

## Research Article

# THE APPLIANCE AND EFFECTS OF SITUATIONAL TEACHING ON PRESCHOOL CHILDREN'S FLUENCY AND CREATIVITY

<sup>1,\*</sup> Dietermar Say and <sup>2</sup>Li-Yuan Cheng

<sup>1</sup>Okumantai Corporation, Oita, Japan.

<sup>2</sup>Department of Sports Science, National Tsinghua University, Hsinchu, Taiwan.

Received 12th October 2021; Accepted 14th November 2021; Published online 20th December 2021

### ABSTRACT

Education of preschool children is a very important stage in life. Many studies have confirmed that the critical period for creativity development is between the ages of three and five. Preschool children's creativity can be enhanced through the creation of an environment and the inspiration of teaching activities through cultivation, training, and learning development ability. The goal of this study is to investigate the impact of situational learning through physical education on preschool children's creativity. Methodology for this research first starts off with a pre-test of the child's creativity performance, followed by a six week program of situational physical learning lessons. The data is compared to display the changes of children's learning ability and the efficiency of situational learning training in boosting creativity.

**Keywords:** Situated learning, physical education, creativity, fluency, imagination.

### INTRODUCTION

Zhou Yuru (2012) pointed out that the infancy stage is the physical and mental development of an individual's life. The Early Childhood Educare (2017) offers a new perspective on early childhood education through free or guided play learning. Children naturally enjoy games, through situational games and participation, children are able to gradually build new knowledge to perform appropriate roles within groups. Variety of playful situations can develop children's emotional and cognitive needs and extend through individual development. In terms of social functioning (Zhang et al., 2010) play-induced social behaviors can promote positive interactions and role identification in interpersonal networks. Existing literature have generated much related discussion and research and presented the concept of situational learning that is becoming more widely accepted by the public for use in a variety of learning activities and learning-emphasizing knowledge (Brown et al., 1989). Other studies suggested knowledge acquisition should take place in the context situated cognitive learning activities (Lave & Wenger, 1991). The learning process requires teachers to try multiple different methods to keep the child engage in different situation and environment to arouse interest in learning at an early childhood stage (Huang, 2007). Whereas, Zhang and Huang (2005) suggested using narrative situations in physical education related games for preschoolers creates a pressure-free study environment, the range of activities would motivate students to learn. Allowing two or more preschoolers to play situational cognitive games can increase interpersonal relationships and opportunities for cooperation among preschoolers (Liao and Huang, 2016). Along the process to complete the given task, children would learn about the concept of mutual support, creative thinking, and to be more imaginative. Jamali, Kazemi & Shahbazi (2012) also suggest that situational learning could help preschoolers to learn and apply knowledge and improve their creative thinking skills in situations where there is no physical or mental burden.

It has been confirmed that in between the ages of 3 to 5, important stage of creativity development is between the ages of 3 and 5. Through development, training and learning development skills, children's creativity can be promoted through environmental design and educational activities (Johnson et al., 2005; Zhang, 2008; Zhou, 2011; Wei, 2014; Song, 2016) In a constantly changing environment, the concept of education for preschoolers is gradually shifting, this research study investigates whether context-sensitive physical educational game lessons can develop preschool children's thinking and problem-solving skills in order to adapt to the changing society of the future.

### METHODOLOGY

The purpose of this research is to investigate the impact of a six-week situational sports game teaching method on preschool children's creativity. After alternating the prediction of creativity test by Torrance (1981). A preschool child takes part of the program through situational physical education with the parent's consent. In order to compare the effects, a pre-test is to conducted, which includes activities creative performance stimulation test on 'Fluency', also known as the flow of logic and understanding of the situation. The reliability test shows a score of 0.75, which is within the standard range of 0.60 to 0.76.

The experiment is divided into five stages:

1. physical warm-up;
2. a story is provided, the student is asked to connect the story with previous experiment;
3. the story is played out through costumes and props with the scenario provided for the student;
4. multiple interactive games were executed with praises to encourage the student to be more expressive;
5. to slowly cool down the student's playful emotion, a music is played with similar warm up exercise, ending with the instructor's praises for each student's performance.

\*Corresponding Author: Dietermar Say,

<sup>1</sup>Okumantai Corporation, Oita, Japan.

