

Creativity Teaching through E-book Reading Program among the Children in Malaysia

Fong Peng Chew^{1*}, Khai Ling Eau²

¹ Department of Language and Literacy Education, Faculty of Education, University of Malaya, 50603 Kuala Lumpur, Malaysia

² The Children's House, Jalan Bruas, Damansara Height, 50490 Kuala Lumpur, Malaysia

This study was carried out to identify the effectiveness of the literature lesson plans through E-picture book reading designed on the creativity elements; originality, elaboration and fluency. They were 42 children year 4-to-5-year old children from two private preschools in the district of Petaling Jaya, Selangor. This experimental research applied the Wallis Model of Creativity (1926) as the research framework and the Torrance Test of Creative Thinking (TTCT) as the instrument of study. Data was analyzed by using Statistical Package for the Social Science (SPSS). Findings indicated that there was significant difference between pre-test and post-test that carried out among the children in originality, elaboration and fluency elements of creativity with the total moderate effect size at .61. Chinese female children score higher than Malay male children in creativity. In other words, literature lesson plan through E-picture book reading is effective to inculcate the creativity among the children at the young age. Thus, the preschools and the educators should review their educational system to cultivate the creativity elements since creativity is an important criterion to produce dedicated leaders in the future.

Keywords: creativity; children's literature; arts; Torrance Test of Creative Thinking, Wallas's Stage Model.

1. INTRODUCTION

Nurturing creativity in students has captured the attention of educators and artists who view that arts education and creativity are closely related¹. In child development theories, young children are viewed as highly creative, with a natural tendency to be fantasy, experiment and explore their environment². However, should creativity be emphasized as early as in the preschool education?

According to evidence from the USA the creativity of the children is peaked between 5 to 6 years old but at 9 years old due to the school and peer influences. The creativity declined 11 years old³. Creativity of children is then peaked again between 10 to 11 years old. Research also has shown that fostering creativity earlier will advantage the country. In the long run, the country would gain economically at the level of organization and national, if creativity is able to be integrated early among adolescents and children.

2. STATEMENT OF PROBLEM

In Malaysia, *Education Blueprint 2013-2025*⁴ has been introduced and implemented since year 2013. Below is

part of the forewords from the Deputy Prime Minister and Minister of Education in the education blueprint.

"Our education system must develop young Malaysians who are knowledgeable, think critically and creatively, have leadership skills and are able to communicate with the rest of world, in order to compete with the best in the world." Educational Blueprint" (p 8)⁴

This shows that creativity is playing an important role in transforming the Malaysia Education in the next one-and-a-half decades. In this regards, Malaysia Prime Minister, Dato Seri Najib Tun Razak has actually given an additional allocation of RM500 million to the Ministry of Education in implementing teacher training activities focusing on high-order thinking skills which included creative thinking⁵. However, the students nowadays are still claimed of being less creative⁴.

One of the main reasons of lacking of creativity among children is because of adults especially school leaders and teachers still have a lot of misconceptions about creativity and act on erroneous beliefs⁶. Teachers are important in creative teaching and they are the indicator to determine whether creative teaching will take place or not. Factors related with teacher are teacher's level of motivation towards teaching creativity and creatively, teachers' own level of creativity, and teachers' pedagogical experiences⁷.

*Email Address: fpchew@um.edu.my

Besides that, the situation of creativity is become worsen when dealing with the academic-orientated school climate in Malaysia society. According to creativity research in Malaysia, government policies related to education especially in the area of curriculum development and reference text for teachers and textbooks for students play an equally important role. Teachers may not be motivated to teach creatively if they are constrained by the curriculum and the strict policies regarding testing and evaluation. Research by Palaniappan⁸ has shown that rigorous testing may kill students' creativity as students will be focusing more on studying for examinations rather than reflecting and exploring the world around them purposefully for the benefit of society.

