

Preschool Teachers' Self-Efficacy in the Teaching of English as a Second Language: Validity and Reliability of Questionnaire

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ABSTRACT--- *The purpose of this study is to determine the validity and reliability of a questionnaire on preschool teachers' self-efficacy in the teaching of English as a second language in Malaysia. This survey-designed study used questionnaire as the instrument. The questionnaire contains 87 items under three constructs; teachers' self-efficacy, teachers' English language proficiency, and teaching strategies. Five experts were involved in validating the questionnaire while the reliability coefficient values were obtained from 200 preschool teachers of three districts. The results have shown that the validity of the questionnaire is high with the coefficient value of .924 based on the consensus from the experts. The Cronbach's Alpha coefficient values of the reliability for self-efficacy construct was .921, English language proficiency construct was .961, and teaching strategies construct was .976. Therefore, the questionnaire has been proven to have high validity and reliability which is appropriate to measure preschool teachers' self-efficacy, English language proficiency, as well as teaching strategies in the teaching of English as a second language.*

Keywords--- *Validity, Reliability, Self-efficacy, Preschool Teachers.*

I. INTRODUCTION

The purpose of preschool education is to provide children with potential in all aspects of development, enrich basic skills and incorporate good values and positive attitudes to prepare them for future formal education. Child development can be accomplished by implementing six Learning Strands through assimilation. English is one of the subjects outlined in the National Preschool Curriculum Standard (NPSC) on the Communication Strand. The purpose of bringing the subject into NPSC is to allow children to communicate in English in their everyday interactions as per their second language status. Throughout most of the experience, after age and physical development, children will gradually undergo a continuous process of acquiring a second language (Arina & Hasnah, 2010). The standard of English teaching and learning should therefore be given priority in maintaining better language literacy for the children.

Alexander (2015) said improving the quality of teaching and learning in school would not be feasible without improving teacher quality. This is because competent teachers are the ones who can operate an engrossing and effective learning in the classroom. To achieve this objective, teachers should master adequate and related knowledge, skills and confidence in the implementation of the teaching and learning process.

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Nevertheless, the history of preschool English teaching is showing the contrary. Due to lack of language skills, preschool teachers in Malaysia were found to very seldom speak English during classroom teaching (Rohaty, 2013). This claim is backed by a research carried out by Zuraydah and Rohaty (2014) where they found knowledge of English among preschool English teachers in the district of Sepang, Selangor was moderate. A research by Nur Nazuha Beevi and Nordin (2017) also suggested that English proficiency among preschool English teachers in the districts of Larut, Matang and Selama was moderate. Some preschool teachers reportedly were discouraged in conversing in English and felt less confident doing so. Ngu and Suziyani's latest study (2019) revealed that one of the obstacles preschool teachers face while delivering English lessons is that the teachers themselves are less fluent in the language. This leads them to be uncertain of themselves on how to effectively teach English. Unless teachers master their English, the goal of presenting the basic language to preschool children may not be successfully achieved.

Expertise on lesson content as well as pedagogy is not enough in efforts to become an effective teacher, as teachers' confidence and self-efficacy have a greater influence on teaching effectiveness (Tschannen-Moran et al., 1998). There is however a gap in self-efficacy research by preschool teachers in Malaysia (Izzah Hanis & Suziyani, 2015). For this reason, in hopes of improving the quality and effectiveness of preschool English teaching, the self-efficacy of preschool teachers must be explored. It is intended that this study would shed new light on the level of self-efficacy of students, English language skills and teaching strategies for teaching English as a second language in Malaysia. This study also provides recommendations on the improvement of teachers' self-efficacy which could enhance the quality of teaching and learning as well as English acquisition of preschool children.

II. PURPOSES OF STUDY

The objective of this study is to test the validity and reliability of a questionnaire on the self-efficacy of preschool teachers in second-language English education in Malaysia. Two research objectives are formulated based on the purpose of the study:

- 1) To determine the suitability of items within the constructs through the validation of experts.
- 2) To determine the reliability value of instrument through the analysis of Cronbach's Alpha coefficients.

