

The Effect of Maternal Scaffolding on Problem Solving Skills during Early Childhood

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During early childhood years, children's ability to solve complex and challenging problems is still limited. Therefore, they still need help and support from parents. The objective of this study was to examine the effect of maternal scaffolding on problem solving skills during early childhood. Participants (40 mother-child dyads) were randomly assigned to four experimental groups that applied various scaffolding techniques, either contingent, verbal, swing or demonstration. The data was analyzed using split-plot analysis of variance (SPANOVA). There were significant differences in the mean scores of problem solving skills at pre-posttest [$F = (2, 35) = 3.84, p \leq 0.05$]. Children's problem solving skills increased across the three testing times. Moreover, there were no significant interaction between time (pre-posttest) and groups [$(F = 6, 72) = 0.78, p > 0.05$]. There were also no significant differences in the mean scores of problem solving skills among the four groups [$F(3, 36) = 0.56, p > 0.05$]. Findings imply that children can internalize the learning processes during the scaffolding session over a longer period. Therefore, it is important for parents to give an appropriate support based on the children's ability in helping them to increase their problem solving skills.

Keywords: early childhood, problem solving skills, scaffolding, Vygotsky, zone of proximal development

Problem solving skills is one of the elements embodied in 21st century skills (Md, 2019) to produce a competent, skilled, creative and innovative generation. Thus, this skill should be learned as early as possible especially during early childhood so they are better prepared to face various challenges in today's life and in the future. Problem solving skills involve cognitive processing in which children will learn to think critically, creatively and reflectively to find solutions when faced with a problem (Dusek & Ayhan, 2014, Kuldass, Hashim & Hairul Nizam, 2015; Lerner, Liben, & Mueller, 2015). Mastering problem solving skills not only can improve children's cognitive development but also will help children to achieve their maximum potential in the future. Previous studies have shown that children who are able to master this skill will improve their ability to solve problems in a more creative way (Subadrah & Tang, 2012), be ready to face new challenges, better regulation of emotions and actions experienced in everyday life, more successful and achieve more complex skills in line with their maturity (Marotz & Kupzyk, 2018). This suggests that children's thinking needs to be stimulated at an early stage so that they can function more effectively in line with their level of development. However, study conducted by Hutagalung and Zulkifli (2017) showed that the cognitive level of the majority of preschool children in Malaysia was still at a moderate level. This should be taken seriously as problem-solving skills are closely related to the cognitive development of children.

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Children who lack problem-solving skills may have difficulty to reach their full potential in life (Cluver, Heyman & Carver, 2013). During early childhood years, children's ability to solve complex and challenging problems is still limited. This is because the level of cognitive development of children at this stage is still at preoperational level where they do not have the ability to think logically (Piaget 1970). Therefore, they still need help and support from parents. The social cognitive theory (Bandura, 1977) further details the process by which parents contribute to the children's learning. This theory is an extension of the behaviorism theory that emphasizes the importance of individual (cognitive), behavioral factors and environmental in the learning process. Bandura also stated that children learn through observation/modelling, social interaction and motivation (Bandura, 1977; Trif, 2015).

Scaffolding is one of an effective technique in helping children to increase their problem solving skills and can be practiced in school or at home (Bernier, Carlson & Whipple, 2010). The concept of scaffolding was first introduced by Wood and colleagues (1976) to illustrate the support and guidance provided by more knowledgeable individual or adults (parents, teachers or peers) to carry out a task that the children independently. According to Conkbayir and Pasca (2014), scaffolding can assist children to attain higher levels of cognitive development. The goal of scaffolding is to provide a temporary assistance and guidance at a minimal level where the assistance will be gradually reduced, based on the children's level of achievement in solving the problem (Lee, 2011; Santrock, 2011). Scaffolding is also defined as a process of guidance that can bridge the gap between what the children already know and what they need to know (Obikwelu, Read & Sim, 2013).

