

MULTI-SENSORY ACTIVITY IN EARLY CHILDHOOD EDUCATION: TEACHERS' PERCEPTION ON THE IMPORTANCE OF ACTIVITY IMPLEMENTATION

Syazwani Aniyah Manja ¹

Abdul Halim Masnan ²

Mazlina Che Mustafa ³

Norazilawati Abdullah ⁴

^{1,2,3,4} National Child Development Research Centre,

^{1,2,3,4} Faculty of Human Human Development, Universiti Pendidikan Sultan Idris, Malaysia.

(E-mail: syazwani@upsi.edu.my)

Article history

Received date : 14-7-2022

Revised date : 15-7-2022

Accepted date : 2-10-2022

Published date : 15-10-2022

To cite this document:

Manja, S. A., Masnan, A. H., Che Mustafa, M., & Abdullah, N. (2022). Multi-Sensory Activity in Early Childhood Education: Teachers' Perception on The Importance of Activity Implementation. *Jurnal Penyelidikan Sains Sosial (JOSSR)*, 5(16), 9 - 17.

Abstract: *The purpose of this study was to survey teachers' perceptions on the importance of implementing multi-sensory activities to children. Perception among early childhood education teachers is seen based on teachers' general perceptions on the importance of multi-sensory activities in early childhood education and teachers' reaction toward the importance of implementation according to the type of multi-sensory activities. This study is a survey study using a questionnaire by Goodwin (2008) about Sensory Experiences in the Early Childhood Classroom: Teachers' Use of Activities, Perceptions of the Importance of Activities, and Barriers to Implementation. Thus the respondents involved in this study are teachers of early childhood education in Proton City Area, Muallim District, Perak. The researcher chooses to use purposeful sampling and the total number of respondents involved is 30 teachers. The findings of the study found that a total number of 27 respondents is (90%) agreed on the importance of multi-sensory activities in early childhood education. The highest score of percentages for teachers' perceptions toward the importance of implementation according to the type of multi-sensory activities, a total of 26 participants (86.7%) agreed with visual stimuli activity and art materials and activities implementation. Meanwhile the lowest score is contain of 21 participant (70%) that agreed with the implementation of multi-sensory activities through Outdoor Play. Although there are high and low percentage scores but it is still seen as important in the implementation of multi-sensory activity in early childhood education.*

Keywords: *Multi-sensory, activity, early childhood education, teacher, perception.*

Introduction

Children grow up with the opportunity to explore the environment of the world, interact together, play and perform activities that contribute to their development. Multi-sensory activity is one of the activities implemented by children that encourage children to connect all the available senses such as sense of taste, sight, smell touch and sound while exploring the activities. Multi-sensory activity gives such a good impact to children like for life skills, language and speech development, memory as well as simple activities that brings joys to children, Patch (2020).

Multi-sensory activity is an activity that comes from multi-sensory environment. Based on Pagliano (2017) in his writing about Multisensory environment, he mentioned that multi-sensory environment is an activity that provides hands-on materials to stimulate visual, auditory, olfactory, tactile and kinaesthetic stimulation where these stimuli affect children not only on behaviour but also have a comprehensive impact on the development required by children.

A multi-sensory environment is a specially designed space or room where stimuli can be controlled, manipulated, diversified, reduced or multiplied, implemented separately or combined, packaged to encourage or reduce interaction, and adapted to meet the needs of motivation, interest, therapy, education and the development of users (Pagliano, 2013).

With reference to the meaning stated in the Oxford Advances Dictionary, multi-sensory carries the meaning of more than one sense which is one of the five senses or all the senses in the individual namely sense of touch, smell, sight, hearing and taste. Naturally every human being will use various senses to learn and explore something, Ginder (2010). Yaswinda (2018) in his writing states that multi-sensory is an activity implemented in stimulating the environment using human sensory organs such touch, sight and hearing. Based on the various benefits of multi-sensory activities as stated, generally teacher's responsibility is to carry out activities for the children in the classroom. Therefore, this study was conducted to examine teachers' perceptions of the importance in implementing multi-sensory activities on children.

