THE EFFECTIVENESS OF BRAINSTORMING AND IMAGINATION TECHNIQUES FOR IMPROVING PRESCHOOL STUDENTS' CREATIVITY IN DRAWING

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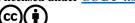
Abstract:

Weaknesses in fostering creativity among young children should be taken seriously by school administrators and preschool teachers because preschool children are the future human capital of the country. **Purpose:** The purpose of this study is to examine the level of creativity in drawing among students based on the traditional teaching methods, brainstorming techniques, and imagination techniques. **Methods:** This study employed a quasi-experimental design and was analyzed using SPSS statistical analysis. The participants consisted of 162 preschool students in the Kota Belud district, Sabah. The treatment groups consisted of two groups: a group using brainstorming techniques with 49 participants and a group using imagination techniques with 56 participants, while the group using traditional methods consisted of 57 participants. **Results:** The mean score for the level of creativity among preschool students using traditional teaching methods was (M=1.82, SD=2.139, n=57), preschool students using brainstorming techniques was (M=4.69, SD=1.971, n=49), and preschool students using imagination techniques was (M=3.13, SD=3.116, N=56). This study indicated that the mean creativity scores for the brainstorming and imagination techniques respectively were higher than those taught using traditional teaching methods. **Conclusion:** This study proved that brainstorming and imagination techniques have a positive impact on the creativity of preschool students in drawing.

Keywords:

Creativity; Brainstorming; Imagination; Torrance Test of Creative Thinking.

Introduction

The Ministry of Education in Malaysia has implemented various innovations in the field of curriculum to ensure that preschool education can adapt to globalization trends. The development of the National Standard Preschool Curriculum (KSPK) is one of the innovations undertaken to improve and enhance the quality of preschool education by emphasizing creativity and innovation. The purpose of developing the KSPK is to foster comprehensive and integrated development of children's potential in terms of cognitive and creative development, based on the National Education Philosophy that emphasizes the cultivation of values based on religion and morality, emotional stability and strength, and physical well-being. This is in line with the Ministry of Education's intention to provide children with the ability to live in society and face formal primary school education.

Individuals who play a significant role in fostering and stimulating creativity among children are preschool teachers. Creativity and innovation are crucial elements in producing students who are critical thinkers and capable of competing in the 21st century globalized era. Therefore, efforts to encourage children to think creatively should begin at the earliest stage, which is preschool, as they are the foundation for future educational pursuits. Children's creative abilities and innovation need to be nurtured and developed to an optimum level, so that they are aware of their potential and tendencies, and can unleash their existing talents, be imaginative, and capable of generating quality ideas and creations, thus making it a practice and culture in their future lives (Ministry of Education Malaysia, 2011). We also aim to see children who not only think creatively but also know how to use their creative skills in problem-solving, not only in academics but also in their daily lives.

The cultivation of a creative and innovative culture among preschool children largely depended on the teaching practices of educators in fostering creativity, such as task autonomy, assessment feedback, and recognition (Chein & Hui, 2010). Therefore, it demands dedication and high commitment from teachers to nurture creativity among children. Past studies had shown that teachers preferred students who possessed non-creative traits such as obedience and unquestioning acceptance of authority, and they might impose penalties on children with the intention of maintaining classroom discipline (Norsita & Zainal, 2014; Beghetto & Kaufman, 2011). Teachers also responded negatively to 80 percent of instances when children provide their own ideas (Jingbo & Elicker, 2005). Additionally, Al-Thani (2010) stated that preschool teachers did not incorporate creative thinking skills in their teaching. Weaknesses in teaching practices could affect the social, cognitive, and creative development of children, which in turn could impact their readiness for formal schooling (Bierman Domitrovich & Darling, 2009).