Scaffolding techniques are unlike other techniques as these techniques emphasize on the shifting elements in the assistance provided. According to Wood and Middleton (1975), the transition element used by parents in performing scaffolding techniques is based on the achievement of children. The shifting element in scaffolding technique refers to a change in the level of assistance either reduced or increased based on the achievements shown by the children in completing a task given (Rathus, 2015). Changes in the level of assistance can give children a chance to think about how to solve a problem. However, most parents do not include the shifting elements in scaffolding while doing activities and interacting with their children (Dilworth-Bart, Poehlmann, Hilgendorf, Miller & Lambert, 2009). According to Goldstein and Naglieri (2014), parents usually make two mistakes when helping their children to perform a task whether they provide too much or too little help. High level of scaffolding or too much assistance has a negative impact on children. Findings from previous studies indicated that too much assistance would reduce the level of the children's control in doing a task (Anne & Alan, 2009) and increase children's dependency on others (Goldstein & Naglieri, 2014). In addition, the true learning will not occur if the children were told and shown in detail about what to do (Lee, 2011). According to Kail and Cavanaugh (2016), children will not master a new skill if they receive too much help or if they were left alone to solve a difficult task.

Based on the research findings from Sun and Rao (2011), the mothers who were implemented the scaffolding in a directive and less transferring responsibility to the children will reduced the level of children's involvement and limited their chances of exploring an activity. The results also showed that mothers were more focused on the children's efficiency and accuracy in solving problems rather than the learning process itself. Too little help will lead the children to experience repeated failures and this will decrease their ability to perform a task independently (Goldstein & Naglieri, 2014). This situation clearly indicates that parents are always eager to support the learning process of the children but they do not know exactly the

best ways to provide assistance for their children (Marsico, Komatsu & Iannaccone, 2013). This finding clearly showed that the implementation of scaffolding techniques that are not compatible with the level of knowledge and ability of the children will have a negative impact on the children's problem solving skills.

Therefore, it is important to examine the extent of scaffolding or assistance provided by the mother while helping the child to solve the problem. Most of the previous research that used an experimental method to examine the effectiveness of scaffolding on problem-solving skills among children only carried out an immediate posttest, which was administered after the scaffolding treatment (Charyna Ayu, 2003; Sun & Rao, 2011). The implementation of immediate posttest cannot determine the child can internalize the extent of the learning process received during the scaffolding session over a long period. The process of internalization is very important because according to Vygotsky (1978) and Ann (2012), the process can help children to use the knowledge and skills acquired while engaging in activities with individuals that are more skilled to solve problems in the new context in the future.

The researchers also found that most recent studies on this topic have been widely conducted in Western countries (Bates, 2005, Charyna Ayu, 2003, Clausell, 2016, Conner & Cross, 2003, Conner, Knight & Cross, 1997; Hustedt & Raver, 2002; Hou & So, 2016; Kermani & Brenner, 2000; Kermani & Janes, 1999; Lajoie, 1995; Pratt & Savoy-Levine, 1998). Therefore, this study aims to contribute to widening prior research particularly in Malaysian context. First, this present study gives a clear understanding of the effect of maternal scaffolding techniques (contingent, verbal, swing and demonstration) on problem solving skills during early childhood. Second, this research attempts to emphasized the importance of internalization process by comparing the children's problem solving scores in three testing time (pretest, one-week posttest and one- month posttest).

Literature Review

The effectiveness of scaffolding in raising the level of children's potential depends largely on adult sensitivity to the needs of children. Studies showed that adult's parents are more likely to perform scaffolding than teachers because they are more aware of their children's ability (Van de Pol, Volman & Beishuizen, 2015). Researchers have found that implementation of scaffolding will enhance the children's ability to master problem solving skills (Smith, Landry & Swank, 2000), help children to increase their attention span, resist the temptation of distractors, and able to manage their frustration to solve the problem successfully (Bernier, St-Laurent, Matte-Gagné, Milot, Hammond & Carpendale, 2017). Numerous studies have attempted to explain the effect of maternal scaffolding on problem solving skills among children. For example, Sun and Rao (2011) conducted a study on scaffolding interaction between adult and children during a problem-solving task. This study involved 57 children low and high socioeconomic background in China. The children were asked to complete a set of puzzle and school-like task with their mothers. The findings revealed that mothers gave scaffolding that is more skilled on school-like task compared to the puzzle task. In a different study, Clausell (2016) examined the effects of maternal scaffolding on problem solving skills among children. This study consisted of 10 mother-child dyads (children aged between six to seven years old). They were divided into two groups (control group and experimental group). Problem solving skills has been measured by using two tasks: the picture-arrangement task and

build a 32-pieces frog model by using a set of LEGO bricks. Mother's scaffolding was rated based on three aspects of scaffolding (directiveness, cognitive support and praise and criticism). The findings of this study showed that there is no significant difference in problem solving skills for pretest and posttest between control groups and experimental groups.

