

Validity and Reliability Implementation Programme Empowercer Academic @ Perak Toward Indigenous Students at Perak State in 2024

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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v14-i5/21402>

DOI:10.6007/IJARBSS/v14-i5/21402

Published Date: 21 May 2024

Abstract

This study is an assessment of the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak. To determine the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students, an assessment instrument has been developed. This developed instrument covers all the modules that have been implemented for students (academic), teachers (enrichment), and also parents (enrichment). To determine the validity of the developed instrument, a total of 5 experts in the field have been identified. Correlation coefficient values are used to determine the validity of the experts in the field. Furthermore, for determining the reliability of the instrument, a pilot study was conducted. A total of 30 teachers from the Sabak Bernam district were used as pilot study samples. Cronbach's Alpha coefficient values are used to determine the reliability of the instrument. The study found that the validity of the field experts shows correlation coefficient values for the questionnaire instrument for each module of the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak as follows: The Parenting Module obtained a correlation coefficient value of 0.90, the Edu Steam module with 0.92, the Semai Bakti module with 0.90, the art appreciation module with 0.91, the cabana module with 0.92, the career destination module with 0.90, and finally the theramind module with 0.90, while the Cronbach's Alpha coefficient values also show values for the enrichment parenting module as 0.92, the value for the Edu Steam enrichment module is 0.86, the value for the Semai Bakti enrichment module is 0.88, for the Art Appreciation module is 0.92, while for the Cabana module is 0.96, the Career Destination module is 0.93, and finally for the Theramind module is 0.90. According to Said et.al (2021), a

good and acceptable validity value is .60 and above. Meanwhile, according to Hashim and Raj (2018), a good instrument reliability value is .70 and above.

Keywords: Indigenous students, EmpowerNCER Academic @ Perak instrument

Introduction

Education is the core foundation of a nation's success. The aspect of education is a primary agenda that consistently receives attention from the government to ensure that the national education agenda is not neglected. The national education agenda strongly emphasizes the development of students starting from the primary school level. To ensure that the national education agenda remains a priority, the government, especially the Ministry of Education Malaysia, takes seriously the aspect and exposure of education to all layers and segments of society.

The National Education Philosophy states that education is also based on belief and obedience to God, unity, responsibility, trustworthiness, motivation, and determination to achieve personal well-being and aspire towards the prosperity of society and the nation. According to Shafiq and Noraini (2018), the government continues to fund educational institutions with a high level of trust that education is the best medium for bringing about change and progress in line with the desires and aspirations of a society according to current developments. Schools, in turn, provide infrastructure and opportunities to realize these aspirations through structured and organized educational processes. Teachers create a conducive classroom environment for individual student development, while parents have their own aspirations for the academic, social, and emotional development of their children, including aspects of self-concept and achievement motivation.

The Orang Asli, also known as Indigenous People, are the native ethnic group inhabiting Malaysia since ancient times. In recent decades, attention to education for the Orang Asli community has become crucial in efforts to achieve social inclusion and sustainable development in Malaysia. Despite progress, significant challenges still need to be addressed. One of the main challenges in providing education for the Orang Asli is the diversity of culture and language among these ethnic groups. Each tribe has its own language and traditions, requiring a contextual and inclusive educational approach. In facing this challenge, the government, educational institutions, and communities collaborate to find sustainable solutions. A holistic approach involving active participation of the Orang Asli community is key to shaping an education system that considers their uniqueness and needs. Through collective efforts, education can become an empowering tool for the Orang Asli, helping them overcome future challenges while preserving their cultural heritage.

EmpowerNCER Academic @ Perak is one of the initiatives established to assist the government in reducing the education gap among the Orang Asli community, especially in the state of Perak. Universiti Pendidikan Sultan Idris (UPSI) is one of the service providers assisting the government in implementing the EmpowerNCER Academic @ Perak program. Various modules are specifically developed to improve the academic performance of Orang Asli students. Enrichment modules are also developed for teachers and parents as additional support values to the development of Orang Asli students.

According to Halimatus (2020), academic excellence encompasses all activities undertaken to achieve maximum success. In general, this is often the aspiration of a student when applying to continue their studies to the next level. However, unsatisfactory academic achievement has become a topic of discussion among leaders, academic figures, and society because this phenomenon contributes to the unemployment rate in Malaysia. The national

education agenda also emphasizes education for the indigenous community. It is widely known that the Orang Asli community is among those that require appropriate attention to prevent them from being left behind in the national education aspect. Therefore, in this implementation, the focus is directed towards the Orang Asli community.