The lack of emphasis on creativity among preschool children requires serious attention from all parties, especially preschool teachers. If left unaddressed, it can have implications for the creative practices of society and hinder the country's progress toward becoming an advanced nation. Teaching practices using brainstorming techniques (Wang et al., 2006; Butler & Kline, 1998) and imagination techniques (Maksic & Pavlovic, 2013) have been known to incorporate creativity in teaching practices. However, research on the effectiveness and use of brainstorming and imagination techniques, especially in teaching creativity among preschool students, is limited. Therefore, the researchers took the initiative to develop a teaching module using brainstorming and imagination techniques for teaching creativity in painting among preschool students. The research questions are as follow:

1) What is the creativity performance among preschool students in drawings using the traditional teaching method, brainstorming technique and imagination technique?
2) Among the brainstorming technique, imagination technique and the traditional teaching method, which one is the most effective for improving creativity performance among preschool students in drawing?

Literature Review

Brainstorming Technique
Brainstorming was defined as working in a team and leading to various creative stimuli and interactions among participants, seen as a highly effective process (Osborn, 1957). His statement had led to numerous research studies attempting to empirically validate his argument through experimental studies. Brainstorming was a stimulation technique that activated specific cognitive structures in students' minds for deep exploration in generating creative ideas (Stroebe, Nijstad & Rietzschel, 2010).

The main function of brainstorming technique for students was to practise flexibility, fluency, risk-taking, elaboration, and other skills related to creativity (Starko, 2009). The primary objective of brainstorming is to enable students to generate ideas or options to solve problems on their own. Studies by Wang et al. (2006) and Butler & Kline (1998) found that brainstorming was an effective technique to facilitate intellectual fluency and helped students to generate creative solutions. Brainstorming had also been shown to enhance students' metacognitive formation and positive attitudes towards learning (Cheng, 2011).

The brainstorming technique proposed by Osborn (1957) aimed to increase productivity and creativity in groups by presenting original and diverse ideas. Some guidelines for implementing brainstorming are as follow:
1. Do not criticize ideas presented during the brainstorming session because the main objective of brainstorming is to generate a large number of ideas. Criticism will only hinder the process of listing ideas by each group member.
2. Idea generation should be free and unrestricted. This aims to explore possibilities for unique and interesting ideas.
3. Prioritize the quality of ideas. This aims to further develop the generated ideas. Having a large number of ideas increases the likelihood of solving a problem.
4. Participants in brainstorming are encouraged to use other participants' ideas by combining and further developing them.

Imagination Technique
Imagination was considered as the creation of something new with the ability to combine, process, and create new representations and behaviors (Karpov, 2005). Vygotsky's foundational proposal revealed how children can use imagination to understand the world (Garcia & Mukhopadhyay, 2019) through the integration of neurobehavioral functions that utilize imagination (Lindqvist, 2003). Imagination has also been identified as one aspect of creativity in current research involving creativity theories, defining preschool creativity particularly through curiosity and imagination (Maksić & Pavlovic, 2011). Fostering children's imagination was the most promising way to build a creative personality and contribute to the development of creative individuals in the future (Maksić & Pavlovic, 2013).

Research on children's imagination had begun since the 1980s and 1990s, emphasizing how imagination can control children's understanding of corresponding aspects of reality (Morison & Gardner, 1978; Carey, 1985; Siegler, 1996; Stanovich, 1994). Torrance (1966) made significant contributions to creativity research by designing tests to assess four basic skills that reflect creativity, namely fluency, flexibility, originality, and elaboration. Torrance's Creative Thinking Test (2008), was based on Guilford's theory of intelligence. It is a useful tool to assess both quantitative and qualitative aspects of different thinking. According to Gündoğan et al. (2013), children could open up their creative imagination at different ages and in different ways, and effective drama programs to develop children's creative imagination. Therefore, an experiment was conducted involving 60 children (30 from the 10-year-old group, 30 from the 13-year-old group) from two primary schools with similar socio-economic backgrounds. The findings showed that children from the 10-year-old group produced more original ideas and created more detailed drawings than children from the 13-year-old group. Observations also indicated that the number of creative ideas generated by girls was higher than boys. Overall, it can be said that drama programs are more effective for younger age groups, and drama programs are suitable to be implemented in educational programs to develop creative imagination from a young age.