However, the topic of this study is still lacking in the attention of researchers in Malaysia. Researchers in Malaysia were more focused on the effectiveness of scaffolding on student achievement in academic matters such as religious education (Norizan, Marina, Suzana & Noor Atiqah, 2008) and literary text comprehension (Premalatha, 2008) which involved adolescents and teachers as respondents. The only study conducted by Baranovich, Fong and Hutagalung (2017) on parental scaffolding in Mathematics' homework was done on preschool children. Thus, the present study was carried out to fill this scarcity of research of how maternal scaffolding may effects the children's problem solving skills in Malaysian context.

Theoretical Framework

This study adopted Vygotsky's sociocultural theory as a theoretical framework. According to the theory, there were three major aspects in children's learning, that is, social interaction, more knowledgeable other (MKO) and zone of proximal development (ZPD). Social interaction is an essential element in assisting the process of cognitive development of children since it occurs first on an interpersonal level and later internalized as intrapersonal level. The process of transition from social to individual level is called internalization (Vygotsky, 1978). Based on the opinion of Vygotsky (1978), the main basis in the process of internalization is social interaction. Through these interactions, the children will internalize new knowledge and strategies that have been obtained (Gallucci, 2008; John-Steiner & Mahn, 1996; Lave & Wenger, 1991). Internalization begins when children process the information and ideas received while communicating with other individuals. The information and ideas acquired will be internalized and will become part of the children's thinking that can be applied in a new situation in the future (Vygotsky, 1978).

The second aspect emphasized in this theory is more knowledgeable other (MKO). The MKO refers to anyone who has better understanding or higher ability and skills than the children (adult, teacher or peers), in terms of a particular task, process or concept. These individuals can help the learning process by using various strategies while helping the children to accomplish a new, complex and challenging task. They also need to support children's learning until the children reach the next level of ability by themselves (Neaum, 2013). The level of assistance or support provided varies according to the level of ability of the children. According to Beloglovsky and Daly (2015), more skilled individuals will provide more help to children when they face difficulty in performing a challenging task and provide little help if the children are able to master the task independently. The third aspect is zone of proximal development (ZPD). The ZPD has been defined as a distance between that children's actual developmental level and children's potential developmental level. The children's actual developmental level refers to the ability of a child to perform a task without any help while the children's potential developmental level refers to what the child can achieve through guidance with more skilled and knowledgeable individuals. According to Vygotsky (1978), the achievement of children should be assessed based on the potential developmental level outcomes from the help of other individuals. Higher levels of thinking can be formed as a result of the interaction of children with adults in the proximal development zone.

Hypotheses

This study seeks to test the following hypotheses:

- H1: There were significant effects of three testing time (pretest, one-week posttest and one-month posttest) on problem solving skills.
- H2: There were significant interaction effects between three testing times (pretest, one-week posttest and one-month posttest) and groups (contingent, verbal, swing and demonstration).
- H3: There were significant effects of groups (contingent, verbal, swing and demonstration) on problem solving skills.

Method

Research Design

This study employed a randomized control-group pretest-posttest design to determine the effectiveness of maternal scaffolding on problem solving skills during early childhood. However, the control group was not included in the present study.

Participants

This study was conducted from October to December 2015. The total population in this study consisted of 55 children aged between 48 to 83 months from Family, Adolescent and Child Research Centre of Excellence (FACE), Faculty of Human Ecology, Universiti Putra Malaysia. The actual sample size consisted of 50 children and 40 mothers. Mean ages for children and mothers were 63.30 months (range 48-82 months) and 35 years (range = 27-45), respectively. The sample size was determined using Krejcie and Morgan's (1970) table of sample size, specifying a five percent margin of error. Based on the table, the number of sample used would be 48 respondents. However, the sample size for this study was increased to 50 respondents.