Literature Review

A study conducted by Biel (2014) about the lack of exposure to children on multi-sensory activities affects them in terms of learning, the way children acquire information and behavior as children grow older. Moreover, according to Koenig and Rudney (2010), lack of exposure to children about multi-sensory activities will cause children to have problems for their sensory processing methods.

A report written by Azimah Ghazali (2019) shows that children who have problem in sensory processing will give huge impact in children to master gross and fine motor skills where both skills is a crucial development for every child to grow. Thus, based on effect of lack exposure to sensory use, implementation and exposure to multi-sensory activity should be implemented in children from an early age to give maximum effect and positive impact to the children's holistic development.

Since that, as we know that early childhood education is an important stage of education or called as *Golden Age* especially for children age zero to six years old where the cognitive development develops with a capacity of 80%. Therefore, the experience and education that

children go through at this age is very important to achieve optimal development, (Yuhariati & Yuriansa, 2018).

According to Mulyasa (2012), early childhood education is fundamental to the development of each individual child in terms of emotional, personality, language and cognitive. The experiences received by children during that age have a big effect on child's development and future. Teachers play a big role for children based on the experience of activities that children go through during the period of early education. Teachers need to always be prepared in terms of pedagogical needs by preparing themselves with the knowledge and skills appropriate to the needs of the children (Masnan et al., 2019). One of the activities that can be implemented on children is multi-sensory activities which have a big and comprehensive impact on children.

Learning that involves the use of all senses such as touch, smell, sight, hearing and taste contributes to a clearer understanding of ongoing activity or learning (Edirisinghe et al., 2018). According to Watts (2020) sensory activities encouraging children to explore the world around them using all their senses. Through that, the connection in the brain will be formed which has a good effect on a higher level of learning.

Gascoyne (2016) mentioning that experience in performing multi-sensory activities provides foundation for children's skills such as knowledge, thinking and creativity. It happens when child is performing the activities, a process of sensory stimulation will connect a nerve with another nerve and new connection will produce. Based on Gales and Cayka (2013) state that through the implementation of multi-sensory activities performed by children, it will contribute to the improvement of children's fine motor skills, in addition to mastery of vocabulary and provides a meaningful experience for each child.

The process of implementing activities through the use of multi-sensory is a determination of the process whether it will curb or enrich the development of children where they use the environment with the multi-senses that exist in humans, accordingly, the same exposure to the use of those senses is used properly and widely or otherwise will be a determinant to the development of child (Bremner et al., (2012).

Baines (2008) emphasizes that multi-sensory learning methods provide effective learning and high adaptability when children use more than one sense, they will interact through activity materials more clearly and in detail thereby having a positive impact on their development. In multi-sensory teaching, teachers will engage children through hands-on activities involving visual, auditory and olfactory stimuli.

In addition, multi-sensory activities are activities that are seen simple but provide many opportunities and experience for children. Activities and environment provided for the implementation of multi-sensory activities will provide meaningful and exciting expression for children, Davies (2019). According to him, the environment built for multi-sensory activities can be used for different levels of children. For example each setting is design for visual, auditory and kinaesthetic stimuli and there should be an area that encourages children to ask questions.

Research Question

This study was conducted to determine the teachers' perceptions on the importance of multi-sensory activities in early childhood education.

The questions research for this study are:

1. What is teachers' general perceptions on the importance of multi-sensory activities in early childhood education?
2. How teachers' react toward the importance of implementation according to the type of multi-sensory activities?

Methodology

Research design

This study aims to examine the perceptions of early childhood teachers about the importance on the implementation of multi-sensory activities in early childhood education. Accordingly, a quantitative research methodology is implemented to respond to the research questions. The study used a total of 30 respondents who are teachers in early childhood education in Muallim District, Perak.

