

Exploring the Skills of Special Education Teachers in Implementing PBP to Enhance the Reading Skills of Special Education Students

Sarasvathy Gopal & Syar Meeze Mohd Rashid

Fakulti Pendidikan, Universiti Kebangsaan Malaysia

Email: p130089@siswa.ukm.edu.my, cikgumeeze@ukm.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJARPED/v14-i2/24899> DOI:10.6007/IJARPED/v14-i2/24899

Published Online: 28 May 2025

Abstract

This study aims to explore the practices of Malay Language teachers in implementing Project-Based Learning (PBL) to improve the reading skills of remedial students in Sepang, Selangor. This qualitative study employed in-depth interviews involving ten Malay Language remedial teachers. The findings revealed five key themes: planning based on students' abilities and interests, the use of creative and visual methods, active engagement through hands-on activities, overcoming challenges through time management, and the use of language games. The study found that teachers' ability to tailor projects to students' needs and employ innovative, interactive approaches plays a critical role in enhancing student engagement and reading skills. This study recommends continuous professional development for teachers and institutional support to optimize the effectiveness of PBL in remedial education contexts.

Keywords: Project-Based Learning, Malay Language Teachers, Remedial Teachers, Reading Skills, Special Education

Introduction

Project Based Learning (PBL) has been identified as one of the most effective educational strategies in enhancing student engagement and success across various learning contexts, particularly in special education in Malaysia (Ahamad & Bakar, 2022; Special Education Division, Ministry of Education Malaysia, 2019; Zahri & Othman, 2023). This approach involves the use of systematically and carefully planned projects, integrating both intellectual and practical skills, while engaging students in deep exploration of complex issues or real-world problems (Ghosheh Wahbeh et al., 2021; Hassan & Ahmad, 2023; Kiong et al., 2022). This allows students to apply the knowledge and skills they have learned in contextual and meaningful situations, which is crucial for deeper understanding and improved reading abilities. Ghosheh Wahbeh et al. (2021) suggest that Project Based Learning helps develop students' adaptive and interactive abilities by facilitating learning through inquiry and creation, which are critical for students facing challenges in their learning.

In the context of special education in Malaysia, Project Based teaching of the Malay language plays a crucial role in enhancing students' reading skills (Special Education Division,

Ministry of Education Malaysia, 2019). However, several key issues need to be addressed to ensure the effectiveness of this approach. These issues primarily revolve around teachers' skills in implementing Project Based teaching, which all impact students' success in acquiring essential reading skills. One of the main challenges in Project Based Malay language teaching in special education schools is the lack of specific knowledge among teachers regarding the application and integration of Project Based teaching strategies (Ahamad & Bakar, 2023; Ghosheh Wahbeh et al., 2021). Teachers may not fully master the methods of planning and implementing projects that not only support academic skills but also strengthen social and emotional skills (Ahamad, Bakar, & Juhary, 2022). For example, in the implementation of reading projects, teachers need to understand how to integrate relevant and engaging reading materials that help students understand context and improve language comprehension (Bui et al., 2020; Garcia, 2020). Insufficient knowledge in planning innovative learning materials that are responsive to the needs of special education students can hinder the learning process, leading to reduced student engagement and motivation (Eng & Abd Rahman, 2023). Therefore, addressing this issue is essential, as enhancing teachers' knowledge in Project Based teaching will directly improve the quality of learning and help students reach their full potential.

Although teachers may possess theoretical knowledge about Project Based teaching, practical skills for implementing it are often insufficient (Kiong et al., 2022; Hassan & Ahmad, 2023). This issue relates to teachers' ability to apply theory into actual classroom practice, including skills in organizing and managing the classroom, using educational technology, and effectively assessing students' progress in the context of projects. For example, in projects that involve collaborative learning, teachers need to be skilled in adapting activities to suit the abilities of each student, as well as integrating the use of technological tools that can engage students and facilitate teaching (Hutauruk et al., 2022). These skills are important because they help teachers implement more dynamic and interactive instruction, which in turn enhances students' understanding and interest in reading (Tonge & Mahamod, 2020; Imbaquingo & Cárdenas, 2023). Developing these skills is also critical to ensure that teachers can provide effective support to special education students, enhancing their ability to understand and master the Malay language in depth.

Teachers' attitudes towards Project Based teaching also play a crucial role in determining the success of this approach. A positive and proactive attitude is essential to create a conducive learning environment that supports the needs of special education students (Nurmalia, 2021). For example, teachers who have an open and responsive attitude towards the individual needs of students tend to be more successful in implementing innovative projects and adapting their teaching to engage students' interest and address learning challenges. Attitudes such as patience, empathy, and commitment to ensuring every student succeeds are vital in encouraging student engagement and building their confidence in the learning process (Nurmalia, 2021; Spencer & Spencer, 2008). This issue is important because a teacher's positive attitude towards Project Based teaching can directly influence how students respond to and engage in the learning process, as well as impact the overall effectiveness of language teaching and learning.