To determine the number of sample in each experimental group, the total number of the sample is divided by the total number of experimental groups. This comes up to 10 respondents in each group. According to Wallace (2007), researchers can use parametric tests if they have a sample size of 10 or more people. Other researcher argued that the minimum requirements for sample size for multivariate analysis is 50 respondents where the minimum sample size for each variable is 10 (Tabachnick & Fidell, 2012). Because we were interested in determine the effect of four maternal scaffolding techniques on problem solving skills during early childhood, the sample here was limited to forty mother-child dyads (children aged 48 to 83 months). The sample for this study was selected by using simple random sampling technique. The main benefit of this sampling technique is that each member of the population has an equal chance of being chosen for the sample (Wagner, Kawulich & Garner, 2012).

The ethics approval in Universiti Kebangsaan Malaysia is compulsory to those from science or medical faculties but not for social sciences faculties. However, we endeavored to safeguard participants as would be required by a formal ethics committee. Before administering the treatment, the experimenters explained the purpose of the study, its confidentiality, potential risks and benefits, and that the caregivers had the option to decline to participate without any

consequences. They obtained the respondents' verbal consent to proceed. None of the prospective respondents whom we contacted declined to participate.

Measure

The four scaffolding techniques (contingent, verbal, swing and demonstration) were adapted from previous studies (Wood, Bruner & Ross, 1976; Wood, 2003). The formation of these four scaffolding techniques were based on five levels of assistance (Level 1: General verbal intervention; Level 2: Specific verbal interventions; Level 3: Specific verbal interventions and non-verbal indicators; Level 4: Prepares for next action and Level 5: Demonstration). Assistance at the level 1 would include general verbal response to encourage the child to make and attempt (Example: "Try again"; "Good job!"). Level 2 specifies for the child what should he/she should do next or suggest some feature of a task for the child to continue solving the puzzle (Example: "I think the puzzle piece is not right"; "Try to find a puzzle piece in the corner"). At the third level, the children will be given verbal and non-verbal hints (Example: "I think the blue puzzle piece is more accurate"). The assistance at the fourth level is almost the same as the third level but now it involved a higher level of assistance. The children will be given an alternative to solve the task (Example: "Take the green puzzle piece"). The highest level of assistance is provided at the level 5. At this level, mother takes complete control over the next step in the solving process. Mother demonstrates exactly how to fit the puzzle correctly (Example: Mother will take a puzzle piece and put it in the right place). Contingency technique involved all the level of assistance (Level 1 to Level 5). The verbal technique involved two levels of assistance (Level 1 and Level 2). The swing technique involved two levels of assistance (Level 1 and Level 5) while the demonstration technique only involved assistance at level 5. Level of assistance can be increased or reduced based on the needs of children. The scoring for the scaffolding techniques were based on a previous study conducted by Khaidzir (1997) where the level of assistance was coded during the puzzle solving session.

Problem solving skills were measured by using a set of 48-piece jigsaw puzzle. Each child was asked to put the pieces of puzzle together to match a sample picture for each test phase. Score 5 was given for each piece of puzzle that placed in the correct position without any help. The score for the problem solving skills in the pretest and the posttest was obtained by summing up the score for the correct puzzle that placed in the correct position. For the treatment phase, problem solving skills score was obtained by subtracting the amount of help with the correct number of puzzle score.

Procedure

The data were collected in three phases: (1) pretesting, (2) administering scaffolding treatment, and (3) posttesting. The first phase of this study was pretesting. This pretest was done to determine the level of children's problem solving skills before the treatment given. Children were asked to complete a set of 48-piece of jigsaw puzzle without any help. There were given 20 minutes to complete the puzzle. In the second phase of this study, children will be assisted by their mothers to complete a set of 48-piece of jigsaw puzzle by using scaffolding techniques that had been set by the researcher (contingent, verbal, swing or demonstration). Children had to arrange the given puzzle to form a complete picture. The third phase of this study is the posttest. The children were assessed within one week after and within one month after the treatment. Children were asked to complete a set of 48-piece of jigsaw puzzle without any help. There were given 20 minutes to complete the puzzle.

Permission to conduct this study was provided from the head of Family, Adolescent and Child Research Centre of Excellence (FACE), Faculty of Human Ecology, Universiti Putra Malaysia and the preschool teachers. Next, permission was obtained from parents for their own participation and their children's participation in this study. The experiment included three phases (pretest, treatment and posttest). In the pretest phase, children need to complete a set of 48-piece jigsaw puzzle without any help. The second phase was the treatment of maternal scaffolding. The children will be assisted by their mothers to complete a set of 48-piece of puzzle by using scaffolding techniques that had been set by the researcher (contingent, verbal, swing or demonstration). The third phase of this experiment was the posttest. The researchers carried out two stages of posttest (one-week posttest and one-month posttest). Children need to complete a set of 48-piece of puzzle without any help in each stage of posttest. The children were given 20 minutes to complete the task during the pretest and the posttest. All the phases in this study were recorded using a video camera.

