



Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at Preschool: Validity and Reliability

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ABSTRACT

This study was conducted to determine the validity and reliability of the questionnaire for the level of implementation of the fun learning teaching method in teaching and learning at preschool, based on expert approval. This study takes the form of a survey using a questionnaire. The questionnaire used to obtain expert validation and reliability. The study employed the item content validity Indexes (I-CVI) analysis method to assess content validity. The questionnaire was assessed by a panel of three professionals in early childhood education research. A questionnaire is accepted and has a good level of content validity when it exceeds the take-off value of > 0.8 . The average results scale content validity index (S-CVI) of each expert review on the items ranged from 0.81 to 1.00, suggesting that no questions required repetition. Overall, 28 items were refined by fitting the items to the implementation of a fun learning method. The finding revealed that the questionnaire was acceptable and relevant. A pilot study found that the the questionnaire developed had a high level of reliability (Cronbach's Alpha value = 0.87), all 28 items were suitable for use, and no items required modification. In conclusion, the questionnaire on the level of implementation of the fun learning teaching method in teaching and learning at the preschool level has high validity and reliability and is well-suited for measuring each domain within the questionnaire.

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1. INTRODUCTION

The fun learning teaching method is one of the most popular and effective teaching strategies in teaching and learning sessions at preschool. This can be seen when the Ministry of Education (MOE) introduced the fun learning teaching method into the Malaysia education system. In addition, the MOE has implemented the strategy of learning through play in the National Preschool Standard Curriculum (NPSC). This strategy is one of the approaches that provide opportunities for children to learn in a free, safe, fun and meaningful environment (Ghani & Nor, 2020). Strategy learning through play is one of the crucial elements in the fun learning teaching method.

The implementation of the fun learning teaching method helps to realize the transformation goals of teaching and learning. The teaching and learning process will be more interactive and student-centered to assist children in achieving their maximum development. Additionally, the fun learning teaching method is said to reduce children's feelings of anxiety and fear when they explore (Almigo & Sonda, 2025). At the same time, the fun learning teaching method created an enjoyable teaching and learning environment (Taufiqurohman et al., 2022). This is because there are elements such as humor and funny elements in the teaching of the fun learning teaching method that allows children to learn hard without pressure.

Therefore, the teacher is an important agent of socialization in the implementation of the method of fun learning teaching. Teachers need to play an active role where teachers need to be smart in creating an enjoyable and cheerful environment with various engaging activities such as puzzles, acting, picture mixing, and crossword puzzles. At the same time, teachers also act as facilitators and guides. They will guide and motivate children to be more enthusiastic and active both mentally and physically, thus creating a more effective learning experience (Panjaitan & Hafizzah, 2025). As a result, the level of knowledge, skills and attitudes of a teacher in the implementation of the fun learning teaching method is important to ensure that the teaching and learning process can be carried out effectively.

However, the study of Saktianayakan (2023) showed that teaching and learning activities carried out by teachers are still traditional in nature where teachers read texts and questionnaire activities are often used because this way is more convenient compared to games, acting or singing activities. This suggests that there are teachers who still use the chalk and talk teaching method. In fact, the study of (Panjaitan & Hafizzah, 2025). emphasizes that teachers who have knowledge in the definition of the fun learning teaching method and the ways to implement it will help improve the effectiveness of the use of fun learning teaching methods. Audina & Irawan (2026) also suggest that teachers who have a high knowledge of the content taught will facilitate the planning and preparation of teaching.

In the meantime, teachers need to maintain professionalism in their teaching and learning planning by implementing various teaching methods. One of the challenges in implementing the fun learning teaching method is when teachers fail to fulfill their roles, as they may struggle to carry out an engaging and effective teaching and learning process (Abdullah & Mohammad, 2022). Insufficient knowledge and skills on the implementation of teaching and learning process will have a negative impact on the effectiveness of the application of the fun learning teaching approach. Furthermore, teachers who lack skills in preventing children from being passive during teaching and learning process will also affect the level of implementation of the fun learning teaching method (Akhyar et al., 2024).

However, the attitude of teachers in the implementation of engaging and effective fun learning teaching method during the teaching and learning process is crucial for nurturing the

potential of children. A study by Saktianayakan (2023) revealed that teachers only included elements of a fun learning teaching method in their lesson plans without implementing it in the teaching and learning process. This indicates that the teacher is not following what has been planned in the lesson plan. Consequently, teachers will behave less confident, fearful and negative towards new teaching approaches (Anggraini et al., 2025). On the other hand, teachers need to maintain a positive attitude towards the implementation of fun learning teaching method in order to enhance the active involvement of children.

