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Acceptance of Technolgy-Based Teaching and Learning (T-BT&L) among Special Education Teachers Through the Integration of Subjective Norms and Self-Efficiency

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ABSTRACT

Technology-based Learning and Teaching (T-BT&L) is not something new to teachers since 2000 because this method is accepted as a support for conventional learning carried out in the classroom. However, during the Covid-19 pandemic, T-BT&L through the Home-Based Teaching and Learning has become a necessity for educators. Therefore, all teachers need to fully implement T-BT&L by using various technology tools to replace face-to-face learning. The purpose of this study is to explore special education teachers' acceptance of the T-BT&L learning approach in Malaysia based on the Technology Acceptance Model during the Covid-19 pandemic period. A total of 100 special education teachers from the state of Johor were randomly selected as respondents in this study. Quantitative data was collected through a questionnaire based on five Likert scales containing 11 questions. The results of the study were analysed using descriptive statistics involving mean values and standard deviations. Findings show that the overall mean value for the level of self-efficacy is 3.89, which means that the majority of special education teachers have confidence in their ability to use technology effectively in implementing T-BT&L. In addition, the mean of the overall subjective norm is 3.75, which means that many teachers think it is not a problem to accept a T-BT&L approach that is based on technology. The findings of this study are expected to be used as a guide for administrators and the Malaysian Ministry of Education (KPM) to plan T-BT&L sessions using educational technology tools that is in line with current trends.

Keywords: Technology-Based Teaching and Learning, Special Education, Self-efficacy, Subjective norm

Introduction of Best Practices

The year 2020 has changed the lifestyle of every individual. Various changes and new norms have become the norm. It is caused by the Covid-19 pandemic that has hit the whole world. The Malaysian government implemented the Movement Control Order (MCO) on 18 March 2020 throughout the country to control the spread of the Covid-19 epidemic in the community. Therefore, the Malaysian Ministry of Education (KPM) has introduced Home-based Teaching and Learning as an alternative to learning during the MCO. The implementation of Home-based Teaching and Learning for the first time in the history of Malaysian education has raised many issues and challenges. According to Mohammad Ziaul Haq (2020), teachers face high challenges in ensuring that the teaching and learning process is carried out effectively during the MCO. In this time, the use of technology played an important role in the field of education. Mohan

Rathakrishnan (2020) found that Technology-based Learning and Teaching (T-BT&L) had an impact on the emotions of teachers and students. This was because, teachers needed to prepare for T-BT&L and family management at the same time. Meanwhile, the issues related to internet access and devices were the main constaints among students. According to Mohammed Amin Almaiah et al., (2020) teachers and students had devices but the issue on the lack of quality internet access was also a challenge in implementing effective T-BT&L. The situation became worse when a family consist of many children. T-BT&L was conducted according to the schedule made by the school and it caused difficulties for students in sharing devices with other siblings.

Justification of Best Practices Implementation

As explained before, teachers in our country experienced many problems in conducting teaching and learning in the form of T-BT&L during the Covid-19 pandemic. Among them, teachers were less motivated because there were several obstacles for T-BT&L online such as institutional obstacles, interpersonal obstacles, training, technical obstacles and cost analysis obstacles in teaching (Lloyd et al., 2020). In addition, teachers were also less successful in conducting T-BT&L due to lack of training, workshops and courses on the use of technology in PdPc. Besides, many teachers were less skilled in conducting PdPc online due to lack of experience and lack of training on the use of technology. Kaup et al., (2020) stated that the use of technology and student involvement in T-BT&L during the COVID-19 pandemic, became a major problem for teachers.

