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Inculcation Religiosity in Preschoolers Local content curriculum

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ABSTRACT: Millennial era life is a big challenge, humans need a strong footing to face all the problems. Religion is God's guidance that becomes the handle of life and it is important to instill religious beliefs early on. The purpose of this study was to find the cultivation of religiosity in preschool children in Kindergarten Aisyiyah Branch and Kindergarten Santa Maria in Kartasura Regency. This study uses qualitative methods with data collection tools, namely interviews, direct observation, and document analysis. Data validated using triangulation of methods and sources. The results showed that the religiosity of planting in the TK Aisyiyah Kartasura branch had more burdens than in the Santa Maria Kindergarten. While its nature is more balanced between vertical ritual content and horizontal content in TK Aisyiyah Kartasura branches compared to TK Santa Maria. The cultivation of moral education is carried out through a step-by-step process starting with teaching to say and answer greetings (Islam), saying good morning and evening to non-Muslims and inviting children to always pray in every activity. Vertical ritual planting in TK Aisyiyah Kartasura branch has more burden through the practice of prayer, memorizing prayers and memorizing short letters from the Qur'an all in Arabic compared to TK Santa Maria only emphasizes the memorization of prayer in Indonesian.

Keywords: Inculcation religiosity, Pre-schoolers, Local content curriculum

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1 INTRODUCTION

Religious faith, beliefs, and activities are important aspects of the lives. Although researchers have found a general age trend for religiousness to decline from childhood through adolescence (Bridges & Moore, 2002). The importance of religious education makes it obligatory to be taught from an early age. research Heiphetz, Lane, Waytz, & Young, (2016) shows that children's religious cognition often matches the implicit responses of adults, revealing anthropomorphic ideas about God's mind The year 2009 was the year of the launch of Early Childhood Religious Education, which was established by the Minister of Religion. Religious education carried out early makes students not only get religious understanding correctly but also avoid the dangers of negative influences such as drugs. The minister of religion does not believe that if a person obtains a true understanding of religion, it will give birth to fanaticism, early religious education also creates children to understand all forms of difference from every existing religion. In addition, it makes children understand that every religion does not teach something negative. In Indonesia, everything is more possible for parents and educational institutions to offer religious education from an early age for children with all the atmosphere and religious aura that is more pronounced.

The age of children is a time when things are easily formed and will find how their future will be. Children 5-7 years prefer teleological explanations, but this preference diminishes with age. Children find teleological explanations more useful than adults. Therefore, understanding goals in life events is rooted in childhood, which has the potential to show more general sensitivity to goals in the social and natural world (Banerjee & Bloom, 2015). That is what underlies the importance of research conducted so that a person will not make fatal mistakes in shaping the child's religiosity in his childhood. Someone who in his childhood gets guidance, childcare, education, experience, and training in matters that are religious, polite and light-handed (such as helping) to others, empathy for distress and all social problems in the surrounding environment, then after adulthood, he will feel the importance of religious values in his life and personality towards religious maturity.

Childhood studies place emphasis on children's agency, their ability to understand their own world and act upon it. Children actively participate in meaningful social interactions in both formal and informal settings. It is vital to understand how children interact in an increasingly diverse world where they meet cultural and religious difference. The results of (Rissanen, Kuusisto, Hanhimäki, & Tirri, 2018) research with children show the role of agency in developing religious knowledge and forming inter-ethnic friendships, and the crucial role schools play in empowering pupils to interact with an increasingly diverse society. Religion direct the behavior of children and adolescents to good behavior at an early age, it greatly influences the development of children in the later stages.

The notion of religion, religious institutions and their function are social constructs. Meaning religion is not an 'object' that exists external to and unaffected by the interpretations and actions of social actors, rather individuals play an active role in the construction of the social reality of religion and its place in society. It must be acknowledged that religion, like culture, 'has a reality that persists and antedates the participation of particular people and shapes their perspectives', but this should be understood as a 'point of reference' only, that is constantly being reinvented and reinterpreted by social actors. Succinctly writes, religion can be considered 'an historical and human variable, a social and cultural system and discourse' (Davies, 2019).

Pre-schoolers live in the world of play. Cultivating religion in early childhood through various methods. (Kienstra, van Dijk-Groeneboer, & Boelens, 2018) found a method that focuses on how early childhood can stimulate learning through these religious stories, to show relationships with

their own values and truths. High thinking skills in children, namely the effectiveness of religious thought through learning that is of interest and the role of the teacher playing is important to improve religious thinking in early childhood. The curriculum for pre-schoolers have to more flexible, according to the abilities and interests of children. But it is still found that in many Early Childhood institution, curricula that carry out inflexible religious education activities and the material is very heavy. Many religious education materials are not suitable for the age of child development so that children are actually burdened by religious education. This makes children less comfortable and less enjoy religious education in the psychological development of children.