Garcia and Mukhopadhyay (2019) conducted a test of children's creative imagination by assigning tasks involving narrative abilities and drawing for participants aged between 8 and 12 years old. The study results showed that imagination contributes to variations in specific aspects of creativity such as narrative and graphic enhancement, and transforms 'general' creativity as understood from the perspective of developmental psychology into increasingly enhanced learning abilities in specific age groups. Creative imagination was also considered a component of creative competence for elementary school students that can be stimulated and improved with the help of current psychological-pedagogical influences during integrated aesthetic courses conducted as part of children's extracurricular activities (Dmitriev et al., 2020). In Malaysia, research on children's creative imagination is still new and not extensively explored. Therefore, this study was conducted to raise awareness about the importance of nurturing creative imagination skills among young children.

Methodology
This study is a quasi-experimental study. The type of quasi-experimental design used is a pretest-posttest control group design. The study was conducted to examine the effectiveness of teaching methods using brainstorming technique and imagination technique compared to traditional teaching methods in fostering creativity in preschool students' painting skills in the Kota Belud district, Sabah. The effectiveness of these teaching techniques is assessed based on the extent to which all three teaching techniques can enhance the painting creativity of preschool students. This type of design is commonly used to assess the effectiveness of a program when respondents cannot be randomly assigned (Rubin, 1974).

Table 1: The Non-equivalent Design of The Pretest-Posttest Control Group

Group	Pretest	Treatment	Posttest
Traditional	O1	X2	O2
Brainstorming	O1	X1	O2
Imagination	O1	X1	O2

In Table 1, the symbol O1 represents the pretest, which will be conducted before the students are taught using the brainstorming and imagination teaching techniques. The symbol X2 represents the group of students taught using the traditional method. On the other hand, the symbol X1 represents the treatment group of students taught using the brainstorming and imagination techniques. The posttest, represented by the symbol O2, will be conducted after the treatment group has completed their respective models.

Sample

The study sample consisted of 57 preschoolers in the traditional group (control group) while the treatment groups are 49 preschoolers in the brainstorming group and 56 preschoolers in the imagination group (refer Table 2).

Table 2: Respondent Profiles for The Treatment Group and Control Group in The Study

Respondent's Background		Brainstorming Group (N= 49)		Imagination Group (N = 56)		Traditional Group (N= 57)	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Sex	Male	25	51	30	54	29	51
	Female	24	49	26	46	28	49
Race	KadazanDusun	47	96	50	89	12	21
	Bajau	0	0	5	9	45	79
	Rungus	1	2	0	0	0	0
	Others	1	2	1	2	0	0
Age	5 years old	16	33	25	45	22	42
	6 years old	33	67	31	55	35	58

All the participants in the study, the 162 preschool students are in the Kota Belud district, Sabah. These three groups are from separate schools. The number of preschool students involved are not the same because the researcher conducted this study using a quasi-experimental design, where student selection is based on what already existed in the respective schools.

The treatment group using the brainstorming technique involved 49 students, consisting of 25 male students (51%) and 24 female students (49%). Among them, 47 students (96%) are Kadazan Dusun, 1 student (2%) is a Rungus, and 1 student (2%) belongs to other ethnic groups. In terms of age, 16 students (33%) are 5 years old, and 33 students (67%) are 6 years old. The treatment group which uses the imagination technique involved 56 students, with 30 male students (54%) and 26 female students (46%). Among them, 50 students (89%) are Kadazan Dusun, 5 students (9%) are Bajau, and 1 student (2%) belongs to other ethnic groups. In terms of age, 25 students (45%) are 5 years old, and 31 students (55%) are 6 years old. The group which uses the traditional method involved 57 students, consisting of 29 male students (51%) and 28 female students (49%). Among them, 12 students (21%) are Kadazan Dusun, and 45 students (79%) are Bajau. In terms of age, 22 students (42%) are 5 years old, and 35 students (58%) are 6 years old.