Respondents of the study

A total of 30 early childhood education teachers participated in this study based on the population of 30 teachers who teach kindergarten in Proton City Area, Muallim District, Perak. They were 26 (86.7%) females and 4 (13.3%) males with the range age 30 to 40 years. The researcher chooses to use purposeful sampling i.e. purposeful selection based on elements of knowledge and information that will be received by the researcher through the sample to focus on specific characteristics and in accordance with the research focus, Holloway & Wheeler (2013). The focus of this study is on teachers who are involved in early childhood education. Therefore, sample involved teachers who teach kindergartens registered under the Ministry of Social Welfare (JKM) in Proton City Area, Muallim District, Perak

Instrumentation

The research instrument conducted consists of two main parts that are seen to fulfil the purpose of the study and to answer research questions. The questionnaire formed consists of two main parts and the study instrument was formed based on the nominal scale, yes or no. scale were chosen to distinguish clear quality, experience, or opinion of respondents. This section is analysed using frequency and percentage to obtain the following information:

1. Background of teachers such as age, gender, marital status, educational status, teacher experience, current age class, number of adults in the class as well as experience in attending any course related to sensory.
2. Teachers' general perceptions on the importance of multi-sensory activities in early childhood education.
3. Teachers' perceptions toward the importance of implementation according to the type of multi-sensory activities.

Validation and reliability

The questionnaire used and provided was adapted and replicated from the research by Goodwin (2008) about *Sensory Experiences in the Early Childhood Classroom: Teachers' Use of Activities, Perceptions of the Importance of Activities, and Barriers to Implementation*. There are 4 sections stated on the questionnaire which are social-demographic, the implementation of

multi-sensory activities, the perceptions on importance of multi-sensory activities and the barriers in implementing multi-sensory activities.

The reliability statistic shown on the table 1 below.

Table 1: Reliability Statistics Cronbach's Alpha

Cronbach's Alpha	No. of Items
$\alpha = .957$	55

Data analysis

The gathered data were analysed using frequency and percentage statistic in preparation for responding to the research questions. The Microsoft Excel 2017 and SPSS v. 20 (Statistical Package for the Social Sciences) are used for statistical analyses. The results of the data became the basis of the researcher to propose a research and development of module.

Findings and discussion

Feedback from the research questions found a variety information used to answer the research question.

i) Teachers' General Perceptions on The Importance of Multi-Sensory Activities in Early Childhood Education.

General views from teachers on the importance of implementing multi-sensory activities in early childhood education whether it is important to implement it or not.

Table 2: Teachers' General Perceptions on The Importance of Multi-Sensory Activities in Early Childhood Education

Aspect	Frequency / Percentage	
	Yes	No
Is it important for teachers to implement multi-sensory activities to children?	27 90%	3 10%