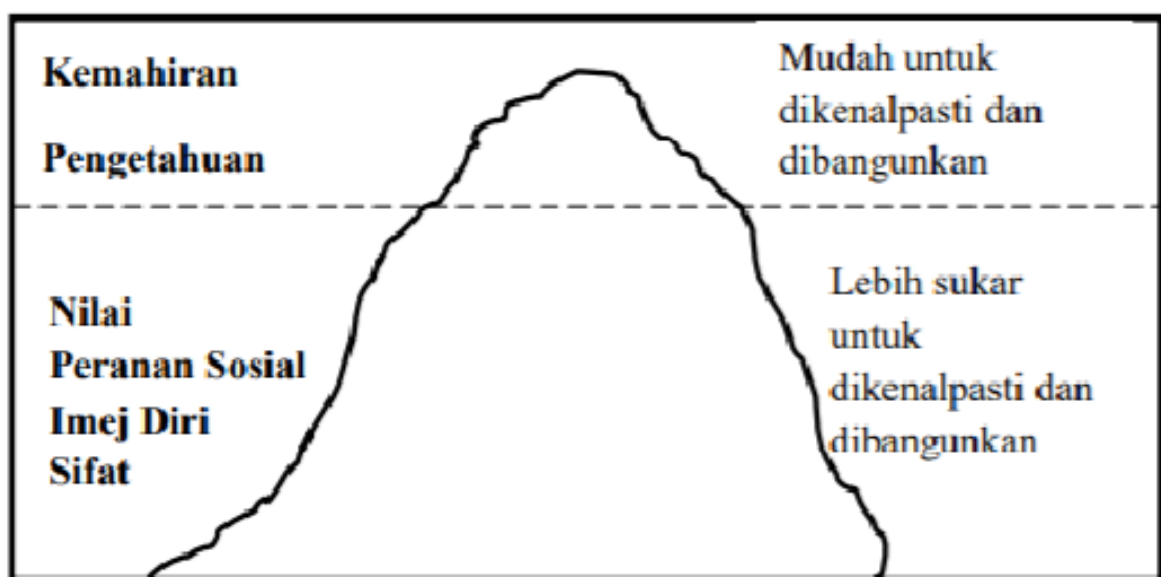
This study aims to fill the gap in the literature by exploring how the practices of Special Education teachers in the context of special education in the Sepang district, Selangor, can be

enhanced through Project Based Learning. Focusing on skills will provide important insights into the methods that can be used to improve teaching practices, thereby enhancing student learning outcomes in the context of the Malay language. This is crucial not only for improving the effectiveness of special education but also for ensuring that all students, particularly those with low achievement, can benefit from innovative and responsive teaching approaches. Therefore, this study aims to identify the teaching approaches of Special Education teachers in implementing Project Based Learning for special education students in the Sepang district, Selangor. The objective of this study is to examine teachers' skills in applying Project Based Learning methods. The main research question is: What is the level of skills of Special Education teachers in implementing Project Based Learning to improve reading skills among special education students in the Sepang district, Selangor?

Literature Review

Related Theories

The Competency Iceberg Model by Spencer and Spencer (2008) is a highly relevant framework in the context of special education, particularly in supporting Project Based Learning for students facing reading difficulties. This model outlines that individual competency consists of visible elements such as knowledge and skills, as well as hidden elements that include values, social roles, and personal attributes (Spencer & Spencer, 2008). The selection of this theory is critical because it allows educators to understand and holistically integrate all aspects of competency that contribute to effective learning. In the context of teaching the Malay language to special education students, this model is especially beneficial because teachers need to adapt their methodologies not only based on academic knowledge but also by considering psychosocial and emotional factors that affect student learning. This is essential in Project Based Learning, where the success of education lies not only in content mastery but also in the development of students' abilities to interact effectively in a broader social and emotional context. This model provides insights into how teachers can be more effective in planning and implementing projects that not only educate but also motivate and address the comprehensive needs of students, thereby helping them overcome reading difficulties and, more generally, challenges in their learning.



Conceptual Framework

The conceptual framework for this study is built upon the key components, namely the skills of Special Education teachers in Project Based Learning at special education schools. Knowledge refers to the teacher's understanding of innovative and responsive Project Based Learning strategies that cater to student needs. Skills encompass the practical abilities of teachers in planning, implementing, and evaluating effective projects to enhance students' reading skills. Attitude involves the positive, proactive, and committed approach of teachers in creating inclusive learning environments that support student success. This framework emphasizes the importance of in-depth knowledge, practical skills, and a positive attitude in ensuring the success of Project Based Learning.