## FINDINGS AND ANALYSIS

The following result display the before and after of a 6-week situational physical education game lessons. The pre- and post-test descriptive data on experiment participants' fluency are compared. The interview data are based on the content of the action and action creation thinking test. In Figure 1, the children were first test on their fluency of understanding the situation of the given surrounding. During the pre-test, group A scored the highest of all groups with 40 marks. Groups C, D, E scored 24, group B at 13, and lastly group F at 6. Suggesting on how the nature of how different toddlers are different from their natural attributions. The six-week training of situational physical education learning methods hope to improve all preschoolers' level of fluency so they could better map out and identify the problems given from the instructors.

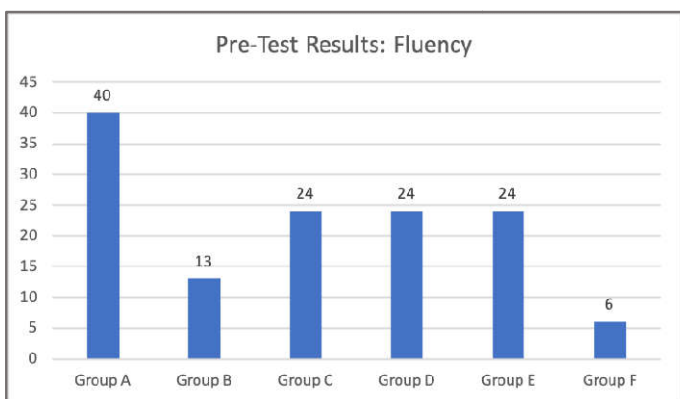


Figure 1. Pre-Test Results: Fluency

In Figure 2, after six-weeks of situational physical education learning, all preschoolers have improved their ability to identify what is the given story about, and are able to re-tell the given story. Their fluency level according to each group shows group D with the highest of 65, follow by group C of 64, group E at 60 marks, group B at 53, group A at 46, and group F at 26.

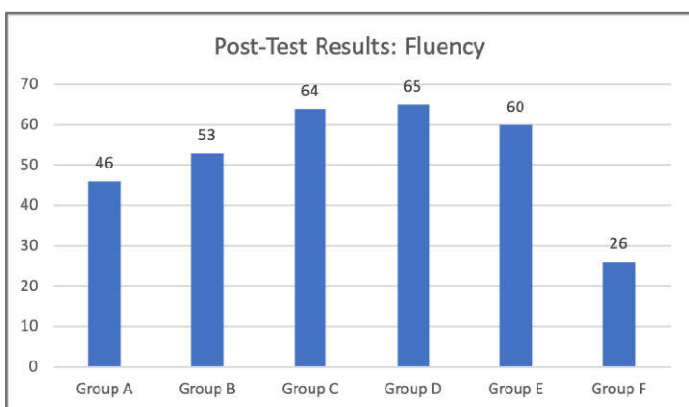


Figure 2. Post-Test Results: Fluency

By comparing the both pre and post test results, Figure 3 has proven on how situational physical education learning methods is able to improve preschoolers the fluency on comprehending the instructions, problems, and story given from the instructors. The groups that showed the most obvious improvements are group D (+41), group C (+40), group B (+40), group E (+36), group F (+ 20), and group A (+6). It is interesting to point out that although group A was the highest among all the preschoolers (40), they showed the least amount of improvement in their fluency level after six-weeks training (46). This is possible that the group A might have already know how to be fluent in re-telling the story, and find the six-week training quite

repulsive as it is something that group A had already known. The rest of the groups are new to the concept of situational learning, and this new unexplored area maybe what kept the group B,C,D,E, and F to be motivated and be emerged in this experiment. Group F scored the lowest both in pre and post-test, possible explanation might be because the group might need more time and exercise to see greater improvement.