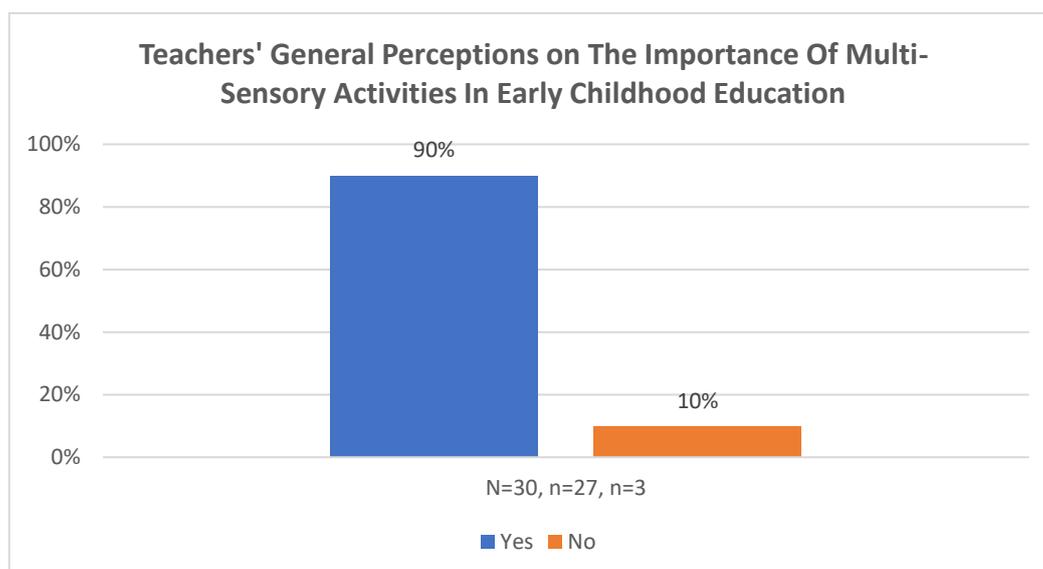


Chart 1: Teachers' General Perceptions on The Importance of Multi-Sensory Activities in Early Childhood Education

Based on the result showing on table 1 and chart 1, it shows that teachers give the perception that multi-sensory activities are very important to be implemented in the world of early childhood education with the result (N=30), n=3, 10%, n=27, 90%. A total of 27 participant give an answer Yes meanwhile 3 participant give an answer No with percentage 90% of Yes and 10% of No toward the perception of multi-sensory activities are very important to be implemented in early childhood education.

ii) Teachers' Perceptions on The Importance of Implementation According to the Type of Multi-Sensory Activities

To survey teachers' perceptions of the importance of implementing multi-sensory activities in early childhood education, several related activities are listed to see the views of teachers.

Table 3: Teachers' Perceptions on The Importance of Implementation According to the Type of Multi-Sensory Activities

Aspect	Frequency / Percentage	
	Yes	No
Is it important for teachers to provide multi-sensory activities through <i>Sensory Table Activities</i> ?	22 / 73.3%	8 / 26.7%
Is it important for teachers to provide multi-sensory activities through Outdoor Play?	21 / 70%	9 / 30%
Is it important for teachers to provide multi-sensory activities through music and movement?	24 / 80%	6 / 20%
Is it important for teachers to provide multi-sensory activities through art materials and activities?	26 / 86.7%	4 / 13.3%
Is it important for teachers to provide multi-sensory activities through sense of taste and smell activity?	25 / 83.3%	5 / 16.7%
Is it important for teachers to provide multi-sensory activities through visual stimuli?	26 / 86.7%	4 / 13.3%
Is it important for teachers to provide multi-sensory activities through activities that can stimulate children to make a difference (example: distinguish sounds, temperatures and textures)?	23 / 76.7%	7 / 23.3%