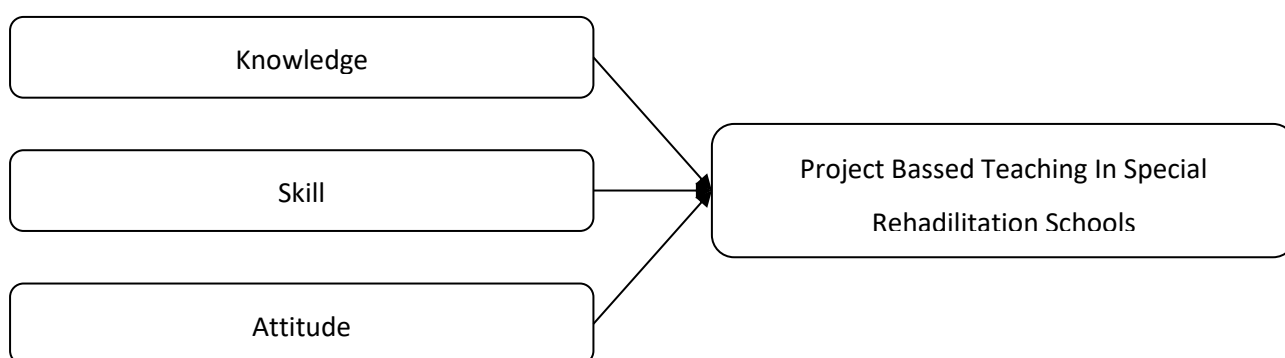


Figure 2. Conceptual Framework of the Study

Project-Based Learning Implementation in Special Education Teachers on Improving Reading Skills for Special Education Students

Project-Based Learning (PBL) has been identified as a highly effective approach in education, particularly within the special education context in Malaysia. This approach involves engaging students in meaningful and relevant projects that not only enhance their involvement in learning but also help develop their cognitive and social skills. In this regard, special education teachers play a crucial role in designing and implementing these projects to cater to the individual learning needs of their students.

A study conducted by Ahamad and Bakar (2023) sought to assess students' proficiency in various language skills, including listening, speaking, reading, and writing, by utilizing the Project Based Malay Language Learning approach. The study employed an action research methodology, which consisted of four main phases: planning, implementation, observation, and reflection. The research tools included direct observation and document analysis. With a sample of 28 sixth-grade students, including five from special education classes, the results revealed notable improvements in all aspects of language skills, especially in reading. Students demonstrated their ability to summarize, transfer information into graphical forms, and write essays in dialogue format. This research highlighted that Project-Based Malay Language Learning not only improved students' language skills but also motivated them to engage actively in learning and collaborate. The study concluded that PBL should be widely integrated into special education to unlock students' full learning potential (Ahamad & Abu Bakar, 2023).

In their research, Sulong and Sulong (2022) investigated the advantages and challenges of implementing Project-Based Learning within the educational landscape. The

study was based on secondary data from authoritative sources such as journals and books, and it explored the characteristics, benefits, and challenges associated with PBL for both students and teachers. The findings indicated that PBL offers numerous advantages, including the enhancement of students' critical and creative thinking skills and enabling them to learn according to their individual capabilities. However, the study also identified several obstacles to PBL implementation, such as insufficient resources, inadequate facilities, and the lack of continuous teacher training. The research emphasized the need for strong support from all stakeholders to ensure PBL's success in special education. With the right support and ongoing training, PBL has the potential to significantly improve reading skills in special education students (Sulong & Sulong, 2022).

Jamian's (2021) research focused on challenges faced by primary school students in rural areas with reading and writing skills in the Malay language. Using a descriptive survey method, the study collected data through questionnaires from 161 fourth and fifth-grade students across Negeri Sembilan, Pahang, and Sarawak. The findings revealed that many students struggled with text comprehension and had difficulty distinguishing between uppercase and lowercase letters, as well as recognizing punctuation marks. This study suggested that a more hands-on, contextualized special education approach is necessary to address these challenges. Project-Based Learning could be employed to improve reading skills by providing students with more meaningful and practical learning experiences. The research emphasized the potential of PBL to help students overcome reading and writing challenges (Jamian, 2021).

Derbala and Yasin (2022) discussed the importance of continuous support from all stakeholders in the successful implementation of special education programs. Through qualitative research, including interviews with special education teachers, the study explored the challenges teachers faced in using PBL. One key finding was that support from students' families and communities is essential for the success of PBL. Teachers who received consistent support were more successful in adapting effective teaching strategies, including integrating technology into learning. The study highlighted the positive impact of collaboration between teachers, parents, and other education professionals, which significantly enhanced the effectiveness of PBL in special education (Derbala & Yasin, 2022).

Another important study by Ghosheh Wahbeh et al. (2021) examined the role of Project-Based Language Learning in developing students' life skills. The research, which involved 80 students from two sixth-grade classes at a private school, used a combination of observations, semi-structured interviews, and document analysis. The findings revealed that Project-Based Learning helped improve students' communication skills, self-confidence, and self-regulation. These results are particularly relevant for special education in Malaysia, as they show that PBL not only enhances reading skills but also contributes to the development of crucial life skills. The study suggests that integrating PBL into special education curricula can yield significant benefits in both reading and social skill development for students (Ghosheh Wahbeh et al., 2021).