Apart from that, the lack of facilities such as equipped laptops, lack of internet connection was also a problem for T-BT&L teachers during the COVID-19 pandemic. Teachers experience problems in using technology to conduct T-BT&L because most schools have not yet provided sufficient exposure or courses on the use of online technology (Verma et al., 2020). Next, the lack of self-efficacy towards the use of technology among teachers also influenced the effectiveness of T-BT&L. All teachers needed to have high self-confidence in conducting T-BT&L so that their teaching and learning activities were effective for their students. At the same time, teachers received social pressure in using modern technology in their T-BT&L and this was also from their interpersonal influence (Fauzia et al., (2020) and Shaukat et al., (2020) that teachers were interested in using technology facilities in conducting their T-BT&L. Subjective norms provided normative belief and motivation to all teachers to carry out T-BT&L effectively.

Furthermore, teachers needed to be positive about the use of technology so that learning was effective for students. Nevertheless, the attitude and efficiency among teachers allowed them to accept the use of technology in the T-BT&L process. Many teachers were positive in using technology as a main tool. Teachers' perceptions also changed from negative to positive in using technology in their classes. However, the use of technology by teachers in T-BT&L was still not widespread, especially among special teachers in schools in our country (Najmi, 2020). Many teachers were also less actively involved in the use of technology. The researcher hopes that this study will present the influence of self-efficacy factors and subjective norms on the acceptance of the T-BT&L learning approach by teachers in Malaysia. So the TAM model is used to express the behavioural intentions of potential teachers to use technology

motivation. Factors that contribute to the adoption of different technologies with networks, user beliefs and online context will be studied. Therefore, this study was conducted to examine teachers' acceptance of T-BT&L learning in Malaysia based on the Technology Acceptance Model.

Objectives of Implementation

The objectives of best practice implementation are:

1. Studying the influence of self-efficacy factors on the acceptance of the T-BT&L learning approach by special education teachers in Malaysia.
2. Studying the influence of subjective norm factors on the acceptance of the T-BT&L learning approach by special education teachers in Malaysia.

Best Practices Implemented

Teachers have made presentations for students by incorporating visual effects, photos, videos and music into them. They also develop slide shows and digital presentations, playing music or videos for background and context when making presentations. They also try to make virtual classes (such as Skype, Google Meet and Zoom) all fun and creative. They have used various ways to increase student engagement by using technology and multimedia.

After teachers have used technology in their teaching and learning, they asked to answer a questionnaire based on their self-efficacy towards T-BT&L. The findings show that the study respondents have a high level of self-efficacy towards T-BT&L. This is proven by the overall mean score of 3.89 with a standard deviation of 0.805. For the dimension related to the subjective norm towards the acceptance of the T-BT&L approach, the overall mean score is 3.75 and the standard deviation is 1.000. This shows that the study respondents have no problem accepting the T-BT&L approach.

Impact of Best Practices Implemented

The Influence of Self-Efficacy Factors on the Acceptance of Technology-Based Teaching and Learning (T-BT&L) Learning Approaches by Special Education Teachers in Malaysia.

Table 1
*Self-efficacy of Technology-Based Teaching and Learning (*T-BT&L*)*

No	Item	Percentage (%)					Mean	SD
		1	2	3	4	5		
1	I am confident that I can teach using the T-BT&L method even if no one can help show me how.	0.9	6.5	25.6	44.7	22.3	3.80	0.889
2	I am confident in applying T-BT&L even if I have never used it before.	0.9	7	25.1	50.2	16.7	3.74	0.849
3	I believe in applying T-BT&L if I have seen other teachers use it	0.9	2.8	27.4	47.4	21.4	3.85	0.816
4	I am confident in applying T-BT&L if I can get help if I have problems applying it	0	3.3	21.9	51.6	23.3	3.94	0.762
5	I am confident in using the T-BT&L method if someone helps me to start using it	0.5	3.3	25.6	45.6	25.1	3.91	0.821
Overall							3.89	0.805

Based on Table 1, one item has a mean score above 4.0, which is item number 6. This item focuses on teachers' ability to apply T-BT&L if they have sufficient time. While the first item has a low mean score of 3.80 with a standard deviation of 0.889. Respondents think that they are willing to use the T-BT&L method even though there is no special guidance. This shows that teachers have confidence in their ability to use technology effectively in implementing T-BT&L and teaching ability refers to the ability to change students' achievement.