Suyadi, Destiyanti, & Sulaikha, (2019) research shows that the development of religious-moral values in early childhood is not achieved because of the behavior of children who are not noble, poor quality of morals, and lack of concern for the school environment. This research also shows that there are internal and external factors that become the achievement of religious-moral values in elementary age children because the curriculum with religious content is too heavy and does not focus on developing values in daily life and moral development, but is more focused on memorizing. This shows the importance of planting religious education in early childhood. Therefore, the purpose of this study is to find out inculcation religiosity in the branch of Aisyiyah kindergarten and the Santa Maria kindergarten in Kartasura regency.

2 THEORITICAL STUDY

2.1. Early Childhood Religiosity

Children's religiosity elucidates recurring themes which contribute towards describing spirituality. A key theme arising in the broader literature on spirituality is that it is widely held to be an innate aspect of being human. Children are thus often believed to have a natural capacity to be spiritual; something which education has the potential to nurture. Four types of consciousness emerged from conversations with the children. These were relationships with self, other, the world and God/the transcendent. Other conceptualizations of the relational have emerged. For example, Fisher, (2013) has developed a quantitative tool, the Spiritual Health and Life-Orientation Measure (SHALOM), to assess four domains of relationship which he classifies as relationship with self, others, environment and God/the Divine (Adams, Bull, & Maynes, 2016). With regards to relationships with self, identity is a core theme. Within identity, the search for meaning and purpose in life emerges as another central tenet of spirituality. For some, the search relates to the transcendent, which many call God. This search engages with the ultimate questions posed by humankind: Why are we here? What happens after death? Is there a God? children are natural philosophers, instinctively asking these kinds of questions.

To study children's religiosity at the beginning of the twenty-first century provides a prime opportunity for exploring the personal, social and global interconnections in the understanding and practice of spirituality. Countless definitions of spirituality have been suggested, yet it has also been said that spirituality escapes definition altogether. Open-ended description which can be applied to childhood where the fabric of human life first emerges, is nurtured into further growth and shaped towards its adult expression. King, (2013) show on the spiritual potential of childhood, its awakening and development relate closely to the development of the spiritual potential of children.

To attract children's spiritual potential into conscious spiritual awareness requires sensitive teaching from the earliest childhood onwards, through formal and informal education by parents, teachers and friends. It is necessary to develop spiritual literacy in a more intensive manner than is happening

now. Spiritual intelligence is associated with more comprehensive spiritual literacy in its application. Spiritual literacy does not only develop by itself; it needs to be nurtured and nurtured, it needs to be sown to grow and develop. For this, spiritual education is important at all levels, not only for children and adolescents, but everywhere, at home and at school. Spiritual literacy needs to be an integral part of lifelong learning to begin the global spiritual awakening that is urgently needed in the world today, so that the human species can evolve into greater fulfilment of life (King, 2013). Educational efforts are reconnecting and integrating spiritual and religious into early childhood education. Give children renewed and re-created religious traditions that are appropriate for millennial times and for each generations (Scott, 2014).

Spiritual development refers to a person's involvement with what he considers sacred, divine, or outside the material world. Religion, on the other hand, creates doctrines, beliefs and rituals that bind believers with this process and with each other. Curriculum development of the value of spirituality in early childhood through religion-based learning will develop aspects of children's moral and social development (Benson, Scales, Syvertsen, & Roehlkepartain, 2012). Oftentimes, the micro and macro systems in the child's environment are in harmony, such as when a child is treated with warmth and acceptance by caregivers in a culture where most people have a belief in God the Most Good. However, micro and macro systems can also experience disharmony. For example, a child taught at home that God is real but immaterial can attend school in a secular-rationalist education system that features secular / materialist metaphysics, and where God is rarely mentioned if ever mentioned (Granqvist & Nkara, 2017).

The importance of religious cultivation at an early age is to reduce the deterioration of mental health in adulthood. Significant associations between childhood difficulties and adult mental health have been documented in epidemiological and social science research. The research recommendations Henderson, (2016) suggest some support for religious involvement in moderating or protecting the harmful effects of childhood difficulties on self-esteem. Religion if not properly cultivated from an early age can also strengthen adverse effects on adult mental health.

2.2. Early Childhood Religiosity Education Materials

A critical literature review of early childhood spirituality to move further towards an understanding of what is characteristic of children's spirituality. Ontological issues surrounding the concept of spirituality in the wider literary context are explored, relevant themes are given that many practitioners seek definitions to facilitate the implementation of information from their respective curricula (Adams et al., 2016).