Research by Park and Scanlon (2024) focused on teachers' perceptions of how Project-Based Learning affects the performance of students facing academic challenges. The study utilized thematic analysis through focus group interviews with teachers in a Catholic

secondary school. The results showed that Project-Based Learning improved student participation, motivation, and achievement. Despite some cognitive and academic challenges, students in the PBL program demonstrated considerable benefits. The study implied that PBL could serve as an effective strategy to create an inclusive learning environment for all students, including those in special education programs (Park & Scanlon, 2024).

Markula and Aksela (2022) examined the core features of Project-Based Learning and its implementation in science education. Using both deductive and inductive content analysis of student videos, learning diaries, and online survey responses, the study revealed that PBL promotes collaboration, the use of technological tools, and scientific practices in science education. However, it also noted challenges in maintaining the integrity of project activities and ensuring that the projects effectively teach core content. While this study focused on science education, its findings about collaboration and technology use are equally relevant in the context of special education in Malaysia, especially in Malay language teaching (Markula & Aksela, 2022).

Imbaquingo and Cárdenas (2023) explored the effectiveness of Project-Based Learning in enhancing English reading skills among ninth-grade students in Quito. The study combined descriptive analysis and a comprehensive literature review, revealing that Project-Based Learning significantly increased student motivation and reading abilities. The study suggested that PBL is an effective strategy for improving reading comprehension, and these findings are highly relevant for special education in Malaysia. They provide evidence that Project-Based Learning can enhance reading skills in the Malay language, providing students with meaningful and contextual learning experiences (Imbaquingo & Cárdenas, 2023).

Finally, Garcia (2020) investigated teachers' perceptions regarding the effects of Project-Based Learning on student engagement and achievement in schools for students facing academic and behavioral challenges. Using a qualitative approach with open-ended surveys, the study found that Project-Based Learning increased student engagement, motivation, and achievement. These findings suggest that Project-Based Learning is a highly effective teaching strategy in the context of special education in Malaysia. Special education teachers can use PBL to address students' learning difficulties and improve their reading skills through relevant and engaging projects (Garcia, 2020).

Special Education Teacher Skills in Project-Based Learning and Its Impact on Reading Skills of Special Education Students

In the context of special education in Malaysia, the skills of teachers in implementing Project-Based Learning (PBL) play a crucial role in improving the reading skills of students. A study by Ahamad and Bakar (2023) demonstrates that the effectiveness of PBL depends on the teacher's ability to plan and execute projects that are not only relevant but also engaging and meaningful for the students. This involves skills in integrating academic content with activities that encourage research and creativity. For example, the use of technology and multimedia in PBL has been shown to enhance students' understanding and interest in reading. However, for this to be effective, teachers need specific skills to use technology in a productive and efficient manner (Eng & Abd Rahman, 2023).

However, implementing PBL in special education faces several challenges. Kiong et al. (2022) state that the lack of innovative and adaptive classroom management skills is a key issue faced by teachers. Effective classroom management is essential for handling projects that involve various learning needs. Teachers must possess strong organizational skills and the ability to adapt their teaching approaches dynamically based on students' responses. Additionally, the lack of resources and institutional support often burdens teachers, which affects the effectiveness of implementing comprehensive and holistic learning projects (Hassan & Ahmad, 2023).

Furthermore, studies on best practices in PBL show that continuous professional development and collegial support are crucial in helping teachers overcome these challenges. Training programs focused on developing PBL skills, such as planning student-centered activities and integrating technology into teaching, can enhance teachers' ability to deliver teaching materials that not only meet curriculum requirements but also enrich students' learning experiences (Imbaquingo & Cárdenas, 2023). Therefore, it is essential for stakeholders in special education to invest in teachers' professional development and provide adequate resources to optimize the implementation of PBL. This approach not only improves teaching but also enhances reading skills among special education students.

Research Methodology

Research Design

This study uses a qualitative research design to explore and understand the teaching practices of special education teachers in the context of project-based learning for special education students in the Sepang district, Selangor. According to Creswell (2013) and Maxwell (2012), the qualitative approach allows researchers to gain an in-depth understanding, in this case, of the experiences, perceptions, and social contexts of teachers, which cannot be obtained through quantitative methodologies. This study involves in-depth interviews with ten special education teachers who are directly involved in teaching special education students. The interviews are designed to explore in detail the teachers' skills in using project-based learning in their teaching.

Population and Sampling

This study targets special education teachers who teach Bahasa Malaysia at primary schools in the Sepang district, Selangor. The selection of schools and teachers is based on specific criteria to ensure that relevant and in-depth data are obtained. The chosen schools must implement the Special Education Program, which assists students with difficulties in reading, writing, and arithmetic (the 3Rs). The teachers involved must have experience teaching in the special education program and using project-based learning strategies in Bahasa Malaysia instruction. Teachers who do not teach Bahasa Malaysia or who do not have experience with this approach are excluded from the study. The study uses purposive sampling to manually select respondents, ensuring that all participants meet the criteria and have relevant experience. This approach allows the researcher to gather meaningful data to assess the teachers' skills in project-based learning and its impact on the reading skills of special education students.