Instrument

In this study, the researcher utilized the Torrance Tests of Creative Thinking (TTCT), which is known as a widely used and highly recommended set of assessments in the field of education (Kim, 2006). The TTCT is a standardized test that covers a diverse age range, from preschool students to adults (Torrance, 2018a), and it had been translated into over 35 languages in the early 21st century (Millar, 2002). For this study, only Form A of the TTCT-Figural was used, which consists of one drawing activity assessed based on four measures: fluency, originality, elaboration, and abstractness of titles. This activity involves figural drawing and the creation of titles, and it must be completed within a 30-minute time frame. The activity requires students to construct a drawing based on given basic shapes. Students are given the opportunity to creatively paint an object or picture based on the provided basic shapes. They are given an incomplete basic shape as a stimulus, and each stimulus is used to generate an object or picture. Students are also required to provide suitable titles to explain the generated object or picture.

Data Analysis

The research questions in this study are analysed via quantitative analysis methods using statistical software SPSS version 28. Table 3 shows the two research questions and type of statistical analysis.

Table 3: Data Analysis

Research Questions	Data Analysis Method
What is the creativity performance among preschool students in drawings using the traditional teaching method, brainstorming technique and imagination technique?	Paired-sample t-test
Among the brainstorming technique, imagination technique and the traditional teaching method, which one is the most effective for improving creativity performance among preschool students in drawing?	One Way ANOVA

To answer the research questions, the treatment group consists of two schools, namely School A and School B. Students in School A were taught using brainstorming techniques, while students in School B were taught using imagination techniques. School C serves as the control group and was taught using traditional methods. Students in both the treatment and control schools will undergo a creativity assessment called the Torrance Test of Creative Thinking. A pre-test was conducted before students in the treatment schools learned using brainstorming and imagination techniques. After students in the treatment schools completed the modules on brainstorming and imagination techniques, a post-test was administered. The mean creativity scores in drawing by the students will be analyzed using the SPSS statistical software. The marking criteria for the assessment of creativity and creativity index is shown in Table 4 (adapted from Torrance & Ball, 1984; Guildford, 1977).

Table 4: Marking Criteria for Assessment of Creativity and Creativity Index (Adapted from Torrance & Ball, 1984; Guildford, 1977)

Creativity Component	Marking Criteria	Score Given
Fluency (F)	The number of different ideas that can be generated by an individual	1 mark for each idea
Elaboration (E)	Elaboration in the detailed richness of ideas generated by an individual	1 mark for each creative elaboration
Flexibility (FX)	The number of categories of ideas generated by an individual	1 mark for each category
Originality (O)	The uniqueness of ideas generated by an individual compared to the overall sample	If 5% = 1 mark; If 1% = 2 marks
Creativity Index (CI)	Combination of all creative constructions	Total Score (F + E + FX + O)

Reliability of TTCT
According to Torrance (2000), the Figural TTCT test has reliability coefficients ranging from .78 to 1.00, depending on the different grade levels. He also stated that the construct validity (r = .51) is relatively high compared to the Verbal TTCT test. The norms are somewhat limited due to sample size, and there is limited discriminant validity (Torrance, 1990). TTCT has been widely used by creativity researchers, and generally, the test can be considered reliable.

Findings

The first research question: *What is the creativity performance among preschool students in drawings using the traditional teaching method, brainstorming technique and imagination technique?*

Creativity Performance Of Preschool Students In The Traditional Method Method
Table 5 shows that the 57 preschoolers scored a mean of 1.82 (SD=2.139). This is considered as satisfactory.

