THE IMPLEMENTATIONS OF TECHNOLOGY IN SPECIAL EDUCATION CLASSROOMS BASED PROJECT

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\textbf{ABSTRACT}

\textbf{Purpose:} This qualitative study was conducted to explore the factors that influence the use of technology in special education classrooms.

\textbf{Theoretical Framework:} Technology is evolving so fast, that we can’t afford to keep up with it. These technological developments give a new leaf to various aspects of life.

\textbf{Methodology:} Respondents were interviewed in three separate sessions and recorded before the thematic analysis was conducted.

\textbf{Findings:} This study shows benefit from the emergence of various gadgets that can make teaching and learning more interesting. Nevertheless, there are still teachers who are unable to use technology efficiently in the classroom, especially for special education. This condition is caused by several factors.

\textbf{Implications:} The findings of this study are expected to provide an initial overview for subsequent researchers to conduct further studies.

\textbf{Value:} Among those affected by this rapid development is the field of education. It can be seen that education is gradually moving according to a fresher and more exciting trend with the application of technology.

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\textbf{AS IMPLEMENTAÇÕES DE TECNOLOGIA EM SALAS DE AULA DE EDUCAÇÃO ESPECIAL COM BASE NO PROJETO}

\textbf{RESUMO}

\textbf{Objetivo:} Este estudo qualitativo foi realizado para explorar os fatores que influenciam o uso da tecnologia em salas de aula de educação especial.

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Estrutura teórica: A tecnologia está evoluindo tão rapidamente que não podemos nos dar ao luxo de acompanhá-la. Esses desenvolvimentos tecnológicos dão uma nova perspectiva a vários aspectos da vida.

Metodologia: Os entrevistados foram entrevistados em três sessões separadas e gravadas antes da realização da análise temática.

Conclusões: Este estudo mostra os benefícios do surgimento de vários aparelhos que podem tornar o ensino e o aprendizado mais interessantes. No entanto, ainda há professores que não conseguem usar a tecnologia de forma eficiente em sala de aula, principalmente na educação especial. Essa condição é causada por vários fatores.

Implicações: Espera-se que os resultados deste estudo forneçam uma visão geral inicial para que pesquisadores posteriores realizem outros estudos.

Valor: Entre os afetados por esse rápido desenvolvimento está o campo da educação. Pode-se observar que a educação está se movendo gradualmente de acordo com uma tendência mais fresca e empolgante com a aplicação da tecnologia.

Palavras-chave: Uso da Tecnologia, Aplicativos de Tecnologia, Educação Especial, Salas de Aula.

LA APLICACIÓN DE LA TECNOLOGÍA EN LAS AULAS DE EDUCACIÓN ESPECIAL BASADA EN PROYECTOS

RESUMEN
Propósito: Este estudio cualitativo se llevó a cabo para explorar los factores que influyen en el uso de la tecnología en las aulas de educación especial.

Marco teórico: La tecnología evoluciona tan rápidamente que no podemos permitirnos seguirle el ritmo. Estos avances tecnológicos dan una nueva perspectiva a diversos aspectos de la vida.

Metodología: Se entrevistó a los entrevistados en tres sesiones distintas y se les grabó antes de realizar el análisis temático.

Conclusiones: Este estudio muestra los beneficios de la aparición de diversos dispositivos que pueden hacer más interesantes la enseñanza y el aprendizaje. Sin embargo, todavía hay profesores que no pueden utilizar la tecnología de forma eficiente en el aula, especialmente en educación especial. Esta situación se debe a varios factores.

Implicaciones: Se espera que los resultados de este estudio proporcionen una visión general inicial para que investigadores posteriores realicen más estudios.

Valor: Entre los afectados por este rápido desarrollo se encuentra el campo de la educación. Se puede observar que la educación se está moviendo gradualmente según una tendencia más fresca y emocionante con la aplicación de la tecnología.

Palabras clave: Uso de la Tecnología, Aplicaciones Tecnológicas, Educación Especial, Aulas.