Early education materials for children from 0 to 6 consist of:

(1) *Sensory Material*: Here the child learns a lot from the senses, then the material delivered must support the cognitive aspects of sensory cognition, such as by introducing the child to the names of objects he sees, hears, and touches with his senses. It can also be done by showing the material with pictures or toys.

(2) *Intuitive Material*: Here the child must develop his feelings or intuition, the right way is to provide material in the form of songs, for example *Pelangi-pelangi alangkah indahmu* (Rainbows, you are so beautiful). With the introduction of material in the form of songs, it is expected that children can develop intuitively well.

(3) *Fantasy Material*: For cognition, fantasy material provided is in the form of material that makes the child's fantasy develop like stories or fables which in itself makes the child develop his fantasy.

3 METHOD

This research uses qualitative research. This means that this research does not use statistical formulas in the analysis but more words from the object under research because the results collected is data on the implementation description in a process, namely the process of Inculcation religiosity in the Kindergarten, Aisyiyah Branch Kindergaten and Santa Maria Kindergarten, Kartasura.

The research conducted in the Branch Aisyiyah Kindergarten and Santa Maria Kindergarten with 17 children and 4 teachers for Aisyiyah Kindergarten, and Santa Maria with 30 children and 3 teachers as well as 4 extras who carried out different religiosity learning activities. It is different from the background of religion in the two institutions. The Aisyiyah Kindergarten is under the Islāmic religious organization of Muhammadiyah while the Santa Maria Kindergarten is under the auspices of Canisius the Catholic religion representations.

Data collection techniques use interviews, direct observations and document analyses with a focus on the inculcation of religiosity in existing classes, places of worship used in the process of religious learning as well as areas of Faith and Piety (*iman dan taqwa*).

Data validity used in this research is methods and sources triangulations. The data obtained considered valid, with using a variety of sources (multiple sources) with one research focus. The data obtained from the documentation through observation and interviews with one research focus or vice versa. Thus, the data are relatively similar between those obtained with source triangulation and method triangulation.

Data analysis in this research using an interactive model. This means the process of organizing and into basic patterns, categories and description units so that themes found. Achievement of this research theme through data reduction is summarized, sorted out the main things, focused on important things, looking for themes or patterns.

4 RESULT AND DISCUSSION

4.1. Result

4.1.2. Inculcation Religiosity in Preschoolers in the Aisyiyah Kindergarten Branch Kartasura 2018/2019 Academic Year

Aisyiyah Kindergarten Branch Kartasura is an educational institution based on Islam with a Muhammadiyah religious organization background in the field of women namely 'Aisyiyah. Based on that, this institution uses 2 curricula related to the Inculcation of Religion and Noble Morals. The curriculum refers to the curriculum set by the Ministry of National Education and the Local Content Curriculum is in accordance with the Characteristics of Aisyiyah/Muhammadiyah's education so that the religious content is more dominant. And the number of hours of religious content is also a lot and varied. That was stated by the Aisyiyah Management Branch Kartasura:

“The curriculum at this institution uses 2 references. Ministry of National Education's reference so that students master competencies according to the graduate competency standards set by the ministry. In addition, students are also able to develop competencies in accordance with the spirit of this institution, namely Muhammadiyah/Aisyiyah.”

The statement shows that Aisyiyah Kindergarten students are directed to become Indonesian Muslims who are humble according to the conditions and situation of Indonesia. This is consistent with the vision which states that:

“The realization of a generation of muslims who have faith and noble character as well as intelligent, independent, and creative”.

The vision states that the main target of this educational institution is to make students who have faith and noble character in addition to making students smart, independent, and creative. The vision is described in the mission as follows: (1) Laying the foundation of *aqeedah* in accordance with the Qur'an and Sunnah; (2) Forming morality and personalities of muslim people who are pious, independent, creative and intelligent in accordance with Islamic values as a provision to live together in the midst of family and society; (3) Help lay the foundation towards the development of attitudes, behaviors, knowledge, skills, and creativity needed by students in adjusting to their environment and for further growth and development.

The vision and mission show that Aisyiyah Kindergarten strives for students who have faith and are well-mannered. To achieve this vision and mission, the institution follows it up in the curriculum of Religion and Noble Ethics which refers to the Ministry of National Education decree on the National Education Minister Regulation No. 58 on PAUD Standards. This was stated by the head of ‘Aisyiyah Kindergarten:

"The curriculum used by our institution refers to the Ministry of Education Regulation on Early Childhood Education Standards and the curriculum is in accordance with the provisions of Aisyiyah which are local content.”

In accordance with the standard provisions stipulated by the Ministry of Education, the scope of development of Kindergarten students is related to Religious and Moral values in the form of responding to matters related to religious and moral values which include: (1) Beginning to imitate the movement of prayer in accordance with the religion; (2) Beginning to imitate short prayers according to his religion; (3) Beginning to understand when to say hello, thank you, sorry, and so on.

