However, the reality on the ground shows that there are still many teachers who have not mastered technology, such as using laptops or teaching online. As a result of a lack of understanding of technology, in the end, the teacher only gives books to read and assignments to do; the important thing is that children continue to study from home and are not unemployed. As a result, in the long term, students experience learning burnout because they feel they are not getting a pleasant learning experience (Satariyah, 2020). This is in line with a survey from the Head of the Education and Culture Information and Communication Technology Center (Kapustekkom) of the Ministry of Education and Culture, which said that only 40% of non-ICT teachers (who do not teach Information and Communication Technology) in Indonesia are ready with technology (Maharani, 2018). This is felt to be an obstacle to carrying out the online learning process. Another obstacle that hinders the application of technology-based learning is the age factor. As is well known, the average teacher in Indonesia is a late-adult teacher who is not used to using technology. This is in line with research conducted by Vaportzis, Clausen, and Gow (2017), which found that there are barriers for late-adult individuals to interact with technology, including a lack of instructions and guidance, a lack of knowledge and self-confidence, and health-related barriers. In addition, there are concerns, namely, that technology is too much and too complex; feelings of inadequacy and comparison with the younger generation; a lack of social interaction and communication; negative features of tablets; and skepticism about the use of tablets and technology in general. These are felt to be causing individuals to worry or fear using technology.

History explains that organizational change can cause chaos and make things dramatic for both employees and the organization. Change is described as a difficult process involving unlearning and re-learning, which is difficult because it will make employees, in this case the teacher, try to restructure their thoughts, feelings, and behaviors in relation to the changes that occur (Desplaces, 2005). In the end, conditions that require learning to be carried out using technology make teachers ready to teach using technology and also ready to deal with change. Readiness to change is defined by Holt, Armenakis, Harris, and Feild (2007) as a comprehensive attitude that is influenced simultaneously by the content (i.e., what is being changed), the process (i.e., how the change is implemented), the context (i.e., the circumstances in which the change occurs), and the individuals (i.e., the characteristics of those asked to change) involved and collectively reflects the extent to which an individual or group of individuals is cognitively and emotionally inclined to accept, embrace, and adopt a particular plan to intentionally change the status quo.

Bernerth (2004) also stated that readiness to change is a condition in which employees concentrate all their thoughts and have intentions that lead to efforts to make changes. This means that employees who are mentally, physically, and psychologically ready to change will believe that these changes can bring progress to the organization where they work. These employees will also have a positive attitude towards organizational change and have the intention to be involved in carrying out these changes (participating) and promoting these changes to other colleagues.

Based on research conducted by Khodijah (2018), it is known that teacher competence can be said to be capable of leading to 21st century education; however, it still requires encouragement and strengthening direction. In addition, research from Mulyanto and Yoenanto (2023) shows that teachers in Indonesia at every level have

the ability to help teachers digitize education in the era of independent learning, but there are teachers who still experience difficulties in integrating components of technological knowledge, pedagogic knowledge, and content knowledge simultaneously in supporting learning.

In accordance with some of the problems that occur due to changes in the digital era, including in the field of education, where there is a shift in the use of learning media, it appears that there is a problem, namely the difficulty of teachers in dealing with existing changes. This research is important to be able to see and dig deeper for information so that teachers can deal with the existing situation and be ready to face change.

2. Research Methods

The research method used in this study is descriptive-quantitative. This research was conducted on 395 teachers in Indonesia. The population in this study were teachers who used technology and media in their learning, and the sampling technique in this study used non-probability sampling with accidental sampling. The measurement scale used is the readiness to change scale adapted and modified from Kurniawan (2013), which is based on the dimensions of readiness to change from Holt (2007), namely appropriateness, change-specific efficacy, management support, and personal valance.

3. Research Result

The calculation results show that the teacher's readiness to change in using technology to support teaching activities is high, with an empirical mean value of 103.41. Besides that, based on statistical tests on the dimensions of the variable readiness to change, it is also known that the dimensions of appropriateness (32.76) and managerial support (25.65) are in the high category, while the dimensions of change-specific self-efficacy (23.25) and personal valance (26.42) are in the medium category. A more detailed explanation can be seen in Figures 1–5 below.