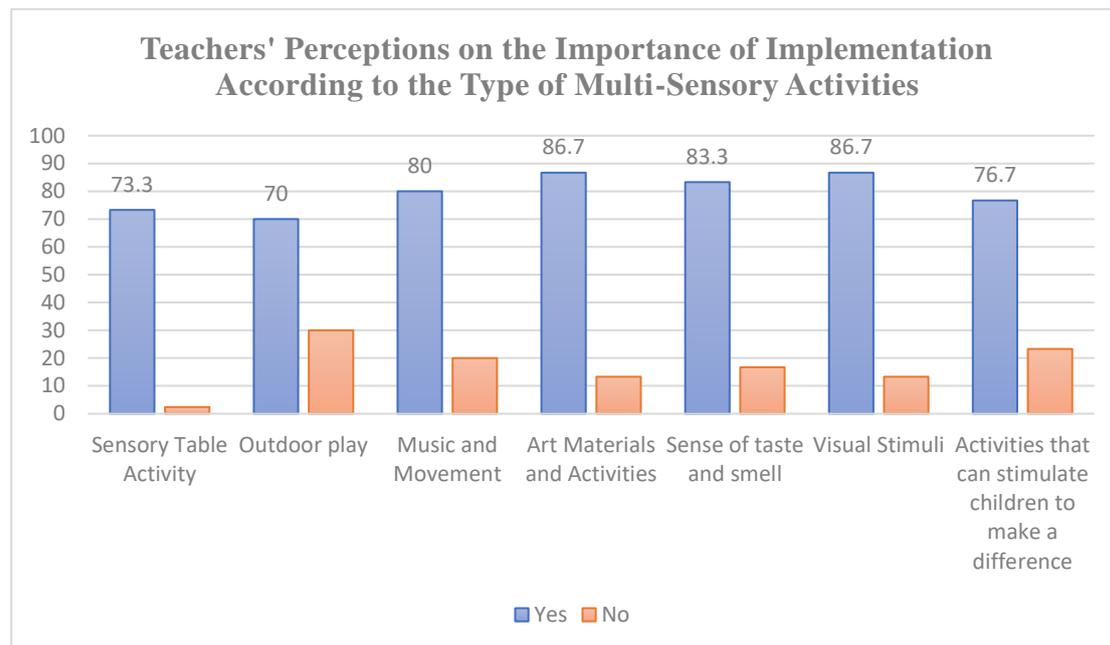


Chart 2: Teachers' Perception on the importance of Implementation According to the Type of Multi-Sensory Activities

Based on the result showing on table 2 and the chart 1 above, teachers' perceptions on the importance of implementation according to the type of multi-sensory activities taken from 30 respondents. It shows that the types of activities that get the highest percentage are visual stimuli activities and art material and activities with a percentage of (N=30), n=4, 13%, n=26, 87.6%. Next, the implementation of multi-sensory activities that are seen as important by teachers is taste and smell with a result (N=30), n=5, 17.7%, n=25, 83.3%. Then the teachers' perception on the importance of multi-sensory activities is through music and movement with scores (N=30), n=6, 20%, n=24, 80.0%. Next is through the activities that can stimulate children to make a difference (example: distinguish sounds, temperatures and textures) with scores (N=30), n=5, 23.3%, n=25, 76.7%. Other than that, the teachers' perception on the importance of multi-sensory activities is through sensory table activities with scores (N=30), n=8, 26.7%, n=22, 73.3%. Teachers' views on the importance on implementing multi-sensory activities according the types activity that gets the lowest score is through outdoor play activity (N=30), n=9, 30.0%, n=21, 70.0%. As to conclude, the type of activity that has the highest score is Visual Stimuli activity and Art Materials and activities while activities that get low scores for teachers' perceptions on the importance of implementation is Outdoor Play.

Discussion and Conclusion

Based on the findings obtained from the study, it shows that early childhood education gives the impression that multi-sensory activities are very important to be implemented in early childhood education. According to the perceptions of early childhood education teachers, the types of activity implementation are also seen as important based on several activity criteria such as art and material activities, visual stimulation activation activities, music and movement activities, senses of taste and smell activities and so on.

Although there is activity that get a low percentage score but still get the majority of respondents involved. All the activities mentioned are the activities that involve multi sensors. Toth (2019) states that sensory activities whether involving the uses of one or more senses implemented can help in connecting nerves in the brain. The importance of learning and early exposure that

contains multi-sensory activities is crucial for children's holistic development in turn giving great potential as directly and indirectly (Cosentino et al., 2019).

According to Cruickshank in Abdul Halim and Aznanche (2015) Teachers' skills in the implementation of activities are the result of creative artwork, have a deep interest and provide a clear understanding to children. Thus, teachers in early childhood education play an important role in the implementation of activities that will be done by children. The preparation of activities provided by teachers should have the best impact and benefits on children especially for their development.

As a teacher especially early childhood education teachers, it is a responsibility to stimulate children's learning either directly or indirectly. If the activity is well planned by the teacher, the effect will be that children will gain various experience through the activities and this will also attract children interest. The wisdom and efforts of teacher are very important in ensuring the effectiveness of their learning. In summary, teachers in early childhood education need to prepare themselves with sufficient knowledge in the implementation of activities that will contribute to the great benefit for children, Cho, (2016).