Table 5: The Level of Creativity Among Preschool Students Using Traditional Teaching Method

Teaching Technique	N	Mean	Standard deviation
Traditional Findings (Post-Pretest)	57	1.82	2.139
Valid N (listwise)	57		

Inferential statistic approach using paired-sample t-test was done to check significance of the mean scores of in term of fluency, originality, elaboration, and flexibility. The results are displayed in Table 6.

Table 6: Paired Sample T-Test Results Between Pre-Test and Post-Test for Fluency, Originality, Elaboration, And Flexibility in The Group Using Using Traditional Teaching Methods

Aspect	Test	N	Mean	SD	Difference	r Value	t Value	Sig
Fluency	Pre-test	57	2.14	1.008	0.51	0.611	4.774	.001*
	Post-test	57	2.65	0.719				
Originality	Pre-test	57	1.61	0.675	0.11	0.558	1.181	0.243
	Post-test	57	1.72	0.750				
Elaboration	Pre-test	57	1.09	1.005	0.49	0.322	3.518	.001*
	Post-test	57	1.58	0.778				
Flexibility	Pre-test	57	1.18	0.630	0.73	0.384	6.069	.001*
	Post-test	57	1.91	0.950				

Table 6 shows the results of the paired t-test for fluency, indicating a significant result with t = 4.774 and a significance level of p = 0.001. The mean post-test fluency score (M=2.65) was higher than the pre-test score (M=2.14). For the aspect of originality, the t-value is 1.181 and the significance level is p = 0.243. The p-value is greater than 0.05 (p > 0.05) and therefore it was not significant. For elaboration and flexibility, the t-values were 3.518 and 6.069 respectively, and both results were significanct (p < 0.001). The mean post-test scores for elaboration (M=1.58) and flexibility (M=1.91) were higher than the pre-test scores (M=1.09 and M=1.18, respectively).

Creativity Performance Of Preschool Students Using The Brainstorming Technique

Table 7: The Level of Creativity in Preschool Students Using Brainstorming Techniques

Teaching Techniqe		N	Mean	Standard Deviation
Brainstorming (Post-Pre)	Findings	49	4.69	1.971
Valid N (listwise)		49		

Based on Table 7, the mean creativity scores of preschool students using brainstorming technique was 4.69 (SD=1.971, n=49). The results of the paired sample t-test analysis based on the four aspects of Torrance's creativity in the pre-test and post-test for the brainstorming group are shown in Table 8.

Table 8: Paired Sample T-Test Results Between Pre-Test and Post-Test for Fluency, Originality, Elaboration, And Flexibility in The Brainstorming Group

Aspect	Test	N	Min	SD	Difference	r Value	t Value	Sig
Fluency	Pre-test	49	2.88	0.389		0.056	2.203	0.32
	Post-test	49	3.00	0.000				
Originality	Pre-test	49	1.04	0.889	0.246	0.124	15.011	.001*
	Post-test	49	2.90	0.306				
Elaboration	Pre-test	49	0.65	0.969	-0.184	0.191	1.229	.001*
	Post-test	49	2.27	0.758				

Flexibility	Pre-test	49	1.65	0.948	0.151	0.147	0.807	.001*
	Post-test	49	2.76	0.560				

Table 8 shows the results of the paired sample t-test for the creativity aspect of fluency. The result was not significant (t=2.203, p>0.05). Although the mean score for post-test fluency (M=3.00) is slightly higher than the pre-test (M=2.88), the difference was very small (0.12). For the creativity aspect of originality, elaboration and flexibility, the results were significant with t-value of 15.011, 1.229 and 0.807 respectively. All were significant because p values were less than 0.05. The mean score for post-test originality (M=2.90) was higher than the pre-test (M=1.04). Similarly, the mean score for post-test elaboration (M=2.27) was higher than the pre-test (M=0.65). The mean score for post-test flexibility (M=2.76) was higher than the pre-test (M=1.65).