According to May and Aikman (2003), there is a need for a critical approach to the curriculum, pedagogy, and learning methods for indigenous people. This is because, from the researchers' perspective, indigenous people have their own unique characteristics that need to be understood and explored. This is also supported by the study of Jacob et al (2015), which states that higher education should address, support, and welcome the holistic diversity of perspectives of indigenous peoples. The most intellectually open way to address the issues and diversity of Indigenous peoples is to realize that there are unique Indigenous paradigms that cannot be addressed within the framework of ethnic or minority diversity, civil rights, or human rights.

Therefore, among the issues and challenges addressed in this study are the differences or gaps in the curriculum, pedagogy, and specific teaching and learning methods that need to be addressed to provide suitability and space for the indigenous community to benefit from the education system of a country. The results of the development of the modules that have been developed will be evaluated and reviewed for future improvements, thereby assisting the Ministry of Education Malaysia in reducing the education gap among indigenous peoples in this country.

An assessment instrument needs to be developed to identify the strengths and weaknesses of the modules developed holistically for the implementation of the EmpowerNCER Academic @ Perak program. For the implementation of this study, two main objectives have been identified, namely determining the content validity of the assessment instrument for the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak and determining the reliability of the assessment instrument for the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak.

Methodology

Overall, the researcher employed a quantitative design approach for the development of the assessment instrument for the effectiveness of implementing the EmpowerNCER Academic @ Perak program on the academic achievement of Orang Asli students. According to Creswell (2017), the quantitative approach is suitable for seeking meaning behind numerical data collected. The content validity of this instrument was assessed by five (5) experts, consisting of two lecturers in the field of education from UPSI, two lecturers from the Language Faculty of UPSI, and one lecturer from the Aminuddin Baki Institute, Genting Highlands, to verify the content of the constructed items representing the measured constructs, including accuracy in terms of language usage, spelling, and sentence structure.

To obtain instrument reliability, the researcher conducted a pilot study. A pilot study refers to the implementation of a study resembling a real study with a nearly identical sample to obtain a reliability value. The population of this study consisted of teachers from National Schools in the Muallim district. The recommended sample size for this pilot study, as suggested by Cooper and Schindler (2011), is between 25 to 100 individuals, as pilot studies are practically small-scale studies. Therefore, this pilot study involved only 30 teachers from National Schools in the Sabak Bernam district. According to Said et al (2020), the

implementation of a pilot study to obtain the reliability value of an instrument is adequate using a sample size of at least 30 individuals.

For determining the validity and reliability analysis of the assessment instrument, correlation coefficients were used to determine the content validity of the assessment instrument for the EmpowerNCER Academic @ Perak program, while instrument reliability was assessed using Cronbach's Alpha coefficient (α) to determine the alpha (α) value. As a result of the development of the assessment instrument for the effectiveness of the Perak EmpowerNCER program, the researcher proposed a prototype model based on the analysis of the program's implementation effectiveness. According to Hashim (2015), a good validity value for content validity is .60 and above, supported by Said et al (2022) in the Timbuild Instrument Development study, which states that good and acceptable content validity is .60 and above. As for the reliability of the instrument or module, according to Alsiyabi et al (2023); Said et al (2022), reliability is the process of determining the instrument that has accuracy and good reliability. They stated that instruments with an α value of .60 and above are good and acceptable.

Results and Discussions

Content validity for the assessment instrument for the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak

The correlation coefficient is used by the researcher. The researcher utilizes the correlation coefficient formula in determining the content validity value of the instrument developed by Chua, 2012; Zaini & Mailis, 2021; Sidek and Jamaludin (2005) in determining the validity of field experts. The following is the formula for determining validity:

$$\text{Item Content Validation Index (I-CVI)} = \frac{\text{The total score of each expert}}{\text{The actual total score}}$$

$$\text{Content Validation Index (CVI)} = \frac{\text{The total Item-Content Validity Index (I-CVI)}}{\text{The number of experts}}$$

The determination of the Content Validity Index (CVI) for the content validity process is done using this formula. The researcher has listed the total content of the questionnaire and also the number of items that will be submitted to the field experts (expert panel) for the content validity process. Experts will assess the value or score based on each item developed. The overall scores will be collected.