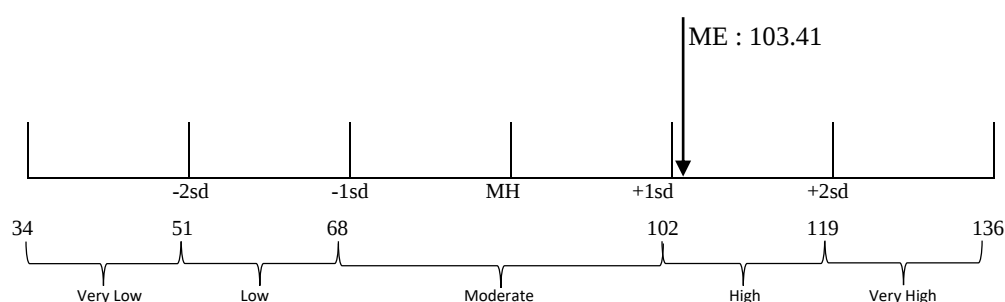


Fig. 1. The results of the categorization of readiness to change on the subject

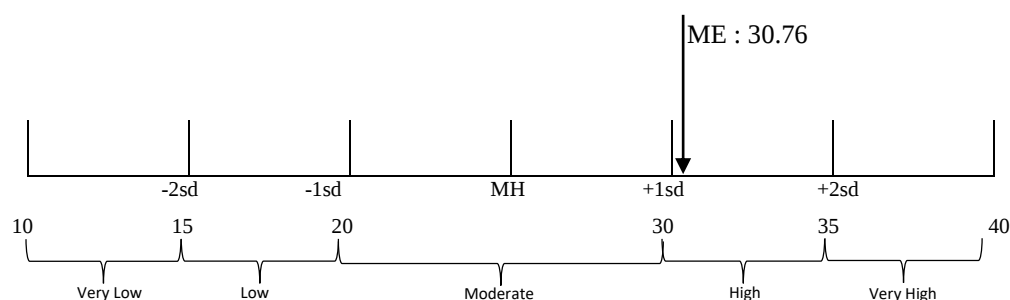


Fig. 2. The results of the calculation of the appropriateness dimension of the subject

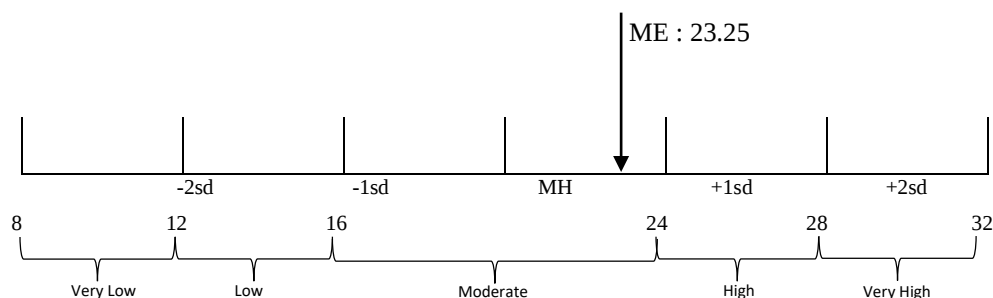


Fig. 3. The results of the calculation of the change specific self-efficacy dimension categorization on the subject

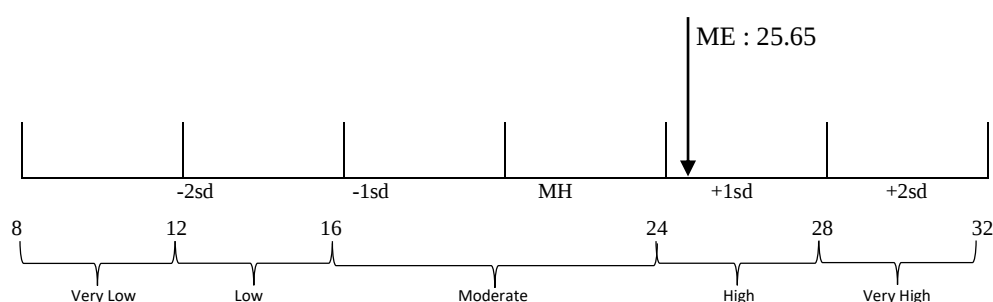


Fig. 4. Results of calculating the dimensional managerial support categorization on the subject

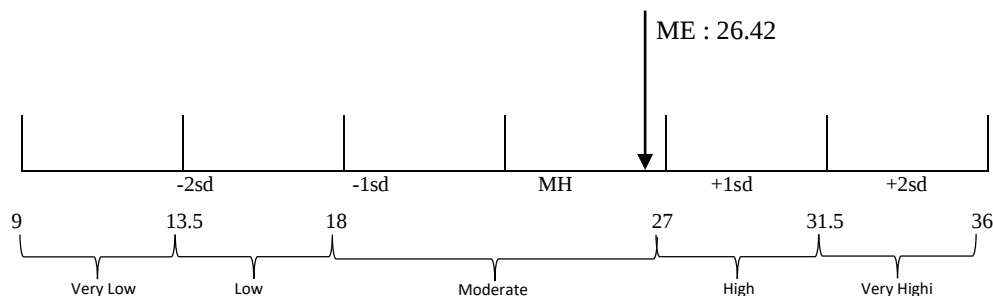


Fig. 5. The results of the calculation of the personal valance dimension categorization on the subject

In addition, calculations were also carried out to be able to analyze the readiness to change for the teacher based on the identity given by the subject. The identities analyzed include gender, age, last education, and length of work. The results of these calculations can be seen in Tables 1–4.