Creativity Performance Of Preschool Students Using The Imagination Technique

Table 9: The Level of Creativity for Preschool Students Using the Imagination Technique

	N	Min	Standard Deviation
Imagination Findings (Post pre-test)	56	3.13	3.116
Valid N (listwise)	56		

Based on Table 9, the creativity scores for preschool students using the imagination technique are Mean (M) = 3.13, Standard Deviation (SD) = 3.116, Number of Observations (N) = 56.

Table 10: Paired Sample T-Test Results Between Pre-Test and Post-Test for Fluency, Originality, Elaboration, And Flexibility in The Group Using the Imagination Technique

Aspect	Test	N	Min	SD	Difference	r Value	t-Value	Sig
Fluency	Pre-test	56	2.48	1.044	-0.067	0.173	1.858	0.69
	Post-test	56	2.8	0.699				
Originality	Pre-test	56	1.41	0.826	0.36	0.159	3.03	0.04
	Post-test	56	1.89	0.888				
Elaboration	Pre-test	56	0.20	0.553	0.021	0.129	10.787	**.001***
	Post-test	56	1.59	0.804				
Flexibility	Pre-test	56	0.95	0.444	-0.056	0.15	6.172	**.001***
	Post-test	56	1.88	1.010				

Table 10 shows that for fluency and originality, the results were not significant t-value of 1.858 and 3.03 respectively. Both were not significant because p values were more than 0.05., p>0.05). The mean score for post-test fluency (M=2.80) is higher than the pre-test (M=2.48), but the difference was very small, only 0.32. For originality, the post-test originality (M=1.89) is higher than the pre-test (M=1.41), the difference is relatively low, only 0.48. For the creativity aspect of elaboration and flexibility, the results were significant with t-value of 10.787 and 6.172 respectively. All were significant because p values were less than 0.05. The

mean score for post-test elaboration (M=1.59) is higher than the pre-test (M=0.20). The mean score for post-test flexibility (M=1.88) is higher than the pre-test (M=0.95).

The second research question: *Among the brainstorming technique, imagination technique and the traditional teaching method, which one is the most effective for improving creativity performance among preschool students in drawing?*

An ANOVA test was conducted to examine the effectiveness of these three teaching methods on the improvement of creativity in drawing among preschool students. We will first report on the overall mean scores for the three groups (refer Table 11).

Table 11: ANOVA Test Results for The Three Teaching Techniques

Mean scores for the traditional, brainstorming and imagination:

Teaching Technique	N	Mean	SD
Traditional	57	1.82	2.139
Brainstorming	49	4.69	1.971
Imagination	56	3.13	3.116
Total	162	3.14	2.723

ANOVA results:

Student Creativity Based on Teaching Technique	Total Power of Two	Degree of Freedom	Min Power of Two	F Value	Significance
Between Groups	216.956	2	108.478	17.658	**<.001***
In Group	976.779	159	6.143		
Total	1193.735	161			

Post Hoc test results for the level of student creativity based on the teacher's teaching techniques:

(I) Teaching Technique	(J) Teaching Technique	Min Difference (I-J)	Standard Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Traditional	Brainstorming	-2.869*	0.483	<.001	-4.01	-1.73
	Imagination	-1.300*	0.466	0.016	-2.4	-0.2
Brainstorming	Traditional	2.869*	0.483	<.001	1.73	4.01
	Imagination	1.569*	0.485	0.004	0.42	2.72
Imagination	Traditional	1.300*	0.466	0.016	0.2	2.4

Brainstorming	-1.569*	0.485	0.004	-2.72	-0.42

* The minimum difference is statistically significant at the 0.05 level.

Based on Table 11, it was found that there is a significant difference in the mean scores of students' creativity levels based on the teaching methods employed by the teachers (F = 17.658, p < .001). The significance level is p < 0.05. The minimum creativity scores for students taught using the traditional teaching method was M = 1.82 (SD = 2.139), while the minimum creativity score for students taught using brainstorming technique was M = 4.69 (SD = 1.971), and for students taught using imagination technique was M = 3.13 (SD = 3.116). Although the one-way ANOVA results were statistically significant, the actual difference in minimum scores between the groups is relatively small. The effect size calculated using Eta squared is 0.182.