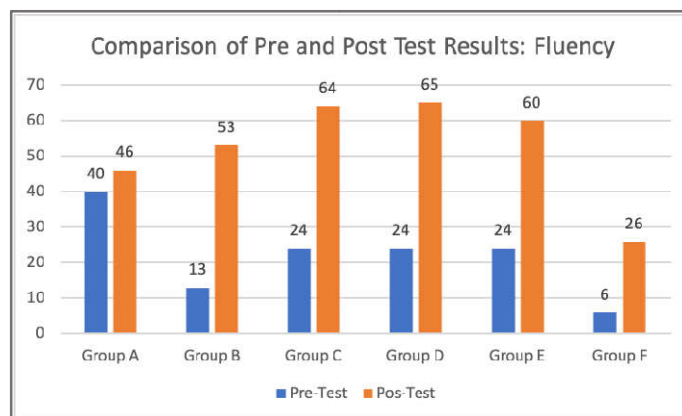


Figure 3. Comparison of Pre and Post Test Results: Fluency

## CONCLUSION

After six weeks of situational physical education learning, the preschoolers had improvement on their fluency level than before. Although all preschoolers experienced improvements, preschoolers who scored high marks during pre-test may see little improvements in the fluency level. Possible reason might be such ability to comprehend the given situation is already taught by their parents, or known in nature, thus the preschooler would conclude that the activity is not new to them hence the motivation to learn is lower than those who scored low in their pre-test. From the suggested data, it can be said that for each different children, there is a need to find a suitable study environment and the instructors would need to constant change study environments to keep preschooler motivated to learn. The importance of creativity in fluently understand the surrounding environment status can help enhance a child's critical thinking that would benefit in potential innovation, social interaction, and cooperation skills at an older age. For countries that are experiencing declining birthrates, it has become a competition for preschoolers to excel at young age, the practice of situational physical education learning according to the findings has proven that such approach of learning method could improve a preschooler's creativity level.

## REFERENCES

- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Education Researcher*, 18, 32-42.
- Huang, Y.K. (2007). *Yòu'eryùndòngyóuxikèchéngshìhīgàikuàngzhītàntào* [Discussion on Preschool Physical Learning in Practice] . *Fùrèndàxuétiyùxuékǎn*,(6),137-149.
- Jamali, B., Kazemi, R., & Shahbazi, M. (2012). Effects of sport activities on increasing preschool children's creativity. *Management Science Letters*, 2(6), 1975-1980.
- Johnson, J. E., Christie, J. F., & Wardle, F. (2005). *Play, development, and early education*. Pearson/Allyn and Bacon.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge university press.

- Song, H. L. (2016). Yòuzhiyuánchuàngzàosīkǎojiàoxuéhuódòngfāng'ànzhīshíyànyá njiū [A experimental research on the creativity and logic teaching in kindergartens]. Yùndòngzhīshìxuébào,(13),1-16.
- The Early Childhood Educare (2017). Yòu'éryuánjiàobǎohuódòngkèchéngdàgāng [Curriculum of Kindergarten Educational Activities]. Retrieved December 10, 2020 from <https://phco.ntunhs.edu.tw/files/14-1013-30056,r214-1.php?Lang=zh-tw>
- Torrance, E. P. (1981). Predicting the Creativity of Elementary School Children (1958-80)—and the Teacher Who" Made a Difference". *Gifted Child Quarterly*, 25(2), 55-62.
- Wei, M. H. (2014). Jìndàiyòu'érjiàoyùsīcháo [Thoughts on Contemporary Preschool Education]. Táiběishì: Xīnlǐchūbǎnshè.
- Zhang, F. J.; Huang, Y. K.; Huang, S. Y. (2010). Yòu'éryùndòngyóuxiduiyòu'érjiàoyùzhījiàzhí. Yòu'érjiàoyù niánkān,21,24-34. Jiàoyùbù (2014) [Value and Importance of Sports on Preschool Education]. Shǐ'èrmiànguómínjīběnjiàoyùkèchénggāngyàozǒnggāng. Retrieved December 10, 2020 from <https://12basic.edu.tw/12about-3-1.php>
- Zhang, P. Y. (2008). Yòubǎoxuéshēngyòu'érchuàngzàosīkǎojiàoxuéhuódòngshèjiz hītànjiùyǔshíjiàn [Research and Practice on the Design of Preschool Critical Thinking Activity].
- Zhou, S.H. (2011). Chuàngzàoliyǔjiàoxué: Yòu'érchuàngzàoxíngjiàoxuélǐlùnǚshíwù [Creativity and Teachings: Theory and Practicality of Creativity Development for Preschool]. Táiběishì: Xīnlǐchūbǎnshè.
- Zhou, Y. R. (2012). Yòu'érfāzhǎn de guānjiànlichéngbēi [A Key to Preschool Development]. Táiběishì: Qīnzītiānxiàzhuāntèkān.

\*\*\*\*\*