These provisions are in accordance with the level of development achievement of children aged 2-3 years. While at the age of 3 - <4 years, the scope of the development of values with religious and moral values is in the form of responding to matters related to religious and moral values which include: (1) Beginning to understand the notion of opposing behavior even though it has not always been done such as understanding good-bad, right-wrong, polite-disrespectful behavior; (2) Beginning to understand the meaning of pity, and love for God's creation.

The curriculum is strengthened with local content which includes *aqidah-akhlak* (morality and belief in One God), A1 Qur'an & Hadits, Worship, Shirah, and Aisyiyah-an and *Kemuhammadiyahan*. The explanation was conveyed by the head of Kindergarten ‘Aisyiyah as follows:

“On the content of Moral Aqeedah, students are directed to be able to master basic competencies: knowing the pillars of faith as the main *aqidah* of a Muslim, knowing morals towards oneself, knowing morals towards others, and getting to know the environment.”

The curriculum of The Islamic Religious Education local content of Branch Aisyiyah Kindergarten written in the following table:

Table 1. Moral Aqeedah Content

Basic Competency	Learning Outcome	Indicator
Children know the pillars of faith as the basic Aqeedah of a Muslim	Are able to know Allah, Allah's asthma, and His creation	Mention the objects of Allah's creation Distinguishing the creations of Allah and man-made Are able to call the tayibah (*takindergartenir*, *tahmid*, *tasbih*, and *tahlil*).
	Are able to Know the Angel of God	Mention the names of 10 angels and their duties.
	Are able to get to know the Prophet and Apostle	Mention 25 names of prophets and apostles Exemplify 4 characteristics of the prophet.
	Are able to get to know God's Books	Know the books of God revealed to the Prophets. Know the book of A1 Qur'an as a guide to Muslim life. Know the etiquette of the Qur'an
	Get to know the End Times	Know at the end of the day. Know the existence of heaven and hell.

The first learning outcomes in the form of material about knowing God, the names of Allah, and His creation are implemented through the singing method. The verses of the song are as follows:

Asy-hadu ala ilaha illa-Allah
Wa asy-hadu anna Muhammad ar-Rasulullah
My testimony that of There is no God but Allah
And my testimony that of Prophet Muhammad was the messenger of Allah.

After the Question and Answer, continue singing with the following teacher and students:

I love Allah... 2x you too ... 2x
I love the Prophet... 2x you too, .2x

The children together with the teacher are eager to sing the verses of the song interspersed with questions and answers, so the classroom conditions are very dynamic. Dynamics can be seen from the process of singing and question and answer conducted by the teacher with answers from students who are very enthusiastic with a strong and loud tone. The second learning outcome in the form of material about knowing the angel of God is carried out through the method of singing. The verses of the song are as follows:

There are 10 angels of God
Who carries out God's commands?
There is an angel of death
There is also a generous person
Jibril, Mikaeel, Izroil, Israfil,
Munkar, Nakir, Rokib, Atid,
Malik and Ridwan

Children with singing actually practice having fun when they receive religious knowledge, so that it does not seem tense, even facilitating children's memorization. The third learning outcome in the form of material about knowing the Prophet of God is applied through the method of singing. The

third learning outcome in the form of material about knowing the Book of God is applied through the method of poetry.

The material shows that the Aqeedah curriculum directs students to understand their own religion and the religion of others. This can be seen in the introduction to be able to understand and know God's books from the Book of Psalms, the Torah, the Gospel and the Qur'an. In addition, 25 prophets/Apostles were introduced who brought different treatises/revelations to different religions. The explanation shows that in the learning of religiosity in the field of aqeedah, children are introduced to the concept of Aqeedah through song and poetry. Aqeedah strength is strong and can respect differences that can lead children to do good. So the moral code is very simple. The picture is as follows:

Table 2. Moral Aqeedah Content

Basic Competency	Learning Outcome	Indicator
Children know morals towards themselves	Accustomed to Discipline behavior	Implement the rules/procedures Carry out daily activities with Islamic manners Pray according to the situation and conditions
	Are able to show confidence	Doing the work, yourself Dare to come forward Convey their wish Show proud to masterpiece
	Are able to be responsible	Carry out the task thoroughly Know one's own/others' belongings Put something back in its place. Maintain cleanliness and neatness

The indicators of implementing the rules ‘Aisyiyah Kindergarten Branch Kartasura makes rules/regulations for students and who deliver students. This code is posted on the bulletin board in front of the entrance. In addition, parents of students are given orientation at the beginning of entering the new school year and given a copy observed at home. The pattern is so that there is a work together between the school and the family and mutual support.