Research Instruments

In this study, the primary instrument used is in-depth interviews. The interview sessions will be recorded to ensure the accuracy and authenticity of the collected data. The interviews are designed to thoroughly assess the skills of special education teachers in the context of using Project-Based Learning in special education. The interview questions will be structured to explore the teachers' teaching experiences, the use of project-based learning strategies, and their perceptions of the effectiveness of this approach in improving students' reading skills. This instrument is chosen for its ability to generate rich qualitative data, enabling a deep understanding of the context and nuances of complex teaching practices in special education.

Data Collection Procedure

The data collection procedure in this study involves conducting interviews with ten Bahasa Malaysia special education teachers from primary schools that implement the Special Education Program. The interviews will be conducted either face-to-face or virtually, depending on the respondents' availability and needs. Each interview is scheduled to last between 45 to 60 minutes to ensure the researcher has adequate time to explore the research topic in-depth. The interviews are semi-structured, where the researcher has prepared an interview plan in advance, which includes open-ended questions. This approach allows respondents to provide in-depth answers and share their personal experiences in detail. To ensure that no information is missed and to facilitate data analysis, the interview sessions will be recorded using audio recording devices. This recording is crucial as it enables the researcher to capture every detail of the responses provided by the respondents, which may be difficult to fully note manually during the interview. Additionally, the researcher will take important notes during the interview session. These notes help capture nuances and vital information that may not be clear in the audio recordings, such as facial expressions, tone of voice, and spontaneous reactions from the respondents. The combination of audio recordings and interview notes provides the researcher with a more comprehensive and in-depth understanding of the special education teachers' experiences and views on implementing Project-Based Learning.

Data Analysis Procedure

Thematic analysis has been used in the data analysis for this study to process the data obtained from the interview sessions. The first step in this analysis is transcribing the recorded interviews. The transcription process involves transcribing verbatim all the conversations recorded during the interview sessions into text. The transcript is then read repeatedly to understand the content and to identify patterns and themes relevant to the research objectives. The next step is to mark and code the data based on the identified themes. The researcher will use codes to categorize the data into larger, more relevant themes aligned with the research questions. These codes will then be grouped into broader themes and interpreted within the context of the study. This process requires the researcher to compare and contrast the themes across respondents to identify similarities and differences in the perceptions, experiences, and strategies employed by special education teachers.

Additionally, the researcher will use direct quotes from the interviews as evidence to support findings and analysis. These direct quotes strengthen the interpretation and ensure that the analysis is based on the actual voices and perspectives of the respondents. By using thematic analysis, the researcher is able to provide a clear and detailed picture of the

implementation of Project-Based Learning in the context of special education, as well as to identify the challenges and strategies used by teachers in addressing the issues they face. This approach ensures that the data collected is analyzed systematically and consistently, providing valid and reliable results for this study.

Findings

Demographic Information of Special Education Teachers

Overall, the ten special education teachers in the Sepang district have diverse experiences in the field of education and special education programs. Their teaching experience ranges from 5 to 20 years, while their experience in special education programs spans from 5 to 15 years. All of the teachers hold a Bachelor's degree in Education with a focus on the Malay language from various higher education institutions, such as UM, UPSI, UKM, UiTM, UTM, and USM, with one teacher holding a Diploma from IPG. The number of students in the special education classes managed by these teachers ranges from 4 to 9 students per class. All participants use the project-based learning approach to assist students in improving their reading skills.

This approach is seen as not only interactive but also effective in engaging special education students to master reading skills more effectively.

Table 1

Summary of Special Education Teacher Demographics

Teacher	Teaching Experience (Years)	Experience in Special Education (Years)	Academic Qualification	Number of Students in Class	Project-Based Learning Approach
Teacher 1	12	8	Bachelor's Degree (UM)	6	Yes
Teacher 2	10	6	Bachelor's Degree (UPSI)	5	Yes
Teacher 3	15	12	Bachelor's Degree (UKM)	7	Yes
Teacher 4	20	15	Bachelor's Degree (UiTM)	8	Yes
Teacher 5	8	5	Bachelor's Degree (USM)	4	Yes
Teacher 6	16	10	Bachelor's Degree (UTM)	6	Yes
Teacher 7	11	7	Bachelor's Degree (UPSI)	9	Yes
Teacher 8	9	6	Bachelor's Degree (UKM)	5	Yes
Teacher 9	13	9	Bachelor's Degree (USM)	6	Yes
Teacher 10	14	10	Diploma (IPG)	7	Yes

Research Findings for the Study Objectives

This section will discuss the research objective, which is to identify the competencies of all ten Special Education teachers in project-based learning in relation to the reading skills of students in the special education program in the Sepang district, Selangor. Based on interviews with the ten teachers, five main themes emerged that showed consistency in the

participants' approaches and views on project-based learning. These themes are: (1) Planning Based on Student Abilities and Interests, (2) Use of Creative and Visual Methods for Learning, (3) Active Involvement Through Hands-On and Interactive Activities, (4) Overcoming Challenges Through Time Management and Additional Support, and (5) Use of Language Games to Enhance Reading Fluency.