Thus, when teachers have high knowledge and skills as well as being positive in the application of the method of fun learning teaching, then the level of implementation of the method of fun learning teaching in the teaching and learning process in preschool will also increase indirectly.

Study Objectives

This study has two objectives as follows:

1. To determine the validity of the questionnaire on the level of implementation of the fun learning teaching method in teaching and learning at preschool based on expert approval.
2. To determine the reliability of the questionnaire on the level of implementation of the fun learning teaching method in teaching and learning at preschool.

THEORY

Bryant's Education Process Model (1974)

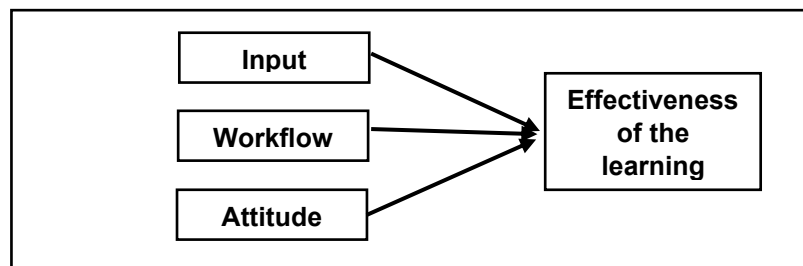


Diagram 1 Framework of Bryant's Education Process Model

The model developed by Bryant (1974) states that there are three key factors in determining the effectiveness of the learning process in education. Among these three key factors are the input factor, the workflow factor, and the attitude factor. The input factor is related to the knowledge of a teacher. According to Salleh & Halim (2023), input refers to a teacher's knowledge of the teaching content. On the other hand, the workflow factor pertains to a teacher's skills in applying the content. Finally, the attitude refers to a teacher's attitude towards a particular teaching.

In this study, the level of teacher implementation is examined from three aspects, namely knowledge, skills, and attitude based on Bryant's Education Process Model (1974). In this context, the input factor refers to the knowledge of preschool teachers in implementing the fun learning teaching method during the teaching and learning process. Knowledgeable teachers can plan teaching and learning process based on the fun learning teaching method effectively because they have knowledge in the concept of entertainment education, the role of teachers in the application of fun learning teaching method, and so on. According to Agus, (2022), teachers need to have knowledge and readiness to plan more effective teaching and learning. As a result, teachers can apply this knowledge in the planning of teaching and learning in preschool classrooms. This indicates that teachers with high knowledge will

enhance the level of implementation of the fun learning teaching method in teaching and learning at preschool.

The workflow factor refers to the skills of preschool teachers in implementing the fun learning teaching method in preschool classrooms. These skills encompass a teacher's ability in teaching and learning planning, the application of fun learning teaching techniques, managing children during teaching and learning, and creating a joyful and cheerful learning environment. Skilled teachers can conduct more engaging learning activities based on the fun learning teaching method. This is evident when teachers possess the skills to apply engaging and enjoyable teaching and learning strategies using the fun learning teaching method. It also shows that the high level of a teacher's skills in implementing the fun learning teaching method can enhance the effectiveness of the teaching and learning process. Therefore, the readiness of teachers in terms of skills should be given attention to ensure the successful implementation of the method of fun learning during teaching and learning in preschool.

Therefore, the attitude in the Bryant's Education Process Model (1974) refers to the attitude of preschool teachers in implementing the fun learning teaching method in preschool classrooms. In fact, teachers need to have a positive attitude in the planning and execution of learning activities based on the fun learning teaching method. This can be expressed by teachers need to be confident that the method of fun learning teaching can increase the involvement of children as well as enable them to make exploration with fun. Indirectly, such a positive attitude can influence the atmosphere and effectiveness of the teaching and learning process. Yuliani & Adri (2025) emphasize the importance of a positive teacher attitude in determining the acceptance of teaching innovations. This underscores the significance of teacher attitudes during the teaching and learning process. With a positive attitude, teachers will be more motivated to implement the fun learning teaching method in their teaching and learning process.