The second indicator is that the child carries out daily activities in an Islāmic way, achieved by giving children the obligation to wear Muslim and Muslim clothing every day. This is to train children to want to close their genitals early on. The other children when they want to enter the gate are welcomed by the teacher by greeting and shaking hands. That way children know and practice the habit that when they meet, they have to say hello, greet and smile to others.

Achievement indicators are that children are able to say prayers according to situations and conditions by means of children being trained to read prayers when entering the school gate, want to go to school, start learning and end learning. These three indicators try to discipline the child to adjust to school regulations.

Learning outcomes in the form of children can show self-confidence achieved by making a code of conduct for introductory children are only allowed to arrive at the front gate of the school and children not be watched while at school even outside the school fence. Children accompanied by

an introduction only during the first week of the new school year. That way children exercise independently and do not always depend on others. They practice doing what their teacher assigned themselves. Moral Materials about morality towards others described as follows:

Table 3. Moral Aqeedah Content

Basic Competency	Learning Outcome	Indicator
Children know morals towards others	Accustomed to the mandate	Ask for permission if using someone else's Take care of another people's property Return borrowed items

The above indicators are achieved with a variety of learning. Children are trained to ask permission from the teacher when they want to use the game equipment owned by the school. When the game equipment is scattered less organized, children are invited to rearrange together to be organized and placed on the toy rack available.

In addition to children knowing morals towards fellow humans, Kindergarten children 'Aisyiyah is taught about knowing morals towards the environment, animals, and plants and protecting the environment. The picture is in the following table:

Table 4. Moral Aqeedah Content

Basic Competency	Learning Outcome	Indicator
Children know morals towards the environment	Love animals and plants	Love animals Care for plants

To get to know the character of the environment both animals and plants, children are given a song about the types of animals. The verse is as follows:

Sheep sheep
Fish fish
Chicken chicken
Cow cow

When the teacher sings this stanza with the child demonstrating the types of animals. Flap both hands for the sheep and say chicken. When declaring fish-like swimming and when calling Cow fingers point forward. Singing and modeling make children live concretely the types of animals. In addition to singing, children are given fable stories about animals that worship. Like Mio (cat), who is friendly with Sali so that all activities of Sali are always followed, including when Sali is praying, even if she is pulling Sali's blanket to get up early and do dawn prayers. Like the following song lyrics,

"Every day I wake up in the morning, I fold the blankets neatly, continue to shower and brush my teeth at dawn prayers do not forget anymore".

In addition to Aqeedah and Morals, children are given the contents of the Qur'an and Hadith. Description of the material as follows:

Table 5. Al-Qur'an & Hadith Content

Basic Competency	Learning Outcome	Indicator

Children are able to memorize short letters in the Qur'an	Are able to memorize short letters in the Qur'an well, correctly and precisely	Memorize letters in the Qur'an 1. Al Fatihah 2. An Naas 3. Al Falaq 4. Al Ashr 5. Al Kautsar 6. Al Lahab

Memorizing short letters is done every day, especially the Al-Fatihah and Al Ashr. Al Fatihah is read when the initial prayer enters class, then another short letter after reading the prayer. In accordance with the Aisyiyah curriculum in semester 1, I memorize the letter An Naas and Al-Falaq. And Al Ashr's letter is always read when going home. When children have not memorized the memorization by imitating their teacher first by beheading the correct verse and then imitating the children. In addition to children being monitored memorizing short letters in the Qur'an is also given memorization of short prayers in daily life. The material is in the following table:

Table 6. Al-Qur'an & Hadith Content

Basic Competency	Learning Outcome	Indicator
Children are able to memorize daily prayers	Are able to memorize daily prayers	Memorize and practice daily prayers 1. Prayers before studying 2. Prayers for traveling 3. Prayers for using the vehicle 4. Prayers before and after meals 5. Assembly closing prayers 6. Prayers for both parents 7. Pray for the good of the world and the here after 8. Prayers after ablution 9. Prayers after the call to prayer 10. Prayers before and after meals 11. Prayers for visiting sick people 12. Prayers when you sneeze 13. Iftar prayers 14. Prayers for mirroring 15. Prayers in and out of the toilet 16. Prayers in and out of the mosque

The way to memorize the prayers above is the prayer before learning is always read at the beginning of the lesson and traveling prayer is always read at the end of the lesson/prayer when going home. Prayers before and after meals are always read every day at rest (meals). Other prayers memorize them according to the schedule, which is Tuesday, sometimes they are also memorized when certain conditions such as a child sneezing, and at that time they also memorize a prayer when sneezing. The memorization of the prayers above is the first that the teacher has just mimicked the children than two/three children are told to mimic those whose voice is loud/eager to imitate the child will get a star image. Such habituation can make children conditioned to always read prayers whenever, whenever and wherever.