Most art specialists, teachers and policy-makers believe that arts education enhances the development of creativity in children⁹. Many studies on creativity in early childhood and primary education have identified links between children's creative development and their participation in some form of arts education.^{10,11,12}

According to the educational psychologist, Kaufman et.al¹³, one of the best ways to develop creative thinking is through learning literature. The study of literature enables students to analyze various aspects and entitle their opinion. Literature encompasses both kinds of content: the discursive, factual writing of exposition and the artistic use of language in fiction, poetry, and drama. Structural and analytical modes of thinking are used in expository writing to describe scientific events. In this type of thinking-writing process, language is used primarily to denote and describe for practical purposes. Aesthetic modes of thinking are used in compositions which describe personal and emotional events. This artistic presentational form is used for its connotative, expressive effect. The reader, as well as the author, is creative in his encounter with books.

Gormen et.al¹⁴ analyzed the effects of culture on the creative and stylistic features children employ when producing narratives based on wordless picture books. The respondents in the study included 60 first- and second-grade African, Latino, and Caucasian children in America. The researchers coded and analyzed a subset of narratives based on wordless picture books collected for the creative and stylistic conventions. Within the context of wordless picture books with a highly structured narrative task, culture influences children's production of narratives. Therefore, enhancing the understanding level of narrative structure, creativity, and style is necessary to provide valid narrative assessment and intervention for children from diverse cultural backgrounds.

According to creativity research in Malaysia, students who perform well in language respondents tend to have higher creative perception both in terms of their creative personality characteristics as well as in terms of their creative achievements⁸. However, previous studies have focused on primary, secondary, university or teacher education^{7,15,16,17}, but few studies have examined how young children in early childhood education can benefit from learning about the literature especially E-picture book. Besides that, another issue raised is could there be

implicit distinction against children of different ethnicity or gender? Study done by Kauman et.al¹³ on the story and poems written by 205 students and rated by 108 different students. Females' poems were found to be more creative; however there were no significant differences by ethnicity.

Hence forth, the research questions in the study were:

1. Is there any significant difference between pre-test and post-test of Torrance Test of Creative Thinking among the children?
2. What is the score of creativity among the children based on ethnicity and gender?

3. RESEARCH FRAMEWORK

The research framework of the study applied Wallas Model of Creativity (1926)¹⁸. He set down a description of what happens as people approach problems with the objective of coming up with creative solutions. He described his four-stage process.

In the preparation stage, we define the problem, desire, or need, and gather any information the solution or response needs to account for, and set up criteria for verifying the solution's acceptability. In the incubation stage, we step back from the problem and let our minds contemplate and work it through. Like preparation, incubation can last minutes, weeks, even years.

In the illumination stage, ideas arise from the mind to provide the basis of a creative response. These ideas can be pieces of the whole or the whole itself, i.e. seeing the entire concept or entity all at once. Unlike the other stages, illumination is often very brief, involving a tremendous rush of insights within a few minutes or hours. In verification, the final stage, one carries out activities to demonstrate whether or not what emerged in illumination satisfies the need and the criteria defined in the preparation stage.

First of all, this research studied the dimension of process only, out of the four dimensions in creativity. The Wallas' Stage Model was applied in ten literature lesson plans to teach the creative thinking (process). To carry on the lesson to teach for creativity effectively, the researchers concerned about the aspects involved in the creative teaching, that are person (the children and the teacher), press (the environment that allows creative thinking to take place), the product (works, drawings or learning outcomes of the lessons), and the process (creative thinking process happen to the children)¹⁹. Besides, dealing with the aspect of literature, the researchers needs to create, design or find the current picture E-books that allow more creative process to take place during the story telling time.

Subsequently, the teacher in this experimental research needs to be very familiar with the skills to foster creativity in the real classrooms such as asking relevant questions to encourage children to think creatively. Therefore, training has been conducted to the teachers involved before the research was carried out.