INTRODUCTION

Studies on the use of technology are very widespread nowadays. Many researchers have conducted studies related to the integration of technology in the classroom. According to A. Guzman & M. Nussbaum (2009: 453) in their statement that is, The process of integrating technology into classroom work has emerged as a significant focus of study in educational research. Interest in this trend has been motivated by the growing number of technology projects implemented in schools. In this section, the researcher describes the methods of analyzing the data that have been collected in the previous section. The reviewer has analyzed the data obtained through interview transcripts and also research on selected documents. This method of analysis is important for the researcher to obtain the findings of the study formed through appropriate methods of interpretation. In addition, in this section, the researcher also describes the method to achieve the validity of a study finding through an inter-rater reliability test.
conducted. To make it easier for the reader to understand this process, the researcher has divided the description into several chapters that contain a detailed description of each category discussed.

This study was conducted to identify several factors that influence the use of technology in the classroom. It is emphasized that the things to pay attention to are the reasons for the selection of technology before a teacher decides to use technology in teaching while in the classroom. In addition, the researcher also set the purpose of the effect of the use of technology in teaching and methods of integrating the technology in teaching. Along with the rapid development of technology, the influence of the use of this technology began to spread to schools and generally to the classroom (Abdul Jalil et al., 2021; Mohd Noh et al., 2021; Mustafa et al., 2021; Roszi et al., 2021; al., 2021; Tumisah et al., 2021). Pupils are also exposed to various forms of technology in their daily lives. Therefore, it is highly desirable if this technology is used also during teaching and learning so that the channels of its use become more meaningful, not just for entertainment alone (Irma et al., 2021; Suzana et al., 2021; Rohanida et al., 2021; Nazrah et al., 2021; Shahrulliza et al., 2021). Fulfilling that purpose, the researcher has evaluated question related to the study as follows:

i. What factors influence the choice of type of technology in classroom teaching?

METHODOLOGY

Data analysis in qualitative research methods involves experience as well as selected data formed from non-numerical material. According to Syahrul (2005), the data collected is not in the form of numbers, qualitative research is very rich in descriptions. The following is the data analysis process.
Through interviews, researchers analyzed the data through the transcripts that have been produced. To facilitate the researcher to determine the results of the study findings, the resulting transcript should be coded. According to David (2006) inductive coding begins with the closing reading of the text and consideration of the various meanings inherent in the text which are then labeled into one category. This process is called coding where each answer given by the respondent is named with their respective code according to category and theme.

The results of this analysis will establish the development of categories into models or frameworks that load raw data and convey key themes and processes (David, 2006). The coding process is very important to obtain the scope of data acquisition from the interview transcripts that have been produced. Through this transcript earlier, the researcher interprets the data to obtain results. All word data obtained through interviews or data from observations need to be described and summarized (Anne & Donna, 2009). According to Anne & Donna (2009) again, this analysis may require researchers to obtain relationships between the various themes that have been identified. Therefore, the researcher has combined the themes obtained to obtain the results of the analysis.

RESULT AND DISCUSSION

R1-Respondent 1

R1: is basic. Basics. Ok ok. Like this. There are many things to consider during the election. First of all. We ourselves need to make sure we know how to use the technology. Don't be very sophisticated. Hehe. What I don't want to bring, I don't use it. Like the game before, I have to know first how to use it. Otherwise, the teaching will be disrupted when I try to use it.
myself. Both levels of students. We look at the level of our students. If you make a powerpoint with slides that do not need many words, this will interfere with students' interest. Place relevant only. if you want to put a picture, put only the relevant picture. later if there are too many, students cannot focus.

R1: all sorts of normal. Importantly, This needs to be addressed. Deaf students have hearing problems, deaf students like pictures, videos. Take into account this factor. Kind of pictures, videos we need a lot. These students are now advanced. More advanced than her teacher. Haha. He is good at using computers, tabs, so we use tabs, computers to teach him something. Yes, right? That's an easy way to get their attention. Some more?

R1: um .. another factor. Ok. Fikirkan ye. the student's interest. They love to explore. So when we share something new like this gadget, they will explore. We take advantage of that, to teach them about something. Like today, we use it to learn Mathematics. Apart from that, take into account the size of the class. Class size is very important. Usually 5 slaves, 4 people like that. If there aren't many people in my class, there are only 6 people, we display the LCD. If you want to use the pound tab, it's hard too. Very small. What's on the computer, show it in front of it.