In addition to the child being able to memorize as described above, the child is also trained to memorize and practice short traditions with polite manners towards themselves and others. This is given to children so that from the beginning they are able to have good manners to anyone, anything and at any time. The following table illustrates the material about short traditions about modesty.

Table 7. Al-Qur'an & Hadith Content

Basic Competency	Learning Outcome	Indicator
Children are able to memorize and practice short traditions in daily life	Are able to memorize the hadiths and practice them in everyday life	Memorize the hadiths and practice them: a. Hadith concerning the ban on anger b. The hadith concerning smiles c. Hadith concerning spreading greetings

Hadith taught to children is a short tradition that is easily memorized by children and can be practiced immediately. When the child is angry with his friend, the teacher immediately reads the Hadith about the prohibition of anger. Likewise, when a child frowns, the child is recited from the Hadith command to smile. With this kind of model, children are warned gently without offending children.

In addition to introducing the material Aqeedah Morals and the Qur'an, the Hadith children are given a vertical worship load that is related to the pillars of Islam, ablution, and prayer with practice. The material is as follows:

Table 8. Prayer Content

Basic Competency	Learning Outcome	Indicator
Children are able to recognize, memorize, and practice the 5 aspects of the pillars of Islam in everyday life	Are able to memorize the pillars of Islam	1. Say the two sentences of the Shahada 2. Mention the pillars of Islam correctly.
	Are able to perform procedures for ablution properly and correctly	1. Perform procedures for ablution 2. Get to know things that are Cancel ablution 3. Know *tayammum* 4. Get to know various kinds of holy water and purify
	Are able to do the movements and recitation of prayer correctly	1. Mention and Demonstrate prayers 2. Pronounce recitation of prayer correctly 3. Know the times of the obligatory prayers 4. Know the number of rak'ahs in prayer 5. Recognize the recitation of dhikr after prayer.

The material above shows that children are introduced to the full pillars of Islam from the Creed, Prayer, Fasting, *Zakat*, and Hajj. In this semester the strengthening lies in the first pillar of Islam and the second pillar, Creed, and Prayer. When introducing the recitation of the shahada, the teacher and the child sing two sentences of the shahada in Arabic and its translation.

In the classroom, children are introduced to the theory and practice of *ablution*, *tayammum* and prayer with lectures and directly practiced by the teacher. After being taught a demonstration by the teacher, then the child is invited to the mosque to practice ablution and prayer. Children are taught directly in the water tap by doing the ablution procedures.

In the following week, the child was introduced *tayammum*. In the classroom, children are introduced to the theory and practice of *tayammum* and prayer with lectures and directly practiced by the teacher. After being taught a demonstration by the teacher, then the child is invited to the mosque to practice in each child can experience it himself. Children are taught directly on the walls of the mosque by practicing *tayammum*. The practice of ablution and *tayammum* is held every Friday.

Children practice ablution and prayer every Friday at the standard Muhammadiyah complex mosque. Children are taught and practiced from prayer to go to the bathroom and prayer after ablution, the prayer of both parents and prayer for the salvation of the hereafter.

Religiosity material is always conditioned by teachers in Aisyiyah Kindergarten through daily activities. That was conveyed by the head of 'Aisyiyah Kindergarten:

"We want children to always be conditioned to the religious atmosphere so that not only face-to-face material, but direct and indirect activities are conditioned to religious atmosphere and climate so that children feel comfortable in religion."

The statement is truly seen from the schedule of learning conducted every day as follows:

Table 9. Activity Schedule for Religiosity

Day	Activity
Monday	Memorization of short letters (Juz 'Amma) and memorization of Hadith
Tuesday	Daily Prayers and Islamic songs
Wednesday	Obedience and Iqra Reading Practice
Thursday	*Kemuhammadiyahan*'s poems
Friday	-

The table shows that between religious material and daily activities are not necessarily synchronous. However, there must be a process of habituation so that children can because it is usually done.

Children's achievements in school are communicated by the teacher through communication books every day so that they are monitored or acted upon. Therefore, children at school often say hello when they meet their friends and enter the room also occurs at home. But if the mastery of the child is not strong at school, the parents let them know so that they can be trained at home by parents.

4.1.2. Inculcation Religiosity in Preschoolers (AUD) in the Santa Maria Kartasura Kindergarten in the 2018/2019 academic year

The Kindergarten of Santa Maria Kartasura is an educational institution based on Catholicism under the auspices of the Canisius Foundation. In accordance with the spirit of the Catholic Faith and Indonesianism, the curriculum used refers to the provisions of the Ministry of National Education

and the Local Content Curriculum in accordance with the Characteristics of Education owned by the Canisius Foundation. This was stated by the Canisius Kartasura Foundation Management:

“The curriculum at Canisius uses 2 references in order to maintain the unity of Indonesia and the Catholic Faith. MONE Reference is used so that children master the graduate competency standards set by the ministry. Besides that, students are also able to develop their Catholic Faith competencies.”