Statistical Analysis

A split-plot analysis of variance (SPANOVA) was used to analyze the archival data. The SPANOVA was conducted using the general linear model (GLM) procedure in Statistical Packages for Social Science (SPSS) version 21. SPANOVA provides a way of combining within-subject (repeated measures) analysis of variance with between-subject analysis of variance. In this analysis, Times (pretest, one-week posttest and one-month posttest) was a within-subject factor and experimental group (contingent, verbal, swing and demonstration) was a between-subject factor. SPANOVA assumptions (normality, homogeneity of variance and homogeneity of intercorrelations) were fulfilled in each analysis.

Results

Table 1 shows the results of descriptive statistics between pretest and posttest among the four experimental groups. According to the table, the verbal group had the highest mean score increase from pretest to posttest compared with other three groups. The mean score of the verbal group was 138.50 in the pretest, and it improved in both one-week posttest (mean = 145.00) and the one-month posttest (mean = 193.00).

Table 1

Descriptive statistics of problem solving skills among the four experimental groups

Groups	N	Pretest		One week posttest		One month posttest	
		Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Contingent	10	122.50	99.95	141.50	76.09	161.00	74.64
Verbal	10	138.50	83.63	145.00	81.55	193.00	65.03
Swing	10	121.00	74.68	104.50	84.67	124.00	86.98
Demonstration	10	111.00	79.23	142.00	63.08	151.50	61.10

H1: There were significant effects of three testing time (pretest, one-week posttest and one-month posttest) on problem solving skills.

To further determine whether there was a significant difference between pretest and posttest of the experimental group, multivariate test using Pillai's Trace was administered

(Table 2). The results showed that there were main significant effects of pre-posttest for mean score in problem solving skills [$F = (2, 35) = 3.84, p \leq 0.05$]. This indicates that there was a change of problem solving skills scores across the three testing time of pretest, one-week posttest and one-month posttest. Thus, hypotheses 1 is accepted. From the analysis, the effect size of pre-posttest was small with the Partial Eta Squared = 0.18 which means 18% of power. According to Cohen (1988), the small effect size is one of at least 0.20, medium effect size is at least 0.50 and a large effect size is at least 0.80.

H2: There were significant interaction effects between three testing times (pretest, one-week posttest, one-month posttest) and groups (contingent, verbal, swing and demonstration).

The results in Table 2 showed that there were no significant interaction effects between three testing times (pretest, one-week posttest and one-month posttest) and groups (contingent, verbal, swing and demonstration) [$F = 6, 72 = 0.78, p > 0.05$]. This suggested that time had no effect on the group performance. Hence, the hypothesis 2 is rejected.

Table 2

Multivariate test using Pillai's Trace

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pre-post	Pillai's Trace	0.18	3.84	2.00	35.00	0.03	0.18
Pre-post*Group	Pillai's Trace	0.12	0.78	6.00	72.00	0.59	0.06

H3: There were significant effects of groups (contingent, verbal, swing and demonstration) on problem solving skills.

Table 3 shows the results of between-subject effect for main effects of groups. There were no significant effects of groups (contingent, verbal, swing and demonstration) on problem solving skills [$F (3, 36) = 0.56, p > 0.05$]. From the analysis, the effect size for group was medium with the Partial Eta Squared = 0.05 which has a power of 5%. Thus, a hypothesis 3 is rejected.