III. LITERATURE REVIEW

1) Definition and Concepts

Self-efficacy refers to the cognitive process which determines one's behaviour. According to Bandura (1977), self-efficacy is an individual evaluation of his/her ability to plan and perform tasks so as to achieve the desired results. Self-efficacy is the determinant of the health, inspiration, and accomplishment of a teacher. A teacher might be apathetic in tackling challenges if the results are not fruitful and enticing. Self-efficacy, trust, faith in one's skills, and the ability to teach and impact students are among the important factors that differentiate one teacher from another. (Ashton, 2009; Evertson, 1986; Gibson & Dembo, 1984).

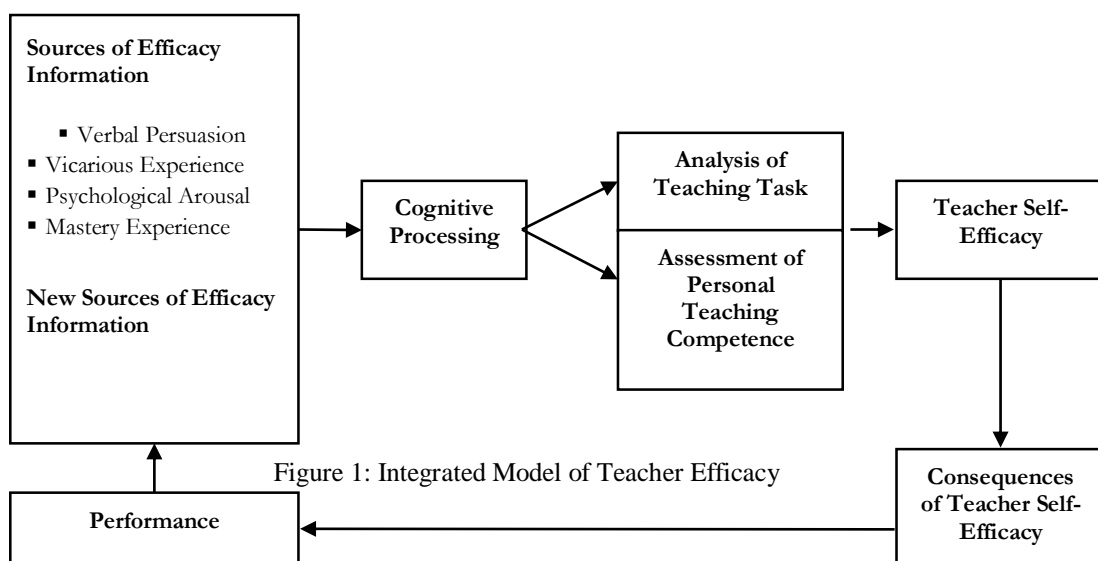
The idea of self-efficacy is backed by several empirical studies that demonstrated how the self-efficacy of teachers is significantly related to teachers' efforts in teaching and learning as well as their persistence in resolving barriers. There is a positive relationship between the self-efficacy of teachers and their teaching behaviours. A

teacher may assume himself/herself is less or more skillful. However, having the idea of being a highly skilled teacher could ultimately boost the effort to realize the thought on the basis of the skills and knowledge acquired (Bandura, 1977; Tschannen-Moran et al., 1998).

Preschool teachers therefore need to possess self-efficacy in teaching English as a second language. Teachers who are highly efficacious would be able to implement effective teaching techniques in contrast with teachers with low self-efficacy who tend to ignore the cognitive development and abilities of students (Gibson & Dembo, 1984). In addition, high self-efficacy could motivate preschool teachers to work on a variety of teaching practices and to remain perseverant in combating difficulties.

2) Theoretical Framework

According to Tschannen-Moran et al. (1998), the self-efficacy of teachers is the teachers' confidence in their ability to teach and motivate students irrespective of the aptitudes and family background of the students. Self-efficacy is significantly linked to the teachers' positive behavior and personality. Tschannen-Moran et al. (1998) added that content and pedagogical expertise may not be adequate to become an effective teacher, as skills and confidence are also essential and highly influential for the effectiveness of classroom experience. Therefore, they proposed that the scale of the self-efficacy of teachers should cover the components of teaching task evaluation and teaching skills assessment. Both of these elements are interconnected and operates at the same time in defining the self-efficacy of teachers. Therefore, Tschannen-Moran et al. (1998) proposed an Integrated Model of Teacher Efficacy as shown in Figure 1.