This opinion shows that Santa Maria Kindergarten is trying to make Indonesian children who have Catholic faith so that they can become Indonesian Catholics. This is consistent with the vision which states that:

"Preparing children to become whole persons that is qualified, faithful and virtuous under the protection of the mother of the Church, Santa Maria

The curriculum is strengthened with simple local content by getting children to be familiar with their Lord. Habituation is first done when starting to enter class. Children are trained in morning singing. The morning song reads:

Good morning Lord Jesus,
I give my greetings.
I will pray well,
and according to my mother.
Lord Jesus bless the children at school
so that we are smart and holy throughout our lives.

Inculcation of religiosity through this song is carried out every morning when the child enters the class.

The beginning of the opening is more fun in the context of inculcating children's religiosity so that children do not feel burdened by their religion at least with Jesus. This was confirmed by the head of Santa Maria Kindergarten:

"Child, we introduce and point to Jesus so that we know the name of Jesus in everyday life because this pat is practiced every day. Besides that, children train themselves to animate religious teachings at the beginning of face-to-face learning".

After it is finished, the child enters the thematic learning as planned the day before. Seeing this condition, it seems that religious learning is not integrated with other learning and even looks separate from religious learning with other learning.

Religious Inculcation is seen again when before eating. Children are trained to pray to eat as follows:

Oh, my God,
we thank you for the fortune you gave us.
Thank you, my Lord.
Amin.

This prayer is familiarized by the school so that children become memorized and train themselves to be able to adjust to their prayers. After the prayer is finished, continue with the theme determined the day before. Religious inculcation will be seen again when the children prepare to go home by

singing first. The path leads the child to the daily introduction of Jesus. After the pat and prayer are over, the child is allowed to go home without having to shake hands with his teacher.

Looking at the explanation above, it can be seen that religious inculcation in Catholics is more dominated by prayers that must be said by all children every day. While in religious practice, less attention is seen when the child enters the classroom shaking hands with his teacher, but when he goes home, he does not shake hands. Santa Maria Kindergarten does not use a communication book between the school and home, so there is no synchronization and synergy between the two. Therefore, there is no control over the sustainability of religious programs on both sides.

4.2. *Discussion*

Inculcation religiosity in children in Playgroups is supported by the environment of educational institutions, teachers, and the learning process. The carrying capacity of religious content is very strong in Aisyiyah Kindergarten because of teacher resources that enable the Inculcation of younger religiosity because it is supported by 3 teachers with religious education backgrounds, namely alumni of Islamic Higher Education. This institution is different from the Santa Maria Kindergarten where almost no teacher has a religious education. Religious Inculcation is seen in terms of the time of the two places studied differently in terms of learning time.

Table 10. Comparison of Entrance Hours and Return Hours

Institution	Day	School time	Home time	Home time Friday	Home time Saturday
Aisyiyah Kindergarten	Monday–Friday	07.30	10.00	09.30	Holiday
Santa Maria Kindergarten	Monday–Saturday	07.30	09.45	09.45	09.00

The table shows that the research time is longer at the Kindergarten Maria Santa because it starts Monday through Saturday when viewed from the day of research. However, it will be shorter if viewed from the research hours. Although the difference is about 15 minutes. However, if the total is actually Santa Maria Kindergarten, the research hours are the same as Aisyiyah Kindergarten.

The same learning time is given more religious Inculcation on the material side of the Aisyiyah Kindergarten Because the material consists of Aqeedah Morals, al-Qur'an Hadith, Worship, and daily prayers. The habit of praying such as prayer to learn, the prayer of parents, prayers before and after eating, prayers want to learn, prayers before and after sleep and prayers of happiness in the world and the hereafter. This prayer is done every day. This research is almost the same as the findings of (Holloway, 1999) who found that at Buddhist preschool, the curriculum was designed to strengthen children's virtue, intelligence, and physical well-being. Slightly different materials in Buddhist preschool the emphasis is on achieving literacy and numeracy skills. Lessons are delivered in the context of the whole group, with an emphasis on absorbing content rather than encouraging personal exploration and expression.

In addition, habituation to say hello and shake hands when going to school with a teacher. Islamic pat and chanting are also accustomed to the child every day so that it is embedded in the heart of the child's good teachings. Whereas in Santa Maria Kindergarten is more dominant in the habit of praying when entering learning, eating prayer and prayer when going home. Its internalization is through habituation by singing and pat. This model makes the child's acceptance of religious values in a cheerful atmosphere.