Post hoc Tukey HSD test revealed significant differences in creativity scores between students taught using the traditional method and those taught using brainstorming technique with a relatively large effect (p = .001 or p < 0.05). The test also found significant differences in creativity scores between students taught using the traditional method and those taught using imagination technique, with a relatively large effect (p = .016 or p < 0.05). Therefore, it can be concluded that there are significant differences in creativity scores among students based on the teaching methods employed by the teachers.

Discussions
Research on creativity in an educational context revealed that everyone possesses creativity, and it is possible to teach and develop creativity (Hernandez-Torrano & Ibrayeva, 2020; Tsai, 2013). Furthermore, brainstorming can be seen as a search process, with its aim being innovative and useful ideas (Nickerson, 1999). Hence, it is important to note that innovative products and creations are sparked by ideas initially. In fact, brainstorming is defined as "the generation of new and useful ideas" (Paulus, 2000, Doğan & Batdı, 2021).

In addition, the brainstorming method also creates interpersonal skills especially empathy, respect, sincerity and the pupils are more actively involved in the learning process (Rosdiana, 2023, Mausomifard M, 2022). This method can also discuss and discuss problems and be solved in groups (Shirazi, Heidari, & Hosseinzadeh, 2023). The brainstorming technique can also generate strategies for problem solving with the first, creating new ideas, secondly, encouraging in-person engagement, the third increases social development such as self-esteem, identity and pervasion. Fourth, Use high mental processes such as abstract thinking and creative thinking. Fifth is instilling torerance, motivation, curiosity, individual and group responsibility and the sixth is able to use self-assessment (Rashid, 2020 & Babut 2021)

The substantial mean scores for preschoolers' creativity level (M=4.69, SD=1.971) found in this study was a proof that the brainstorming techniques was successful. This is supported by Al-Khatib (2012) that brainstorming technique is an effective strategy in developing creative thinking skills. This may be due to the nature of brainstorming as a collective discussion strategy that encourages students to generate a high number of diverse and creative ideas in an open, spontaneous, and non-critical environment that allows freedom to express ideas. This finding was consistent with the research by AlMutairi (2015) which showed similar results.
The creativity results for the imagination group were equally exciting (M=3.13, SD=3.116). Therefore, this finding supported Hanson's (1988) statement that imagination plays a role as a

catalyst in creating something new, unique, and flexible for oneself, society, and the nation. Through imagination, individuals are able to think and act beyond conventional boundaries. This also reinforces the role of imagination in the school curriculum, as stated by Chapman (2008), as a "tool" in education and as an approach to teaching in the school curriculum. It is also necessary for critical pedagogy and prospective reflection.

The use of imagination as a teaching tool or method should be given attention in line with the educational transformation in Malaysia. This study has shown that imagination can also foster effective learning among students. It is hoped that these research findings will open up more research efforts to explore the role of imagination in the field of education and assist the government in achieving the objectives of the Malaysia Education Development Plan (2013-2025) in producing students with high thinking skills and the ability to compete globally in line with the National Education Philosophy.

Conclusion

In line with the development of the preschool curriculum to provide preschool students with rich learning experiences, the activities suggested in teaching using brainstorming and imagination techniques aim to maximize the motor, socio-emotional, linguistic, and cognitive development of preschool students. It enables them to acquire problem-solving skills and be prepared for primary school. This is to fulfill one of the fundamental principles of early childhood education, which is to stimulate imagination and creativity in preschool students.

Activities that foster the creativity of preschool students through teaching using brainstorming and imagination techniques also allow them to express themselves in different and unique ways in a conducive learning environment that caters to their learning needs and styles. Students are not afraid to make mistakes and take risks in a creative atmosphere. Their ideas are respected, and they indirectly become more confident to respond positively as they observe the positive attitude of preschool teachers.

Acknowledgments

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