Planning Based on Student Abilities and Interests

When planning learning projects, one of the key skills emphasized by teachers is the ability to tailor the project according to the students' abilities and interests. This indicates that a deep understanding of each student's individual abilities is crucial in ensuring the success of the project. Participant 1 explained:

"In planning the learning project, I make sure it is closely related to the students' abilities and interests. I often use the project of creating storybooks that involve students in the processes of reading, writing, and presenting." (P1)

In addition, the skill of planning projects that align with students' needs demonstrates the teacher's ability to understand and adjust their teaching to the students' levels, which in turn helps them gradually improve their reading skills. Well-planned projects can help students feel more engaged and motivated to learn. Participant 3 added:

"In planning the project, I ensure that the reading materials are tailored to the students' learning levels." (P3)

Use of Creative and Visual Methods for Learning

Another skill identified in project-based teaching is the use of creative and visual methods to engage students in learning. Participant 4 explained:

"I plan projects using images as the foundation for the text that students will create. An example of a project I implemented is 'Picture Story,' where students are asked to arrange images and write a story based on those images." (P4)

The use of visuals in teaching helps students who may struggle with reading long texts to understand the story more easily. This approach highlights the teacher's skill in integrating visual elements with reading to enhance students' comprehension, while also making the learning process more enjoyable and meaningful for them. Participant 8 further added:

"I often plan projects to create picture books, where students read the story and draw key scenes." (P8)

Active Engagement Through Hands-On and Interactive Activities

The teachers' ability to engage students actively in the learning process is also a key focus. Through activities like these, students not only learn to read but also physically participate in creating models, which helps them understand the text more deeply. Participant 5 shared:

"In the learning project, I use a model-making approach based on folktales or local history. For example, students are asked to read the story 'Sang Kancil and the Crocodile' and then create models of the characters from the story." (P5)

Such interactive activities require students to think critically and understand the connections between events in the story, which in turn enhances their reading skills and comprehension. Participant 7 explained how they use mind mapping techniques to help students link information:

"I conducted a project called 'Story Mind Map,' where students read a short story and then organize it in the form of a mind map." (P7)

Overcoming Challenges Through Time Management and Additional Support

One of the main challenges faced by teachers in project implementation is time management, especially when each student requires different levels of guidance. The teachers' ability to organize time and provide additional support to students who need it is crucial to ensure the smooth running of the project. Participant 1 stated:

"The main challenge I face is the time constraint, as each student needs more individual guidance. To overcome this, I break the project into several stages and provide extra help to the students who need it more." (P1)

Additionally, the teachers' skill in addressing the challenges faced by students through strategic approaches can help improve their reading skills. Participant 2 shared the challenge of boosting students' confidence to read aloud in front of their peers:

"The main challenge I face is students' low confidence in reading aloud in front of their peers. To overcome this, I provide repeated practice and break the script into shorter sections to make it easier for them." (P2)

Use of Language Games to Enhance Reading Fluency

The teachers' ability to design enjoyable and interactive learning projects is another key theme. Games like these not only capture students' interest in reading, but also improve their fluency in recognizing and pronouncing words. Participant 6 explained:

"I design projects that involve language games like crossword puzzles or board games. One successful project was 'Hidden Word Game,' where students had to find words based on themes such as animals or food." (P6)

This approach shows that teachers are incorporating various fun and interactive activities to boost the interest and reading ability of special education students. Participant 9 also uses games to engage students in reading:

"I use a daily journal project as one way to enhance students' reading skills. The students write about their daily activities and then read them to their classmates." (P9)

Discussion

The findings of the study reveal that there are five key themes illustrating the teachers' skills in implementing project-based learning for special education students. These themes are: (1) Planning Based on Students' Abilities and Interests, (2) Use of Creative and Visual Methods for Learning, (3) Active Engagement Through Hands-On and Interactive Activities, (4) Overcoming Challenges Through Time Management and Additional Support, and (5) Use of Language Games to Enhance Reading Fluency.