Acknowledgement

The author would like to thank the participation of the teacher in early childhood education from Muallim District, Perak. The author also would like to express her appreciation to all early childhood education all over the world on the willingness, perseverance and sincerity in educating children from an early age.

References

- Abdul Halim Masnan & Aznanche Ahmad (2015). New Preschool Teachers Teaching Skills. *Research Journal of Social Sciences*. 8(11). 14-19.
- Baines, L. (2008). *A Teacher's Guide to Multisensory Learning: Improving Literacy by Engaging the Senses*. USA: Julie Houtz.
- Beil, L. (2014) *Sensory Processing Challenge: Effective Clinical Work with Kids & Teen*. London: W.w.Norton & Company, Inc.
- Bremner, A.J, Lewkowicz, D.J., & Spence, C. (2012). *Multisensory Development*. United Kingdom: OUP Oxford.
- Cho, E. (2016). *Pathways to early childhood teacher preparation*. New York: Routledge.
- Cosentino, G., Leonardi, G., Gelsomini, M., Spitale, M., Gianotti, M., Garzotto, F., & Arquilla, V. (2019). GENIEL: An auto-Generative Intelligent Interface to Empower Learning in a Multi-Sensory Environment. 10.1145/3308557.3308685.
- Davies, C. (2019). *Creating Multi-sensory Environments: Practical Ideas for Teaching and Learning*. New York: Routledge.
- Edirisinghe, C., Podari, N.H., & Cheok, Adrian. (2018). A Multi-Sensory Interactive Reading Experience For Visually Impaired Children; A User Evaluation. *Personal and Ubiquitous Computing*. <http://doi.org/10.1007/s00779-018-1127-4>.
- Gascoyne, S. (2011). *Sensory Play: Play in the EYFS*. London: MA Education Ltd.
- Goodwin, P.M. (2008). Sensory Experiences in The Early Childhood Classroom: Teachers' Use of Activities, Perception of The Importance of Activities and Barriers to Implementation. *Thesis Ijazah Sarjana*.
- Holloway, I., & Wheeler, S. (2013). *Qualitative Research in Nursing and Healthcare*. 3rd Edition. United Kingdom: John Wiley & Son.

- Krejcie, R.V. & Morgan, D.W. 1970. Determining Sample Size For Research Activities. *Educational and Psychological Measurement*, 30 (3): 607-610.
- Masnan, A.H., Ellina, N., Anthony & Syahindah, N.A.(2019). The level of teaching knowledge preschool teachers in Malaysia. *Asia-Pacific Journal of Research*, 13(2), 39-48.
- <http://doi.org/10.17206/apjrece.2019.13.39>.
- Pagliano, P. (2017). *Multisensory Enviroment*. United Kingdom: Routledge.
- Pagliano, P. (2013). *Using Multisensory Enviroment: A Practical Guide for Teachers*. United Kingdom: Routledge.
- Patch, C. (2020) *Sensory Play for Toddlers and Preschoolers: Easy Projects to Develop Fine Motor Skills, Hand-Eye Coordination, and Early Measurement Concepts*. New York: Simon and Schuster.
- Toth, J.E. (2019). *Sensational Sensory: Unlock the World of Sensory Around You As You Teach Others How to Harness It*. United Kingdom: Independently Published.
- Watts, M. (2020) *Exciting Sensory Bins for Curious Kids: 60 Easy Creative Play Projects That Boost Brain Development, Calm Anxiety and Build Fine Motor Skills*. MA: Page Street Publishing.
- Yaswinda (2018). Development of a Procedural Model of Science Based on Multisensory-Ecology for Early Childhood Education. *Adv. Soc. Sci. Educ. Humanit*, 1(169), 164–167.
- Yuhariati, Y. & Yuriansa, A. (2018). Patterns playing for early childhood education: Mathematics learning for early childhood education. *Journal of Physics: Conference Series*, 1088, 1-5.