4. RESEARCH METHODOLOGY

A pre-test and post-test design was adopted in the

current study. This experimental research carried on by teaching creativity through 10 literature lesson plans in two private preschools in Petaling Jaya, Selangor. Respondents included 42 children from various backgrounds. Two ethnic groups were represented: Chinese children and Malay children. Respondents were from two classes at two private preschools, age ranged from 4 years old to 5 years old. All of them were born in the same year, which is year 2011.

The instrument of the study was the Torrance Test of Creative Thinking (TTCT). Therefore this study applied the concept of creativity as stated by Torrance¹⁹ as "a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results." (p. 6)

TTCT contained three elements or criteria, namely originality, elaboration and fluency that needed to design ten lesson plans to teach the creativity through literature by applying the strategy of storytelling using E-picture books. The TTCT Figural Forms A and B was administered to young children. Figural Forms A and B entitled "Thinking Creatively with Pictures" consisted of three sections: picture construction, picture completion, and repeated figures.

In the picture construction section, "respondents are required to think of a picture in which the given shape... is an integral part" of the picture to be made by respondents¹⁹. The second section required respondents to complete a number of incomplete figures. The repeated figures section "requires an ability to return to the same stimulus again and again and perceive it in a different way"²⁰. In brief the explicit instructions designed to improve originality (original and worthwhile ideas), elaboration (the ability to develop, embroider, embellish, carry out or otherwise elaborate ideas) and fluency (the production of a large number of ideas).

This study was carried out in four weeks period. Prior to the beginning of the treatment period, Figural Form A of the TTCT was administered to the respondents as a pre-test, and after a period of two weeks, Figural Form B of the TTCT was administered as a post-test. All tests (both pre-tests and post-tests) were administered and analyzed by the researchers based on the rating scale.

3. PROFILE OF THE RESPONDENTS

There were 42 respondents in total who came from different background. In term of ethnic, 23 (54.8%) of them were Chinese while 19 (45.2%) were Malay. This meant the number of the Chinese children was higher than the Malays. In term of gender, female pupils (24; 57.1%) were slightly more than male pupils (18 children; 42.9%) in this study.

The father's occupations were divided into six groups, namely administrator, professional, supporting staff, self-employed, students and under-service. Administrator included manager, adviser, consultant, business man, president, assistant, officer, and director. Majority of the father's occupation was in the group of 'administrator' (21 fathers; 50%). Six fathers (14.3%) of the respondents were working as a professional that included artist, lecturer, teacher, engineer, therapist, and medical lab technologist. Supporting staff group made up 14.3% of the total number of the respondents as well. Occupations included in the supporting staff group were those who worked as driver, clerk, and technician. Five fathers (11.9%) were from the self-employed group who were working as contractor or the shopkeeper. One of the fathers was a student and it made up 2.4% of the total number of respondents. Under-service was the last group which involved those who worked as police and insurance agent. Three (7.2%) of the respondents' fathers were in this group.

4. FINDINGS

Research question 1: Is there any significant difference between pre-test and Post-test of Torrance Test of Creative Thinking among the children?

Table 1:
T-test between Pre-Test and Post-Test of Creativity among the Children

TTCT (n=42)	M	SD	t	p	Effect size (Coh en d)
<u>Originality</u>					
Pre-test	4.19	2.99	12.9 4	.00*	.97
Post-test	5.62	1.95			
<u>Elaboration</u>					
Pre-test	5.90	2.40	15.9 6	.00*	.43
Post-test	6.88	2.13			
<u>Fluency</u>					
Pre-test	2.69	1.51	11.5 8	.00*	.10
Post-test	2.88	2.28			
<u>Overall</u>					
Pre-test	12.79	3.89	21.2 9	.00*	.61
Post-test	15.38	4.61			