Teachers' ability to design learning projects that align with students' abilities and interests is a critical element in enhancing the reading skills of special education students. The interviewed teachers emphasized the importance of tailoring activities to individual student capabilities, recognizing that overly complex or irrelevant approaches can demotivate students. For example, participants explained that when planning learning projects, they ensured the projects were closely aligned with students' levels and interests. This is crucial in ensuring that students feel engaged and motivated to learn. The study also found that participants frequently ensured that reading materials were adapted to the students' learning levels. This aligns with Ahamad and Bakar's (2023) research, which states that selecting appropriate materials based on students' abilities is essential for ensuring they can engage effectively in learning projects. Previous studies also support this finding, such as Mihat (2022), who emphasizes that learning projects adapted to students' capabilities can enhance their understanding and interest in reading. Teachers who are knowledgeable about students' abilities and skill levels can design activities that are both challenging and achievable, giving students a sense of accomplishment. This is especially important for special education students, who often face learning difficulties that can impact their motivation. Therefore, teachers' ability to plan projects based on students' abilities becomes a crucial factor in improving their reading skills, as supported by Norok and Khairuddin's (2022) study, which demonstrates that tailored approaches can help students overcome learning challenges more effectively.

The teachers' ability to use creative methods and visual elements is another significant aspect in improving the reading skills of special education students. The teachers in this study used various creative techniques such as picture-based storytelling and storyboard projects to assist students in understanding the texts they read. For example, Participant 4 employed a "picture story" technique where students read and arrange pictures as the basis for the text they would create. This technique enables students who might have difficulty understanding long texts to engage with the learning materials in a more visual way, which strengthens their understanding of the text. Ahamad and Bakar (2023) support this finding, where the use of visual elements in learning is shown to be highly effective in helping students with learning difficulties. Visuals provide students with clearer context and help them connect meaning to the texts they read. Additionally, Sulong and Sulong's (2022) study indicates that visual elements not only aid learning but also increase students' interest in actively participating in learning activities. This proves that teachers' skill in integrating visual methods into learning projects can have a significant impact on the development of special education students' reading skills.

Teachers' ability to actively engage students through hands-on and interactive activities is another essential factor in improving reading skills. For instance, Participant 5

used an approach where students made models based on local folklore or history. Through this activity, students not only learned to read but also physically engaged in making models, which helped them understand the text more deeply. Hands-on activities like these allow students to practice learning in a more concrete and enjoyable way. Derbala and Yasin's (2022) study supports this finding, where hands-on activities were found to increase student involvement in learning and helped them understand concepts more effectively. This is further supported by Imbaquingo and Cárdenas (2023), who found that students engaged in interactive activities tend to learn more effectively. Therefore, teachers' ability to design relevant hands-on activities plays a crucial role in ensuring that students can fully benefit from the learning experience and improve their reading skills.

Teachers' ability to overcome challenges, particularly in terms of time management and providing additional support, was also identified as a key factor in the success of learning projects. Teachers in this study emphasized that each student required different levels of guidance, which necessitated good time management and the provision of extra support for students in need. Participant 1, for example, explained that the main challenge they faced was time constraints, as each student required more individual attention. To overcome this, they broke the project into several stages and provided extra assistance to students who needed it. Garcia's (2020) research supports this finding, where effective time management was found to be essential in ensuring that students could follow the learning project successfully. Additional support also plays a key role in ensuring that each student receives sufficient guidance, especially for special education students who may require more attention. This is further supported by Park and Scanlon (2024), who found that additional guidance and continuous support can help students overcome challenges in learning. Therefore, teachers' skills in managing time and providing extra support are critical to ensuring that special education students can effectively participate in learning projects and enhance their reading skills.

Another important skill identified was the use of language games to enhance students' reading fluency. Teachers in this study employed various language games such as crossword puzzles and word-search games to help students learn to read in a fun way. Participant 6, for example, used a project where students created crossword puzzles based on Bahasa Malaysia themes. This helped students learn the language in a more interactive and less stressful way, making them more interested in learning. Eng and Abd Rahman's (2023) research supports this finding, where the use of language games was found to increase students' interest in language learning and help them develop their reading skills more effectively. This is also supported by Mihat's (2022) study, which shows that interactive activities like language games can improve students' reading fluency. Therefore, teachers' skills in designing fun and interactive learning projects are crucial in ensuring that special education students can improve their reading skills through engaging and meaningful activities.