Table 1

The correlation coefficient value for the assessment instrument of the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak

	Module Parenting	Module Edu Steam	Module Semai Bakti	Module Apresiasi Seni	Module Cabana	Module Destinasi Kerjaya	Module Theramind
Expert 1	.98	.96	.93	.96	.96	.97	.93
Expert 2	.80	.84	.82	.83	.84	.82	.80
Expert 3	.91	.93	.91	.91	.92	.93	.91
Expert 4	.91	.99	.96	.98	.99	.96	.97
Expert 5	.88	.86	.86	.86	.88	.81	.88
CVI	.90	.92	.90	.91	.92	.90	.90

Table 1 shows the Content Validity Index (CVI) values for the questionnaire instrument for each module of the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak as follows: The Parenting Module obtained a CVI value of 0.90, the Edu Steam module with 0.92, the Semai Bakti module with 0.90, the art appreciation module with 0.91, the cabana module with 0.92, the career destination module with 0.90, and finally, the theramind module with 0.90. Based on feedback and assessment from experts, the items in this questionnaire are deemed suitable for use.

The reliability of the assessment instrument for the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak

In this study, the researcher examines the reliability of the instrument developed by the researcher after undergoing the content validity phase by field experts. To assess the reliability of this assessment instrument, the Cronbach's Alpha coefficient model (α) is used to determine the consistency of the questionnaire items. According to Mohd Said et al. (2020), the acceptable reliability value for Cronbach's Alpha (α) is between 0.71 and 0.99 (excellent). The Cronbach's Alpha coefficient (α) value is obtained based on the interpretation of the study's Cronbach Alpha scores by (Bonett and Wright, 2014).

Table 2

Interpretation of Cronbach's Alpha (α) scores:

Cronbach's Alpha (α) scores	Reliability
0.8 – 1.0	Very good and effective with a high level of consistency
0.7 – 0.8	Good and acceptable
0.6 – 0.7	Acceptable
<0.6	The item needs improvement
<0.5	The item needs to be removed

Source: Bonett & Wright 2014

The results indicate the Cronbach's Alpha coefficient (α) values for each module of the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak as listed in Table 2. This explains that, based on the interpretation of Cronbach's Alpha (α) scores, all modules of the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak are good, acceptable, and indeed effective with a high level of consistency.

Table 3

The reliability value of the assessment instrument for the effectiveness of implementing the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak.

	Module Parenting	Module Edu Steam	Module Semai Bakti	Module Apresiasi Seni	Module Cabana	Module Destinasi Kerjaya	Module Theramind
Reliability coefficient	.92	.86	.88	.92	.96	.93	.90

The researcher obtained Cronbach's Alpha (α) values for the enrichment modules as follows: 0.92 for the Parenting enrichment module, 0.86 for the Edu Steam enrichment module, 0.88 for the Semai Bakti enrichment module, 0.92 for the Art Appreciation enrichment module, 0.96 for the Cabana module, 0.93 for the Career Destination module, and 0.90 for the Theramind module. Based on the total alpha values of all enrichment module instruments used, they are considered good and acceptable.

The main objective of this study is to measure the validity and reliability of the items in the questionnaire instrument for assessing the effectiveness of the EmpowerNCER Academic @ Perak program for Indigenous students in the state of Perak, which is used to measure the views of school teachers under the supervision of the EmpowerNCER Academic Perak program. Validity testing analysis conducted by five experts found that the items used are good and acceptable for use by the researcher, and reliability testing on 30 national school teachers in the Sabak Bernam district found that all research instruments have very good reliability values. The findings of this study are also consistent with a study conducted by Mohd Said et al. (2023), which obtained good content validity with a value of 0.87 and reliability value of 0.83, both of which are considered good and acceptable. Additionally, the findings of a study by Zaini & Mailis (2021) also showed similar results with a reliability value of 0.975, which is consistent with the statement by Hashim in 2015, where the acceptable Cronbach's Alpha (α) reliability value is between 0.71 and 0.99 (excellent).

Conclusion

Therefore, it can be concluded that the validity and reliability tests are very important before conducting any study. The results of this preliminary survey also prove that the research instruments used by the researchers have high validity and reliability. This means that researchers can use these research instruments to obtain research data in the future.

The importance of studying the effectiveness of the EmpowerNCER Academic @ Perak program will provide a clear foundation for this research. Indigenous students serve as vital subjects for this study to assess the impact and effectiveness of the program in strengthening empowerment in the academic context in the Perak region. By focusing on the EmpowerNCER Academic program, this study aims to analyze and evaluate the effects and contributions brought about by this program on the learning and academic growth of participants.

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