* $p < .05$

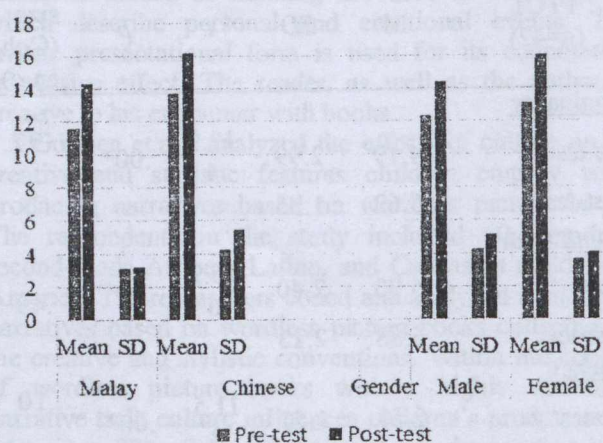
T-test in Table 1 showed that there were significant difference between the pre-test and post-test among the children in term of originality, elaboration and fluency. For the element originality of creativity, the pre-test (M =

4.19, SD = 2.99) and post-test (M = 5.62, SD = 1.95) among the children showed differences after following the lesson plan with $t(42) = 12.94, p = .00$. For the element elaboration of creativity, the pre-test (M = 5.90, SD = 2.40) and post-test (M = 6.88, SD = 2.13) among the children showed differences after following the lesson plan with $t(42) = 15.96, p = .00$. For the element fluency of creativity, the pre-test (M = 2.69, SD = 1.51) and post-test (M = 2.88, SD = 2.28) among the children showed differences after following the lesson plan with $t(42) = 11.58, p = .00$. The effect size for the originality was found the highest at .97 compared to elaboration (.43) and fluency (.10).

As table 1 showed, there was significant difference between sum of pre-test and sum of post-test ($p = .00$). Thus the effect size was .61 at the moderate level. Thus, it can be said that creative thinking can be taught through literature by applying the strategy of story-telling using picture books. Therefore, the null hypothesis sound as "there is no significant difference among the creative thinking of subjects chosen from the primary schools measured by the Torrance Tests of Creative Thinking, Figural Forms A and B" was rejected.

Research question 2: What is the score of creativity among the children based on ethnic and gender?

Graph 1 Mean Score and SD of Creativity among the Children Based on Ethnic and Gender



Graph 1 indicated that Chinese ethnic scored better in pre-test (M13.78, SD4.24) and post-test (M16.21, SD5.42) compared to Malay in pre-test (M11.58, SD3.11) and post-test (M14.37, SD3.25) in terms of creativity through E-picture book reading program. Besides that, the female children scored higher in pre-test (M13.12, SD3.66) and post-test (M16.08, SD4.13) than male children in pre-test (M12.33, SD4.24) and post-test (M14.44, SD5.16) in the Torrance Test of Creative Thinking after following the literature classes.

5. DISCUSSION

The study showed the positive effects of the literary training on the development of the creative imagination among 4-to-5 year-old children. The study indicated that the creativity element of originality, elaboration and fluency tested in Activity 1, Activity 2 and Activity 3 can be enhanced by the art education especially the originality element. The result was align with the research gained by Dziejewicz et.al²¹ who investigated the effect of the doodle book program intervention on creative imagination and divergent thinking on 67 4-to-6 year-old children. The intervention was found to be effective in developing the participants' imagination and their fluency and originality of thinking.

The findings similar to the study by Lee et.al²² in their treatment group of 15 children. They exhibited gains over 10 weeks of instruction that originality and fluency scores increased in relation to respective instructions under problem-solving task²³ by using the TTCT. Hui, He and Ye's²⁴ research also showed no matter which art form young children are engaged in their learning, gains in both verbal and figural creativity have been recorded.

Finding also showed that there was significant differences between sum of pre-test and post-test of TTCT among the children in the study. The middle effect size value at .61 indicated that literature can be used to teach the creative thinking among the children.