Table 3

Between-subjects effect for main effect of group

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	2283900.21	1	2283900.21	171.40	0.00	0.83
GROUP	27592.29	3	9197.43	0.69	0.56	0.05
Error	479699.17	36	13324.98			

Discussion

The main purpose of this study is to examine the effect of maternal scaffolding on problem solving skills during early childhood. The finding revealed that the level of children's problem solving skills increased across the three testing times. All the children have recorded

the highest achievement in the one-month posttest. The present finding supported the Sociocultural Theory (Vygotsky, 1978) which concluded that learning takes place within the children's zone of proximal development (ZPD). This zone is the area where the child cannot solve a problem alone but can accomplish with the support and guidance from adults. Scaffolding is directly related to children's ZPD in that the support mechanism that helps children to successfully perform a task within their ZPD. As a result of scaffolding, children can solve the tasks independently that they were unable to solve previously. Hence, such kind of guidance advances the children's cognitive development. Moreover, the finding showed that the learning process during the scaffolding session can be internalized by children over a longer period of time. The internalization process is very important in helping children to apply knowledge and skills that have been learned during scaffolding sessions for them to solve the problem independently in the future (Vygotsky, 1978; Ann, 2012).

Results also showed that there were no significant interaction effects between three testing times and groups and no significant effects of groups on problem solving skills. The present finding also support Clausell (2016) study, which found that there were no significant differences in problem solving skills in pretest and posttest between groups. Although there is no significant effect between groups, children in verbal group had a higher mean score in the posttest compared with the other three groups. Based on these findings, it was concluded that verbal scaffolding may increase the problem solving skills during early childhood. Additionally, it was proved that maternal verbal scaffolding was more effective than other types of technique in terms of long term maintenance. Children can develop their knowledge through interaction with other individuals in their environment (Vygotsky, 1978; Rogoff, Moore, Correa-Chavez & Dexter, 2015). According to Ann (2012), one of the most important components in the scaffolding process is interaction. Although children can learn through observation, but the interaction during scaffolding can accelerate the learning process (Tharp & Gallimore, 1988; Rogoff, 1993). Interaction between parents and child during play will have a positive impact on the children's cognitive development (Rathus, 2013). The findings also find support of Bandura's (1977) Social Learning Theory that learning occurs through interaction with others.

Other researchers also found that the quality of maternal verbal scaffolding was an important factor in contributing to the children's achievement in the problem solving task (Levine, Ratliff, Cannon & Huttenlocher, 2012). Earhart and Zamora (2015) found that children's cognitive development will increase as parents engage in children's play, respond to children's behavior, show an appropriate expectation based on children's developmental stages and encourage the children's efforts. The results of this study are also in line with the study conducted by Hou and So (2016) which found that children who received verbal instruction and gestures from their caregivers recorded higher achievements in problem solving task. This results clearly showed that scaffolding needs to involve aspects of interaction to improve the level of children's problem solving skills. Neitzel and Stright (2004) indicated that verbal interactions such as praise and encouragement can also help children to manage frustration and regulate emotions better when resolving problems.

Limitations

This study has several limitations that need to be considered. Firstly, the sample size for this study was much smaller compared to previous research, which indicates that there was some lack of statistical power. Therefore, future research should include a much larger sample

size. Secondly, the sample for this study did not represent the general population. All the participants of this study were Malay. A future study investigating scaffolding would be very interesting if using a diverse sample to represent the general population. Thirdly, this study did not focus on paternal scaffolding. Further research might extend the scope of the study by involving the father as a respondent in particular to study the role of paternal scaffolding in children's problem solving skills. Lastly, this study only measuring the children's problem solving skills by using a 48-piece of puzzle. It is recommended that future research to increase the number of puzzle pieces so that the task will be more challenging for the children. Despite these limitations, the present study helped to fill a gap in the understanding the effect of maternal scaffolding on problem solving skills during early childhood.

Implications

This study has both theoretical and practical implications. These empirical findings are consistent with the Sociocultural Theory (Vygotsky, 1978) which emphasized the concept of internalization. Children developed their problem solving skills through scaffolding by internalizing the guidance so that they become able to do the task independently in the future. Practically, the results of this study have implications for intervention programs to train and teach parents on how to properly scaffold their children when playing with them at home. Children could benefit from parental scaffolding strategies used in interactive contexts especially during play. Therefore, these findings could indicate ways of helping parents to learn about how to adjust their scaffolding to their children's ability and skills.

Conclusion

In conclusion, the present study contributes to the body of knowledge by enhancing our understanding the importance of scaffolding techniques to improve children's problem solving skills specifically in Malaysian context. With appropriate support, children can and do begin to solve problem with competency as they increase their actual level of knowledge. Scaffolding allows the children to gradually acquire the skills and competencies they need to become a more independent problem solver.

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