In conclusion, teachers need to have high knowledge and skills, as well as a positive attitude, in implementing the fun learning teaching method during the teaching and learning process. This is because high knowledge and skills can enhance the level of implementation by teachers in the use of the fun learning teaching method. This is evident when teachers integrate the elements of the fun learning teaching method during teaching and learning and can effectively manage children's discipline. At the same time, teachers also need to maintain a positive attitude where teachers need to be confidence in themselves to improve the quality of teaching in the classroom.

2. METHODS

In this study, a questionnaire was adapted and modified from an article titled implementation of edutainment in english language learning at rural area's schools (Ching & Yasin, 2022). The questionnaire consists of five sections and 33 items, using a five-point Likert scale. **Table 1** illustrates the five-point likert scale.

Table 1. Five-Point Likert Scale

Score	Likert-Scale Description
1	Strongly disagree
2	Disagree
3	Neutral/Uncertain
4	Agree
5	Strongly agree

Based on Table 1 above, a score of 1, "Strongly Disagree," means that the respondents strongly disagree with the statement. Meanwhile, a score of 2, "Disagree," indicates that the respondents believe the statement is not correct. A score of 3, representing "Neutral/Uncertain," means that the respondents are not very much in agreement with the statement. In addition, a score of 4, "Agree," signifies that the respondents believe the statement is correct. Finally, a score of 5, "Strongly Agree," means that the respondents are very confident in the statement.

The implementation process of validity and reliability of the questionnaire "Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool" consists of two phases. The first phase is the validity test of the questionnaire, and the second phase is the reliability test of the questionnaire. In the first phase, both face validity and content validity of the questionnaire are conducted to ensure that the questionnaire accurately measures the study domains. In the second phase, a pilot study is conducted to determine the reliability of the study based on the Cronbach's Alpha value. **Figure 2** below illustrates the process of implementing the validity and reliability of this study:

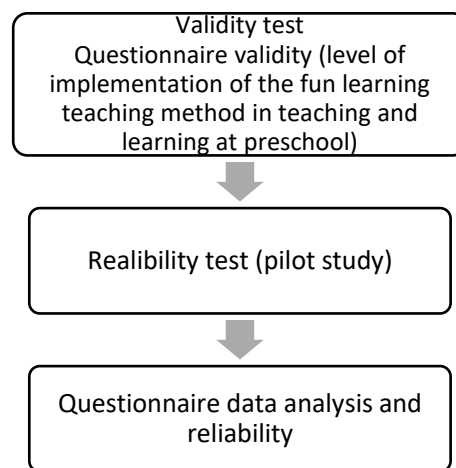


Figure 2. Process of implementing the validity and reliability

Face Validity

At this stage, for face validity, the questionnaire was given to one lay expert on the research topic. The lay expert evaluated the questionnaire on the clarity of the questions, as in whether the question is easy to understand and less likely to cause misinterpretations or confusion. Subsequently, the expert rated the questionnaire concerning problem, ambiguity, clarity, correct terminology and grammar, and comprehension. The detail of the lay expert is summarized in **Table 2**.

Table 2. List of Face Validity Experts

Expert	Expertise	Experience (years)	Institution	Validity
Expert 1	Bahasa Melayu	16	Tengku Ampuan Afzan Teachers' Institute	Face validity

Content Validity

Content validity is defined as the degree to which items of an assessment questionnaire are representative and relevant to the target construct (Almanasreh et al., 2022). Content validity provides the preliminary evidence on construct validity of a questionnaire. If a questionnaire lacks content validity, it is possible to establish reliability for it. For establishing content validity most researchers used judgment of experts (Taneo & Henukh, 2026a).

Identification of content domain and item generation

Content domain is the content area represented through the variables that are intended to be measured (Al Hasany & Palupi, 2025). The content domain was determined through literature review, and focused discussion with the expert and the target group. A mixed deductive-inductive method was adopted for conceptualization and item generation. After the item generation, items were refined and organized in a suitable format and sequenced so that the finalized items were in a usable form.

Determining the content validity

Relevance and representativeness are the two key aspects to be fulfilled in content validation (Taneo & Henukh, 2026b). The content validity was assessed by computing the content validity index (CVI) to determine the relevancy of the scale. For the present study, 3 experts were approached to determine the validation of content. **Table 3** is the list of content validity experts.