Hence similarity to previous studies such as Torrance²⁰, Garaigordobil and Beruecco²⁵, Dziejewicz, Oledzka, and Karwowski²¹ and Holmes et.al²⁶. It was demonstrated that it is possible to stimulate the creativity abilities at the younger age. The research findings also provide evidence to develop the aesthetic value of art for its own sake. The child's right to engage in the expressive arts, including, drawing, reading, and writing should be respected and promoted. Learning in the arts offers multiple enhancements to a creative attitude, experience a process, work on a product, practice a skill, and foster a set of creative personality traits and a set of environmental conditions²⁷. Learning in the arts also provides children to learn how to create in groups and achieve collaborative emergence of a creative outcome²⁸.

On the other hand, the study showed that Chinese female children gain higher score than Malay male children in the TTCT through E-picture book reading program. This finding was found similar to Kaufan et.al who found that female students wrote poems more creative than male, however the ethnicity didn't show significant differences in creative writing. This may due to the different methodology, namely qualitative and quantitative method of both studies.

Interaction with the literary environment provides vicarious experiences which may be assimilated and integrated into individual's present 'knowing.' Creative encounters with literature are developed through repeated satisfying experiences with books. On the other hand, this result supported Fox and Schirrmacher's²⁸ statement that

literature stimulates creative activities. Children need literature as springboard to creative activities in other areas. Creative reading of literature, coupled with a rich program in the arts, helps one art to feed another art. Reading stimulates drawing and rhythmic interpretation in dramatics. The richer the children's experiences in reading and dramatics, the richer they all become in the creative aspects of living.

Consequently, the preschool principal should review their education system in order to make sure the creative teaching take place. Studies have found that teachers play a central role in evoking children's creative potential.^{29,30,31} Teachers' preparation for and beliefs about arts education and creativity are crucial factors in the successful implementation of arts education to enhance creativity among children. Besides, to instil the element of creativity, the preschool system also need to encourage creating an exciting and inviting classroom environment with a classroom climate where sufficient time to explore is given, encourage risk-taking and accept mistakes.

6. CONCLUSIONS

Creativity, in its multifaceted nature has certainly become a potential as well as a talent that needs to be nurtured and developed to the optimum. This study shown that literature play an important role in inculcating the creativity among the children. Therefore, the preschool principal and teachers should have more awareness and make more efforts in cultivating creativity among the children in order to produce dedicated generation in the future.

REFERENCES

[1] L. Zakaras, & J. F. Lowell. Cultivating demand for the arts: Arts learning, arts engagement, and state arts policy. Santa Monica, CA: RAND Corporation, (2008).

[2] C.Sharp. Developing young children;s creativity through arts. Paper presented to an invitational seminar, Chadwick Street Recreation Centre, London, 14 February, 2001.

[3] F. Claxton, C. Pannells, & A. Rhoads. Developmental trends in the creativity of school-age children. *Creativity Research Journal*, 17(4) (2005). 327-335

[4] Ministry of Education Malaysia. Education Blueprint 2013-2025. (2013).

[5] Peruntukan untuk Latihan Perguruan dalam KBAT. Utusan Malaysia. 18, Februari, 2012.

[6] W. M. Williams, M. G. Brigockas & R. J. Sternberg, Creative intelligence for school (CIFS): 21 lessons to enhance creativity in middle and high school students. Needham Heights, MA: Allyn & Bacon, (2001).

[7] A.K. Pallaniappan.. Creative perception and academic achievement: Implications for education in Malaysia. Malaysia: INREACH EDITION, (2007).

[8] A. K. Palaniappan. Creativity Research in Malaysia. Malaysia: Scholar Press, (2008).

[9] Craft, A. Approaches to creativity in education in the United Kingdom. In J. Sefton-Green, P. Thomson, K. Jones, & L. Bresler (Eds.), *The Routledge international handbook of creative learning*.

London: Routledge, (2011) 129-139.

[10] Bancroft, S., Fawcett, M., & Hay, P. *Researching children researching the world: 5×5×5=creativity*. Stoke-on-Trent: Trentham Books, (2008).

[11] Craft, A. Creative thinking in the early years of education. *Early Years*, 23, (2003) 143–154.