Based on the above model, the self-efficacy of teachers is cyclical in nature. The four sources of information for efficacy; verbal persuasion, vicarious experience, psychological arousal and mastery experience may lead to improving teachers' self-efficacy (Bandura, 1977). Teachers would then process this knowledge through the review of teaching tasks and the evaluation of specific teaching skills. Cognitive processing would determine the strength of the source of information, which also influences the teachers' self-efficacy skills. According to Tschannen-Moran et al. (1998), the most influential source of information on teachers' self-efficacy would be determined in cognitive processing by assessing job performance competencies.

After analysing the information, teachers would develop efficacious judgement and use it to identify the aims, endurance, and determination in achieving the desired outcomes. Based on the teachers' effort and performance, the mastery of new experience would be created thus, becomes the indicator of efficacious judgement in the future.

In regards to the purpose of this study, the researcher referred to the Integrated Model of Teacher Efficacy developed by Tschannen-Moran et al. (1998) as the foundation model. The English language proficiency of the teachers acts as the assessment of the teaching competence while the teaching strategies would be the analysis of teaching task.

3) Development of Questionnaire on Preschool Teachers' Self-Efficacy in the Teaching of English

Based on the Integrated Model of Teacher Efficacy proposed by Tschannen-Moran et al. (1998), a questionnaire on preschool teachers' self-efficacy in the teaching of English as a second language in Malaysia was then developed. The questionnaire contains three constructs: self-efficacy, English language proficiency, and teaching strategies.

The construct of self-efficacy refers to the teachers' belief and confidence in their strengths, abilities and teaching skills (Gibson & Dembo, 1984). This construct was adopted from the Teacher Efficacy Scale (TES) questionnaire by Gibson and Dembo (1984) to suit the context of this study. TES was developed based on the theory of social cognitive proposed by Bandura (1977) which stated that one's performance was defined by the confidence and ability to perform the duties desired. Based on this theory, Gibson and Dembo (1984) developed the TES questionnaire which contains two subconstructs: i) personal teaching efficacy (PTE) and ii) general teaching efficacy (GTE). PTE refers to the assumption that one has the talents and abilities to bring about learning for students. As for GTE, it alludes to the belief that the ability of teachers to bring about change is considerably confined by external factors such as home environment, family background and parental influences.

The construct of English language proficiency refers to the competency assessment of the teachers in 4 English language skills: listening, speaking, reading and writing. This construct was adopted from the Teachers' Reported English Language Proficiency Questionnaire by Ghasemband (2014) which suits the context of this study.

The teaching strategies construct corresponds to the specific strategies used by teachers during the teaching and learning process that could boost children's awareness, skills and understanding of learning material. This construct also demonstrates the teachers' initiatives in producing an engaging learning environment, providing guidance, using acceptable teaching materials, conducting suitable activities and building students' well-rounded characters (Moore, 2015). This construct was adapted from the questionnaires on the Use of Strategies to Improve Emerging Literacy by Hawken et al. (2005) and the Instructional Practices in Teaching English to Malaysian Primary Pupils by Juliana (2010).

IV. METHODOLOGY

1) Research Design

This study employed survey as the research design to investigate the coefficient values of the validity and reliability of the questionnaire. The type of survey used in this study is cross-sectional, where data collection takes place once and is taken at a given time from one sample (Creswell, 2008). This study aims to determine the validity and reliability of items in the questionnaire. This study applied simple random sampling method. According to

Mohd Majid (2005), simple random sampling is used to guarantee that each and every individual is given equal opportunities to be chosen as respondents in representation of the population.

2) Research Participants

The questionnaire was validated through the assessment of five experts with doctorate degrees in Preschool/Early Childhood Education, Teaching English as a Second Language (TESL), and Counselling. These experts have vast experience and knowledge in this field of study. This type of validation was used as Mohd Majid (2005) suggested researchers to acquire feedback from professional assessors who are field experts to ensure that the fields of study in the measuring method are reflected. The assessments and suggestions of the experts have been taken into account in enhancing the research tools. A pilot test was then performed to assess the questionnaire for 200 preschool teachers from three districts in Selangor. The teachers are of different race, gender, age, academic qualification as well as teaching backgrounds.

3) Analysis of Statistical Data

Data were retrieved manually based on validation made by the experts. Score 1 to 5 was given for each item. Indicators of each item score are presented in Table 1.