Table 3. List of Content Validity Experts

Experts	Expertise	Experience (years)	Institution	Validity
Expert 1	Early Childhood Education	13	Tengku Ampuan Afzan Teachers' Institute	Content validity
Expert 2	Early Childhood Education	20	Tengku Ampuan Afzan Teachers' Institute	Content validity
Expert 3	Early Childhood Education & Preschool	13	Tengku Ampuan Afzan Teachers' Institute	Content validity

Content validation procedure

Content validity index (CVI) is widely used index in quantitative evaluation. There are 2 types of CVI: I-CVI (item level) and S-CVI (scale level). Prior to the calculation of CVI, the scale is dichotomized by recoding all responses with 3 as 1 and all responses with 1 and 2 as zero. Where 1 means 'relevant' and 0 means 'not relevant'.

I-CVI = Experts in Agreement/ Total No. of experts

S-CVI = The average of proportion relevance scores across all experts.

Pilot Study

Ondeng & Rahman (2026) stated that the optimal sample size range in a pilot study is 15 to 30 respondents. Therefore, a total of 30 preschool teachers in the Bentong district, Pahang, were selected as the pilot study sample. **Table 4** below represents the interpretation table for Cronbach's Alpha scores.

Table 4. Interpretation of Cronbach's Alpha scores

Cronbach's Alpha Score	Reliability
0.9-1.0	Excellent
0.7-0.8	Good
0.6-0.7	Good and Acceptable
<0.6	Acceptable
<0.5	Non acceptable

Source: Bond dan Fox (2015)

3. RESULTS AND DISCUSSION

Face Validity

Based on expert opinions, the face validity of the Questionnaire on the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at Preschool is assessed according to **Table 5**. The table below provides a summary of the expert validity reviews.

Table 5. Face Validity Review

No.	Item	Review
1.	The instrument format is suitable and attractive.	Interesting and suitable.
2.	Items measure the intended domains.	Items can measure the domain.
3.	The language used is easily understandable.	Understandable.
4.	Font size is appropriate and easy to read.	Appropriate.
5.	The meaning of each item is clear.	Clear.
6.	Sufficient number of items.	Sufficient items.
7.	Clear objectives.	Clear.
8.	Clear instructions.	Clear.
9.	Correct spelling.	Correct in terms of spelling.
Overall Review		Congratulations, you can proceed with the study.

Content Validity

The following are the results for the content validity of the Questionnaire on the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool, based on four sections: Section B: Teacher's Knowledge in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool, Section C: Teacher's Skill in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool, Section D: Teacher's Attitude in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool, and Section E: Teacher's Implementation Level of Fun Learning Teaching Method in Preschool. **Tables 6, 7, 8, and 9** represent I-CVI and S-CVI tables.

Table 6. Section B Teacher's Knowledge in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool

Question	Expert 1	Expert 2	Expert 3	i-CVI
Q1	1	0	1	0.67
Q2	1	1	1	1
Q3	1	0	1	0.67
Q4	1	1	1	1
Q5	1	1	1	1
Q6	1	1	1	1
S-CVI/AVE				0.89

Table 7. Section C Teacher's Skill in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool

Question	Expert 1	Expert 2	Expert 3	i-CVI
Q1	1	1	1	1
Q2	1	1	0	0.67
Q3	1	1	1	1
Q4	1	1	0	0.67
Q5	1	1	0	0.67
Q6	1	0	1	0.67
Q7	1	1	1	1
S-CVI/AVE				0.81

Table 8. Section D Teacher's Attitude in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool

Question	Expert 1	Expert 2	Expert 3	i-CVI
Q1	1	1	1	1
Q2	1	1	1	1
Q3	1	1	1	1
Q4	1	0	1	0.67
Q5	1	1	1	1
Q6	1	1	1	1
Q7	1	1	0	0.67
S-CVI/AVE				0.91

Table 9. Section E Teacher's Implementation Level of Fun Learning Teaching Method in Preschool

Question	Expert 1	Expert 2	Expert 3	i-CVI
Q1	1	1	1	1
Q2	1	1	1	1
Q3	1	1	1	1
Q4	1	1	1	1
Q5	1	1	1	1
Q6	1	1	1	1
Q7	1	1	1	1
S-CVI/AVE				1

Based on the I-CVI and S-CVI above, the questionnaire provided indicates a high level of validity. This can be stated by Section B obtaining an I-CVI between 0.67 to 1 and S-CVI of 0.89. For Section C, the I-CVI is between 0.67 to 1 and the S-CVI is 0.81. In Section D, the I-CVI is between 0.67 to 1 and the S-CVI is 0.91. Section E obtained the same I-CVI and S-CVI values, which are 1. The following are expert suggestions for improvement and an overall review of the content validity of the Questionnaire on the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at Preschool. **Table 10** presents expert suggestions for improvement and an overall review of content validity.