R2-Respondent 2

R2: Ok. We start from ancient times. You remember we used to have OHP? There is a light. Which we project on the screen. That is also technology. New time comes out first, it is the greatest technology and up to date. Not anymore. We have changed. We already have the new VLE Frog introduced by the government. E book. Just want to google. Hehe. Then, each school has its own computer lab. Can access directly. Want to find out what information we can get in a short time. Now students are supplied with notebooks by the government. Thats technology. Enough access. The only problem is that some students may be ready and some are not yet ready to go through learning using technology.

R2: Good. Today I taught physical education. There are some skills to send the ball and run. I have used the video to show the correct way in doing the technique of sending the ball and running. From there students can clearly see the correct way to do the delivery. Deaf students, you understand. Everything we have to show in front of our eyes. Can't talk, only through gestures. I just want to do a demonstration. But this student prefers videos, pictures. So I use this method. They like it and they understand.
R2: I choose to use technology like video in my teaching because it makes it easier for me. I just need to search the internet, download and show it to my students. Save time. Understand that nowadays everything needs to be fast. Easy. Fast. I want to save time. In addition, students can also know exactly about something. When watching a video, we continue to get what we see in the video. Distance learning can happen. Students can also learn what their peers in other countries learn. For example, we watch the video in another country, another country. Peer students learn that thing. We can learn the same thing. We don't need to explain at length. Students can look and follow. That is the factor that made me choose this technology.

R2: The use of technology is influenced by various reasons. If seen in my class earlier, it has to do with students' understanding. I chose to show the video because my students needed it so. As I mentioned earlier, my students are deaf students, their way of learning is what they see. That is what they will do and they will easily understand. After all, the development of my students related to this technology is actually ok. They already know about tabs, labtops. When I use this approach, they prefer it. Instead of me drawing on a whiteboard, I'd rather show a video

R2: I choose to use technology in my teaching because it makes it easier for me. I just need to search the internet, download and show it to my students. Save time. Understand that nowadays everything needs to be fast. I want to save time. Pupils can also know exactly about something. Distance learning can happen. Students can also learn what their peers in other countries learn.

R3-Respondent 3

R3: emm. Glad to have the answer. Google play is free. Interactive games like these language games are very interesting and exciting. If the answer is correct, then praise is given. If they are wrong, they will not continue to be blamed, they will be motivated. This makes the teaching more interesting. In addition, students will also be easy to understand and interested in continuing learning. Not like before. If it's wrong, keep it wrong. Now wrongly motivated. They are more interested in continuing from one level to another. Low, medium and high levels. I chose to use a tablet because of the size of the class and my student is only one. No need to use LCD. We can be one by one with students. Students feel we are always close to them. So it's appropriate that I use this tablet. One more thing, this technology as the researcher mentioned earlier is a current demand. Saving. If we do not use technology, it is as if we are left behind. After all it is not difficult to access.
Table 1: Theme Analysis

<table>
<thead>
<tr>
<th>FACTORS AFFECTING TECHNOLOGY CHOICE</th>
<th>RESPONDENT 1</th>
<th>RESPONDENT 2</th>
<th>RESPONDENT 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>• we know how to use technology</td>
<td>• fast time.</td>
<td>• it's free.</td>
<td></td>
</tr>
<tr>
<td>• Deaf students like pictures, videos</td>
<td>• Adequate access.</td>
<td>• very interesting and exciting</td>
<td></td>
</tr>
<tr>
<td>• They love to explore</td>
<td>• students can see clearly</td>
<td>• current claims.</td>
<td></td>
</tr>
<tr>
<td>• Class size</td>
<td>• facilitate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Save time</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• student understanding.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• my student's technology-related development</td>
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</tbody>
</table>

Through the table above, it can be stated that the factors that influence the choice of technology in the classroom is because it simplifies teachers, saves time, free applications, facilitates student understanding and attracts students. Through this analysis it can be observed that there are some similar answers and ideas among the respondents. This can help the researcher to state the validity of the data and the connectivity between the data obtained. This method of data validity will be described in the next section.