[12] A. Wilson, (Ed.). (2005). *Creativity in primary education*. Exeter: Learning Matters.

[13] J.C. Kaufman, W.H. Niu, J.D. Sexton & J. C. Cox. In the Eye of Beholder: Differences Across Ethnicity and Gender in Evaluating Creative Work. *Journal of Applied Social Psychology*, 40(2) (2010) 496-511.

[14] Gorman, B.K., Fiestas, C. E., Peña, E. D., Clark M. R. Creative and Stylistic Devices Employed by Children During a Storybook Narrative Task: A Cross-Cultural Study. *Language, Speech, and Hearing Services in Schools*, 42 (2011) 167-181

[15] S. Nachiappan, A. A. Abdul Shukor, V.P.K. Veeran, H.K. Andi. Primary School Teachers' Creative and Innovative Differences in Cognitive process. *International Journal of Business and Social Science*, 3(10) (2012) 167-172.

[16] H. Mohammad Hassan, W.N.H. Wan Husin, T. Muhammad Zayed. Barriers to creativity among students of selected universities in Malaysia. *International Journal of Applied Science and Technology*. 3(6) (2013) 51-60.

[17] A. Ayob, A. Hussain & R. Abdul Majid. A Review of Research on Creative Teachers in Higher Education, *International Education Studies*, 6(6) (2013) 8-14.

[18] Wallas. *The Art of Thought*. London; Johnathan Cape, (1926).

[19] E. P. Torrance. *The Torrance Tests of Creative Thinking-Norms-Technical Manual Research Edition-Verbal Tests, Forms A and B-Figural Tests, Forms A and B*. Princeton, NJ: Personnel Press, (1966).

[20] E.P. Torrance. Predictive validity of the Torrance Tests of Creative Thinking. *Journal of Creative Behavior*, 6(4) (1972) 236–252.

[21] Dziejewicz, D., Oledzka, D. & Karwowski, M. Developing 4 to 6 year-old children's figural creativity using a doodle-book program. *Thinking Skills and Creativity*, 9, (2013) 85-95.

[22] Lee, Y.J., Bain, S.K. & McCallum, R.S. Improving creative problem-solving in a sample of third culture kids. *School Psychology International*, 28(4) (2007) 449-463.

[23] E.P. Torrance, *The Torrance tests of creative thinking norms—technical manual figural (streamlined) forms A & B*. Bensenville, IL: Scholastic Testing Service, Inc., (1990).

[24] A, N. N. Hui, M. W. J. He & S. S. Ye. Arts education and creativity enhancement in young children in Hong Kong. *Educational Psychology*, 35(3) (2015) 315-327.

[25] E. Garaigordobil and I. Beruocco. Effects of a play program on creative thinking of preschool children. *Spanish Journal of Psychology*, 14 (2011) 608-618.

[26] R. M. Holmes, Lynn Romeo, Stephanie Ciriola & Michelle Grushko (2015) The relationship between creativity, social play, and children's language abilities, *Early Child Development and Care*, 18(7) (2015) 1180-1197.

[27] R. K. Sawyer. Learning for creativity. In R. A. Beghetto & J. C. Kaufman (Eds.), *Nurturing creativity in the classroom*. New York, NY: Cambridge University Press, (2010) 172-190.

[28] J. E. Fox, & Schirmacher, R. *Art and creative development for young children* (7th ed.). Belmont, CA: Wadsworth. (2012).

[29] Cheung, R. H. P., & Mok, M. M. C. A study of early childhood teachers' conceptions of creativity in Hong Kong. *Educational Psychology*, 33 (2013) 119–133.

[30] Chien, C. Y., Hui, A. N. N. Creativity in early childhood education: Teachers' perception in three Chinese societies. *International Journal of Thinking Skills and Creativity*, 5, (2010) 49-60.

[31] Davies, D. Enhancing the role of the arts in primary pre-service teacher education. *Teaching and Teacher Education*, 26, (2010) 630–638.