The Influence of Subjective Norm Factors on the Acceptance of T-BT&L Learning Approaches by Special Education Teachers in Malaysia

Table 2
Subjective Norms

No	Item	Percentage (%)					Mean	SD
		1	2	3	4	5		
1	I teach using the T-BT&L method because it is an instruction from the superior	1.4	8.4	19.1	44.2	27	3.86	0.952
2	I teach using the T-BT&L method because it is a request from the Ministry	0.9	6	19.1	46	27.9	3.93	0.891
3	I teach using the T-BT&L method because other teachers also use the T-BT&L method	6.5	10.2	19.1	44.7	19.5	3.60	1.109
4	My colleagues think applying T-BT&L is a common thing that needs to be implemented during T-BT&L	1.9	3.7	24.7	50.2	19.5	3.81	0.853
5	I use T-BT&L because I think my students want to learn through the T-BT&L method	2.8	7.4	27.9	37.7	24.2	3.73	1.000
6	People around me want to use the T-BT&L method	4.2	10.7	27	38.1	20	3.59	1.054
Overall							3.75	0.977

Based on Table 4.5, all items achieved a mean score of more than 3.5. The mean score of item 2 is 3.93 with a standard deviation of 0.891. This proves that teachers do not have a problem in modifying the teaching approach to the current situation. They are able to use technology well to carry out T-BT&L as directed by superiors such as schools and MoE. While item number 6 has a mean score of 3.59 with a standard deviation of 1.054. This shows that teachers are willing to use the T-BT&L method because it is the request of the people around them such as students, colleagues, heads of departments, parents and the Ministry of Education and Culture. Therefore, it can be concluded that teachers accept the new norm in conducting teaching and learning by practicing the T-BT&L method.

Summary and recommendations

The findings of this study show that teachers are willing to use the technology-based T-BT&L method even though training and guidance for it were not enough. This is supported by several foreign researchers who have conducted a study to see teachers' perceptions on the use of technology for the T-BT&L approach during the Covid-19 pandemic period. A study conducted by Mohammad Ziaul (2020) in Saudi Arabia on male teachers, found that a large number of male teachers had a positive perception about the use of technology during this pandemic period. Meanwhile, in this study, the findings prove that teachers have confidence in their ability to use technology effectively in implementing T-BT&L and teaching ability refers to the ability to change students' achievement. This is supported by the findings of a study conducted by Deepika (2020) on teachers in Bangalore, India showing that 86.9% of teachers prefer online teaching methods over face-to-face teaching methods in the classroom.

The findings of this study show that teachers are ready to implement the use of technology by using Youtube, videos and also learning management systems such as Google Classroom, Zoom or Meet. The findings of this study are in line with the study conducted by Lapada et. al (2020), Ramakanta and Sonali (2020), Irfan Fauzi and Hermawan (2020), Deepika (2020) and Rasmitadila et al. (2020). The use of technology will help the implementation of learning sessions because technology can be a bridge for teaching staff to transfer knowledge to students while making the learning process more meaningful throughout the Covid-19 pandemic period.

In conclusion, the use of technology is useful for T-BT&L purposes among educators in the state of Johor during the MCO period. This study has been successfully implemented in examining the level of self-efficacy, the subjective norms of educators in accepting the use of technology during the MCO for the implementation of T-BT&L. The use of technology in the T-BT&L process not only benefits children but also the educators as they are able to know the development of children during the MCO period. In summary, the use of technology in the field of education facilitates more effective teaching and learning despite some constraints. However, these constraints can be overcome if cooperation from various parties is extended to improve the quality of education in Malaysia. Commitment from all parties is essential in providing the best quality of education comparable to education in developed countries.

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