Once the researcher has finished analyzing all the data obtained and validating all the sources, the researcher can state the findings obtained. These findings can answer the research questions that have been set at the beginning of the writing of this study. In Figure 2 is a summary of the findings of this study. The researcher summarizes these factors into 3 parts, namely student factors, teacher factors and material factors. This finding is a conclusion that can be made based on several factors that have been studied. The researcher summarizes the findings as shown in the figure below.

These three parts of the factor play an important role in influencing the selection of teachers in integrating the use of technology during teaching in the classroom. Among the most
important factors in this determination is the student factor because learning objectives are ultimately determined by student achievement (Mohd Arafat et al., 2021; Sumaiyah et al., 2021; Hifzan et al., 2021; Shahrul et al., 2021; Helme et al., 2021). Each part of those factors includes several other factors. Here are the factors for each of these sections.

Table 2: Technology Selection Factors in the Classroom

<table>
<thead>
<tr>
<th>Factors</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Teachers   | i. Knowledge and skills in using materials  
             ii. Easy to access  
             iii. Saves preparation and management time  
             iv. Simplify tasks |
| Students   | i. Motivate students  
             ii. Attract interest  
             iii. Facilitate understanding  
             iv. Extensive exposure  
             v. Existing skills |
| Materials  | i. Free application  
             ii. Easy access  
             iii. Available at school  
             iv. Attract  
             v. The latest trends |

Based on Table 2, we can see several factors for each section that influence the choice of technology in the classroom. Teacher factors include 4 things, namely knowledge and skills in using materials, easy to access, saving time in preparation and management as well as facilitating teachers' tasks. This is also related to the study conducted by Lynette (2008: 63) which stated that "Effective integration of technology is the result of many factors, but the most important factor is the teachers' competence and ability to shape instructional technology activities to meet students' needs ". The student factor consists of 5 things, namely motivating students, attracting interest, facilitating understanding, wide exposure and their existing skills. As for the material factor, it also consists of 5 things, namely free applications, easy to access, available at school, interesting and according to the latest trends. All these findings can be presented as below.
Among the things considered in the teacher factor is that it saves teachers time in preparing the materials because it is already available, as in Figure 3. Teachers only need to use a piece of software or videos via the internet. In addition, easy access is also a motivator for teachers to use technology (Farah et al., 2021; Syahrul et al., 2021; Quah et al., 2021; Ahmad Syarifuddin et al., 2021; Jumiah et al., 2021). Only an internet connection is required to download a video or software. The use of technology also facilitates the task of teachers. Teachers no longer need to tire themselves out by providing existing teaching materials. Teachers ’skills in the use of technology are also a factor to the integration of technology in teaching (Mohd Ali et al., 2021; Parimala et al., 2021; Siti Jamilah et al., 2021; Nor Fauziyana et al., 2021; Noel et al., 2021).
Based on the findings of the study in figure 4 above, it is concluded that the student factor is the main factor in addition to the material factor where it involves 5 things. The integration of technology in first-grade classroom teaching is due to the extensive exposure to students (Badaruddin et al., 2021; Abdul Rasid et al., 2021). Students are accustomed to the use of technology such as gadgets at home. In addition, technology can also attract students' interest in learning. This in turn can facilitate students' understanding. Technology was also chosen because it can motivate students to learn (Ahmad Shafarin et al., 2021; Junaidah et al., 2021; Farah Adibah et al., 2021; Ahmad Shakani et al., 2021; Muhamad Amin et al., 2021).

![Figure 5: Material Factors](image)

**CONCLUSION**

The technological material itself is also a factor in the integration of technology in the classroom, as in Figure 5. In addition to being the latest trend and being followed around the world in all aspects, the material is also easily accessible (Santibuana et al., 2021; Nor Diana et al., 2021; Zarina et al., 2021; Khairul et al., 2021; Rohani et al., 2021). Materials such as videos and photos are easy to obtain. These materials are also interesting as is the software in tablets as well as labtops. Almost all schools in Malaysia have good broadband links. It is already available and students and teachers only need to use it. The most important factor is that it is available for free on the internet.

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