References

- Ahamad, M. A., Bakar, E. W., & Juhary, J. (2022). Higher Order Thinking Skills Through the Constructivist Approach in Language Arts Teaching. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(7), e001597-e001597.
- Ahamad, M. A., & Bakar, A. H. A. (2023). Project-based Malay Language Learning to Improve Language Skills among Year Six Pupils. *International Journal of Language Education and Applied Linguistics*, 13(2), 53-68. <https://journal.ump.edu.my/ijleal/article/view/9398>
- Special Education Division, Ministry of Education Malaysia. (2019). Teaching and Learning Guidebook for Mathematics in the Special Remedial Program. <https://anyflip.com/jyskv/agkb/basic>
- Bandura, A. (1969). Social-learning theory of identificatory processes. *Handbook of Socialization Theory and Research*, 213, 262.
- Bui, T. T., Vu, T. T. H., Le, Q. H., Pham, T. L., Nguyen, T. M. A., Luu, T. D., ... & Nguyen, V. C. (2020). Application of Project-based Learning for Primary Teachers - A New Direction in Professional Training at Pedagogical Universities and Colleges in Vietnam. *International Journal of Psychosocial Rehabilitation*, 24(4), 7169-7179. Link
- Creswell, J. W. (2013). Steps in conducting a scholarly mixed methods study. <https://digitalcommons.unl.edu/dberspeakers/48/>
- Deci, E. L., & Ryan, R. M. (2013). Intrinsic motivation and self-determination in human behavior. *Springer Science & Business Media*.
- Derbala, R., & Yasin, R. M. (2022). The level of knowledge, acceptance, readiness, and teaching practices of special remedial teachers towards differentiated instruction. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(4), e001445-e001445.
- Eng, L. Y., & Abd Rahman, H. (2023). Effects of Project-based Learning on Motivation for Learning Mandarin. *Asian Pendidikan*, 3(1), 45-53. <https://journalarsvot.com/index.php/aspen/article/view/281>
- Garcia, M. (2020). Teacher Perceptions on the Impact of Project-Based Learning on Students Experiencing School Challenges. <http://csu-mdspace.calstate.edu/handle/10211.3/217175>
- Ghosheh Wahbeh, D., Najjar, E. A., Sartawi, A. F., Abuzant, M., & Daher, W. (2021). The role of project-based language learning in developing students' life skills. *Sustainability*, 13(12), 6518. <https://www.mdpi.com/2071-1050/13/12/6518>
- Hassan, A. M., & Ahmad, A. C. (2023). A Conceptual Framework to Design and Develop Project-Based Learning Instruments and Rubrics for Students with Autism in Learning English Language. *International Research Journal of Education and Sciences*, 7, 1-2023.
- Hutauruk, A. F., Subakti, H., Simarmata, J., Sopotura, D., Lestari, H., Al Haddar, G., ... & Cahyaningrum, V. D. (2022). Learning Media and ICT. https://repository.unugiri.ac.id:8443/id/eprint/4834/1/2022_Book%20Chapter%20DAI_Publikasi%20Media%20Pembelajaran%20dan%20TIK%20Desember.pdf
- Imbaquingo, A., & Cárdenas, J. (2023). Project-based learning as a methodology to improve reading and comprehension skills in the English language. *Education Sciences*, 13(6), 587. <https://www.mdpi.com/2227-7102/13/6/587>
- Jamian, A. R. (2021). Issues in Reading and Writing Skills in Malay Language among Rural Primary School Students. *Jurnal Pendidikan Bahasa Malaysia*, 1(1), 1-12. <https://spaj.ukm.my/jpbm/index.php/jpbm/article/view/19>

- Kiong, T. T., Rusly, N. S. M., Abd Hamid, R. I., Swaran, S. C. K., & Hanapi, Z. (2022). Inventive problem-solving in project-based learning on design and technology: A needs analysis for module development. *Asian Journal of University Education*, 18(1), 271-278.
- Markula, A., & Aksela, M. (2022). The key characteristics of project-based learning: How teachers implement projects in K-12 science education. *Disciplinary and Interdisciplinary Science Education Research*, 4(1), 2. <https://link.springer.com/article/10.1186/s43031-021-00042-x>
- Maxwell, J. A. (2012). Qualitative research design: An interactive approach. *Sage Publications*. [https://books.google.com/books?hl=en&lr=&id=xAHCOMtAZd0C&oi=fnd&pg=PR5&dq=Maxwell+\(2012\)+&ots=Y3BSsmvkd-&sig=KwdkdsdUfstQfNVNKna1HsKtJ7A](https://books.google.com/books?hl=en&lr=&id=xAHCOMtAZd0C&oi=fnd&pg=PR5&dq=Maxwell+(2012)+&ots=Y3BSsmvkd-&sig=KwdkdsdUfstQfNVNKna1HsKtJ7A)
- Mihat, M. D. (2022). The Level of Multimedia Usage for Teaching Reading Skills among Special Remedial Teachers. *Akademika*, 92(1), 45-57.
- Norok, N. B. M., & Khairuddin, K. F. (2022). Teachers' Readiness in Using Play-Based Learning Methods for Students with Special Learning Needs. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(1), 132-144.
- Nurmalia, L. (2021). Character Education for Higher Education. <https://repository.umj.ac.id/9422/2/buku%20PENDIDIKAN%20KARAKTER%20PGSD%205%20desember%202020.pdf>
- Park, H., & Scanlon, D. (2024). General educators' perceptions of struggling learners in an inaugural project-based learning Capstone. *International Journal of Inclusive Education*, 1-29. <https://www.tandfonline.com/doi/abs/10.1080/13603116.2024.2310673>
- Saidin, N. F., & Bukhari, N. A. M. (2023). Fall Behind Factors of Malaysian Primary School Pupils in "Program Pemulihan Khas." *Jurnal Pengajian Melayu (JOMAS)*, 34(1), 26-48.