Table 1. Descriptive Analysis of Gender Categories

Sub Categories	Total	Emperical Means	Category
Men	95	102.65	High
Women	300	103.64	High

Table 2. Descriptive Analysis of Age Categories

Sub Categories	Total	Emperical Means	Category
20 – 29 years old	63	104.47	High
30 – 39 years old	98	105.02	High
40 – 49 years old	111	102.48	High
50 – 59 years old	121	102.19	High
>60 years old	2	115.50	High

Table 3. Descriptive Analysis of the Last Education Category

Sub Categories	Total	Emperical Means	Category
Senior High School	8	92.12	Moderate
Diploma 2	4	103.25	High
Diploma 3	4	95.50	Moderate
Bachelor	354	103.43	High
Master	25	107.96	High

Table 4. Descriptive Analysis of Old Working Categories

Sub Categories	Total	Emperical Means	Category
1 – 9 years	122	103.40	High
10 – 19 years	135	103.83	High
20 – 29 years	68	103.39	High
30 – 39 years	66	102.27	High
>40 years	4	107.75	High

4. Discussion

The results of the analysis test show that the teacher's readiness to change to use technological media in learning is in the high category. This indicates that personally, the teachers are ready to use technological media to carry out the learning and teaching processes. In addition, it is also known that when viewed based on the dimensions of the variable readiness to change, the dimensions of appropriateness and manager support are in the high category, while the other two dimensions, namely the dimensions of change, self-efficacy, and personal valance, are in the medium category. This explains why teachers feel confident that they are able to change because the changes that occur are believed to be beneficial for their progress.

Based on the demographic analysis of the research subjects, it was found that the research subjects in this study, both men and women, were in the high category. This finding is consistent with the results of research conducted by Wittension (2008), which found that there was no significant difference between genders in terms of employee readiness to change. This is in accordance with the explanation from Caluwe and Vermaak (1999), which explains that the most important factor in responding to a change is the change agent's change strategy. The research results are also supported by research conducted by Raaijmakers (2012), which shows that male or female characteristics have no significant relationship with readiness to change. This shows that when dealing with a change, it depends on the individual himself.

Based on the results of the descriptive analysis, it is known that there is no difference in categorization based on age in readiness to change for teachers who are undergoing distance learning. It is known that when viewed from the perspective of age categorization, all of them are in the high category. However, when viewed further, subjects who are over the age of 60 have a higher score in readiness to change. This is in line with the findings of Kunze, Boehm, and Bruch (2013), who found that age is not a barrier for someone to change but instead provides a positive correlation for readiness to face change. This finding is in line with research by Mardhatillah and Sukran (2020), which shows that older employees are more ready to change than younger employees. This may be because older employees have more responsibilities than younger employees.

A descriptive analysis based on recent education found that research subjects who had a Masters or Masters degree had a higher score than other recent education categorizations. This is in line with the results of research conducted by Mardhatillah and Sukran (2020), which show that educational background also determines readiness for change for employees. The findings show that the more educated an employee is, the better prepared he will be to adapt to change. This is possible because employees with higher education backgrounds have more skills, knowledge, and abilities to be more adaptable to the change initiatives that occur. In addition, employees who

have a higher level of education are also considered to have higher self-confidence, so they are more prepared to deal with change because they believe that their education is able to make them survive in the face of change (Shah & Shah, 2010).

Based on the results of the descriptive analysis, it is known that there is no difference in categorization in length of work, and it is known that all subjects in this study are in the high categorization. However, when examined further, there is a fairly high difference in scores, indicating that subjects who have worked for more than 40 years have a greater readiness to change scores. This is in accordance with the ideas of Crewson and Fisher (1997), who argued that employees who have had a longer working period have a tendency to show higher readiness compared to employees who have a shorter tenure.

This opinion is also in line with the opinion of Walker and Enticott (2004), which states that employees with longer or more senior tenure usually have attained a higher position, so that they tend to be accustomed to the process of change throughout their careers and are more ready to change than employees who have a short tenure whose position in work is relatively lower than their seniors. In addition, Juanke (2005) also stated that employees who have less work experience may find it more difficult to deal with change. This may be due to the fact that more senior employees are more familiar with the changes that occur in the organization and speed up the adaptation process so that the change process is easier to accept.

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the research results, it is known that the readiness to change for teachers is in the high category, which indicates that teachers are actually quite ready to change by using technological media to assist in the teaching process. Furthermore, the analysis also shows that the dimensions of appropriateness and manager support are in the high category and the dimensions of change self-efficacy and personal value are in the medium category. This indicates that the organization or company where the teacher works has provided a variety of supports that can also be felt by the teacher, where the organizational support helps in the teacher's readiness to change. But maybe the teacher still needs to develop the belief that he is capable of change and also convince himself that the changes that occur will have good benefits for him.

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