Table 1: Indicators of the Item Score

| <i>Score</i> | <i>Indicator</i> |
|--------------|---|
| 1 | Unaccepted (require major correction) |
| 2 | Below Expectation (require several correction) |
| 3 | Meet Expectation (require minor correction) |
| 4 | Achieve Expectation (no minor correction required but simple amendment is recommended) |
| 5 | Beyond Expectation (no correction required) |

In establishing the questionnaire's validity, the researcher used the Sidek and Jamaludin (2005) validity information formula as shown in Figure 2. In this formula, the total score of experts' views (x) is divided by the overall total score (y) and multiplied by 100. The end-value from this operation is in percentage. A questionnaire that scores 70% and above is considered to have a high validity content (Sidek & Jamaludin, 2005; Tuckman, 1988).

| | | | | |
|---|---|-----|---|----------------------------|
| $\frac{\text{Total score of experts' views (x)}}{\text{Overall total score (y)}}$ | X | 100 | = | Validity content score (%) |
|---|---|-----|---|----------------------------|

The questionnaire data of 200 preschool teachers in three districts was extracted for the reliability value. For classification purposes, the Cronbach's Alpha coefficient values were classified based on the reliability index by Sekaran (2003) as shown in Table 2.

Table 2: Cronbach’s Alpha Coefficient Values

| <i>Indicator</i> | <i>Cronbach’s Alpha Coefficient Values</i> |
|--------------------|--|
| Good | > 0.80 |
| Average (accepted) | 0.60 – 0.79 |
| Low (unaccepted) | < 0.6 |

V. RESULTS AND ANALYSIS

1) *The Validity of the Questionnaire on Preschool Teachers’ Self-Efficacy in the Teaching of English as a Second Language*

To test the validity of the questionnaire, the researcher sought the help of five experts to review the contents of the questionnaire before carrying out the pilot study. The 5 experts have Doctorate degrees in Preschool/Early Childhood Education, Teaching English as a Second Language (TESL), and Counselling. Table 3 presents the background and reviews of each expert.

Table 3: Background and Reviews of Experts

| <i>Position</i> | <i>Field</i> | <i>Review</i> |
|--|--|---|
| Senior Lecturer | Early Childhood Education & TESL | The content of the questionnaire has fulfilled the requirements to conduct this study. Some suggestions are provided for researcher’s consideration. |
| Vice Director of Academic Development Centre, Teachers Training Institute of Malaysia (IPGM) | Early Childhood Education | This questionnaire has fulfilled the requirements for pilot study and real study after necessary amendment has been made as stated in the review form. The researcher should also consider the local culture. |
| Senior Lecturer | TESL & Second Language Acquisition | The accuracy of the instrument content has been examined and compared with the constructs of the questionnaire. |
| Senior Lecturer | Counselling, Self-Concept and Children Counselling | There are several items with ambiguous meaning in one statement. The overall instrument content is clear and relevant with the construct/ sub construct. |
| Teacher, Kindergarten Advisor & Preschool Coach | Early Childhood Education & TESL | This questionnaire has fulfilled the requirements for pilot study and real study. The acceptance of review would depend on the agreement of the supervisor. |

Based on the analysis, the questionnaire on preschool teachers’ self-efficacy in the teaching of English as a second language has a high value of validity with the coefficient index of .924. This value was retrieved through the operation of dividing the total score of experts’ views with the overall total score which was then multiplied by 100 in order to get the percentage value. The end-value of this operation is the validity value for the questionnaire as shown in Table 4.

Table 4: Validity Value of the Questionnaire

| | <i>Percentage / Validity Coefficient</i> | <i>Experts' Review</i> |
|--|--|------------------------|
| The Questionnaire on Preschool Teachers' Self-Efficacy in the Teaching of English as a Second Language | 92.4% (.924) | Accepted |

Table 5 shows the content validity of the questionnaire based on each construct. For the construct of teachers' self-efficacy, its coefficient value is .93 while the value for teachers' English language proficiency construct is .898. The construct of teachers' teaching strategies has the highest value of .934.

Table 5: Content Validity of the Questionnaire Based on the Construct

| <i>Construct</i> | <i>Percentage / Validity Coefficient</i> | <i>Experts' Review</i> |
|--|--|------------------------|
| Teachers' self-efficacy | 93.0% (.93) | Accepted |
| Teachers' English language proficiency | 89.8% (.898) | Accepted |
| Teachers' teaching strategies | 93.4% (.934) | Accepted |

The indicator for a high content validity is based on Davis (1992) which is at 80% and above. Therefore, all the three constructs in the questionnaire are considered good and suitable to be used in the study as the values are above 80%. Based on the analysis, it is proven that the questionnaire has conformed to the accurate process of content validity.