Table 10. Suggestions for improvement and overall expert reviews in content validity

Experts	Section B	Section C	Section D	Section E	Overall Review
Expert 1	Accepted.	Accepted.	Accepted.	Accepted.	Overall, this questionnaire is acceptable, usable, and suitable for this study.
Expert 2	Item 1 needs to be clearer and should not combine - the use of and.	The same issue as with construct B.	The same issue as with construct B and C.	Construct E is all good.	-Each instrument is not encouraged to put two different things (Section B, C and D). Need to separate it. -Questions in section E need to be improved for clarity.
Expert 3	Accepted.	There are some minor corrections.	Accepted.	Accepted.	There are some items that need to be modified. Please refer to the National Preschool Curriculum (NPSC) for the preschool student's developmental stage.

Overall, the provided questionnaire demonstrates good content validity and can continue to be used throughout the research study.

Pilot Study

The constructs discussed in this study consist of four sections: Section B, Section C, Section D, and Section E. The Cronbach's Alpha values for the questionnaire are based on the **Table 11** below:

Table 11. Alpha Cronbach's Alpha

Section	Total items	Cronbach's Alpha Score	Interpretation
Section B: Teacher's Knowledge in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool	7	0.90	Excellent
Section C: Teacher's Skill in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool	7	0.94	Excellent
Section D: Teacher's Attitude in the Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at preschool	7	0.93	Excellent
Section E: Teacher's Implementation Level of Fun Learning Teaching Method in Preschool	7	0.88	Good
Overall Cronbach's Alpha Value		0.87	Good

Based on table 11, it shows the Cronbach's Alpha for section B is 0.90, section C is 0.94, section D is 0.93 and section E is 0.88. This indicates that sections B, C, and D are excellent and effective. As for section E, it is good and acceptable. The overall Cronbach's Alpha value is 0.87, where all items are good and acceptable.

Discussion

Validity expresses the degree to which a measurement measures what its purpose is to measure. Validity tests are categorized into two broad components namely; internal and external validities. Internal validity refers to how accurately the measures obtained from the research was actually quantifying what it was designed to measure whereas external validity refers to how accurately the measures obtained from the study sample described the reference population from which the study sample was drawn (Trafimow, 2023).

Reliability is the extent to which a measurement of a phenomenon provides stable and consists of results (Saidah et al., 2026) and Cronbach's Alpha is an accurate estimate of reliability (Kennedy, 2022). According to Ahmad et al., (2024), the Cronbach's Alpha coefficient between 0.6 - 0.7 indicates an acceptable level of reliability, and 0.8 or greater a very good level.

The results of the pilot test in this study indicate that the reliability index values fall between Cronbach's Alpha 0.88 (stability coefficient) to 0.94 (very good reliability/acceptable standardized test for internal consistency) and are still within the range of degrees of positive correlation (Kennedy, 2022).

The analysis of Table 11 reveals that the average Cronbach's Alpha coefficient exceeds 0.87. This suggests that all items in the study are suitable for use in the questionnaire, and no items need to be modified based on Cronbach's Alpha if item deleted. This ensures that the Cronbach's Alpha reliability coefficient obtained in the actual study will provide even better results. According to Jarupunphol et al. (2025), if the Cronbach's Alpha value ranges from 0.8 to 1, the questionnaire exhibits high reliability, and its items are acceptable.

4. CONCLUSION

The result of the study demonstrates that Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at Preschool fulfills the criteria of a reliable (fair acceptable criteria) and valid (good criteria) assessment tool to identify the level of readiness of teachers in implementing the fun learning teaching method during preschool teaching and learning sessions. The high internal consistency and construct validity support the application of Level of Implementation of the Fun Learning Teaching Method in Teaching and Learning at Preschool as an easy-administered tool to assess the teachers' level of knowledge, skills, attitudes and the level of implementation of the fun learning teaching method in preschool during teaching and learning sessions. However, this study has some limitations. The content validity involved only three experts, while the pilot study included 30 preschool teachers from one district, which may limit the generalizability of the findings. Future studies should involve a larger and more diverse sample to further validate the questionnaire.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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