2) The Reliability of the Questionnaire on Preschool Teachers' Self-Efficacy in the Teaching of English as a Second Language

Reliability refers to the continuity of assessment results (Guilford & Fruchter, 1978). Reliability test is performed on a factor developed to determine an instrument's potential to measure the construct that needs to be measured. The instrument must be accurate and reliable in order to measure the structure in order to achieve similar values when calculated again for the second time, the third time and so on. The Cronbach's Alpha reliability value was used to calculate the internal consistency of the questionnaire.

The coefficient value of reliability for this questionnaire was .975. According to Mohd Majid (2005), the accepted reliability coefficient should be .80 or higher. Thus, the coefficient value of the questionnaire for this study is considered as good. Table 6 shows the reliability values of the questionnaire based on each construct.

Table 6: Reliability Values of the Questionnaire

| <i>Construct</i> | <i>No. of Items</i> | <i>Cronbach's Alpha Value, (α)</i> | <i>Interpretation</i> |
|--|---------------------|--|-----------------------|
| Teachers' self-efficacy | 13 | 0.921 | Accepted |
| Teachers' English language proficiency | 24 | 0.961 | Accepted |
| Teachers' teaching strategies | 50 | 0.976 | Accepted |

Based on Table 6, the coefficient value for the construct of self-efficacy is .921 which is the lowest as compared to the other two constructs. For the English language proficiency construct, its coefficient value is .961 while the highest value is the construct of teaching strategies which is .976. Hence, this analysis indicates that the questionnaire has a high value of reliability and is appropriate to be used for this study.

VI. DISCUSSION

Based on the experts' assessment, the analysis shows that the questionnaire on the self-efficacy of preschool teachers in teaching English as a second-language had a high validity value of 92.4% or a coefficient value of .924 and was accepted by experts. For all the three constructs, the overall achievement level of validity was between 89% to 93%. As recommended by Sidek (2005), Jamaludin (2002), and Mohd Majid (2005), the high-validity instrument is ideal and appropriate for use in research.

A measurement tool is regarded to have a high validity value if it can effectively calculate all the contents and variables in the sample. To ensure the validity of a measuring tool's content it must fulfill five conditions: 1) Items in the questions should demonstrate the intended behavior in a clear sense; 2) items are clearly presented; 3) items are linked to the measuring tool's objective; 4) adequate sample for measuring the validity of the measuring tool; and 5) a consistent assessment of the response for each item (Sidek, 2005). Based on the evaluation made by the experts, the questionnaire used in this study has fulfilled all the five conditions. The questions in the questionnaire are both clear and understandable by the respondents and aligned with the study's objectives. In addition, the questionnaire helps the respondents to provide relevant suggestions.

The analysis also shows that the questionnaire has a high value of reliability. The coefficient value for the construct of teachers' self-efficacy was .921. For teachers' English language proficiency construct, its coefficient value was .961. The highest value is the construct of teachers' teaching strategies which was .976. This analysis indicates therefore that the questionnaire has a high reliability value and is suitable for use in this study.

The questionnaire used in this analysis is therefore proven to be highly valid and reliable, as the items were adopted from TES (Gibson & Dembo, 1984), Teachers' Reported English Language Proficiency (Ghasemboland, 2014), Use of Strategies to Improve Emerging Literacy (Hawken, Johnston, & McDonnell, 2005), and Instructional Practices in Teaching English to Malaysian Primary Pupils (Juliana, 2010). This study also confirms that the approaches employed by the researcher in defining the questionnaire's validity and reliability are acceptable and appropriate. Hence, this study may support other researchers in the assessment of the measuring tool's validity and reliability. This study's questionnaire could also be repeated for future studies.

VII. CONCLUSION

In conclusion, the questionnaire used in this study has been shown to be highly valid and reliable for measuring the constructs of the self-efficacy of preschool teachers, English language skills and teaching strategies in the teaching of English as a second language. The design of this questionnaire could therefore support the field of study on the self-efficacy of teachers, because self-efficacy could have a significant impact on English as a second language. Highly efficacious teachers are directly correlated with the level of preschool English teaching and learning as well as the development of the children's English language skills.

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