These findings indicate that Early Childhood Education as a substitution of basic education gives children the right care model (Departemen Pendidikan dan Kebudayaan Depdikbud, 2007). This means PAUD is not limited to children's education but is also related to the provision of appropriate care in accordance with the level of growth and development.

The environment for the care and education of Preschoolers is according to Arce, (2000, p. 42) is a place where people interact for the common goal in parenting and educating children. For this reason, the role of parents from the perspective of child development is how parents facilitate, support and assist the development of children not based on the needs of parents (Eva L., 2013, p. 64) so that the development of student religiosity at an early age can be optimal.

5 CONCLUSION

Inculcation religiosity in Preschoolers in the Aisyiyah Kindergarten Kartasura Branch uses 2 curricula, namely the curriculum stipulated in the Ministry of Education on Early Childhood Education Standards and the local content curriculum set by PP 'Aisyiyah. Whereas inculcation religiosity in Preschoolers in the Santa Maria Kindergarten in Kartasura Regency uses 2 curriculum references, namely the curriculum stipulated in the Ministry of Education Regulation on Early Childhood Education Standards and the local content curriculum created by the Canisius Foundation.

Inculcation religiosity in the Aisyiyah Kindergarten branch Kartasura has more burdens than in Santa Maria Kindergarten. While its nature is more balanced between the vertical ritual content and the horizontal content on the Aisyiyah Kindergarten branch Kartasura compared to the Santa Maria Kindergarten. The Inculcation of moral education is conducted through the step-by-step process starting with teaching to say and answer greetings (Islam), saying good morning and afternoon to non-Muslims and inviting children to always pray at any activity.

Vertical ritual Inculcation in Aisyiyah Kindergarten branch Kartasura has more burden through the practice of prayer, memorizing prayers, and memorizing short letters from the Qur'an all in Arabic compared to Santa Maria Kindergarten which only emphasizes the memorizing of prayers in the Indonesian language. The habit of religiosity in preschoolers requires teachers who are able to master the material related to religiosity so that to offer examples and examples will get good results.

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Children's Outdoor Activities and Parenting Style in Children's Social Skill

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ABSTRACT: Physical activity is very important for early childhood, especially outdoor activities that add a lot of new experiences. This study aims to check the relationship of children's outdoor activities and parenting styles and children's social skills. The participants are 125 parents of early childhood who attend kindergarten. The research method is a descriptive study using the relational screening model. The results showed that there was a relationship between outside play and parenting style on the social skills of children in their childhood. Democratic parenting styles are found to promote children's social skills, while authoritative parenting styles have a negative correlation with interpersonal skills, the ability to express verbally, self-control, listening skills, emotional management and adaptation to change. In the sub-dimensions of anger management and adaptation to changing skills is a significant difference between authoritative parenting styles and not permissive parenting with children's social skills.

Keywords: Early Childhood Social skills, Outdoor Activities, Parenting Styles

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1 INTRODUCTION

Urban residential problems had a negative impact for the lives of children, especially with the limited outdoor space. In expanse competition, developers tend to build land for high building use and investment property for the sake of trade benefits (Shi, 2017). Azlina & S., (2012) have stated their lack of a natural environment for children's outdoor playgrounds is very clear in urban residential areas. children's outside playroom to have deficiencies in cause of supporting condition, kinds and playable-functional areas and they are integrated with adult fitness facilities and some community activities. Parks and play areas in the city fall apart and centers for leisure activities are not widely available. The condition of the city led to the emergence of family violence, child abuse and neglect, adolescent antisocial activities, and juvenile delinquency behavior (Zajenkowska, Jankowski, Lawrence, & Zajenkowski, 2013). Accordingly, there is a little opportunity for children to attend outdoor activities due to limited area provided by the developers.

Methods In the capital of Jakarta, limited public space for children has also been problems as many places in Jakarta is surrounded by multi-store buildings, leaving only a narrow open space for children to play directly with natural objects. Early childhood children under 8 years old commonly enjoy playing outside by exploring the environment together with their peers. They do this to live through all aspects of their development. Playing outdoors willingly, and without restriction is very important for the physical activities and their developments (Junot, Paquet, & Martin-Krumm, 2017). Three girls and boys say they like to plant seeds. Most children claim that they always play with animals in the environment around their place of residence (Ghanbari-Azarneir, Anbari, Hosseini, & Yazdanfar, 2015).

The children are able to develop physical, mental and creative abilities by playing outside (Kozina et al., 2016). In addition, outdoor learning is believed to promote motivation, and academic achievement, increasing self-confidence and social development, improving health and child welfare (Strasburger, Jordan, & Donnerstein, 2012). The internet and technology have advanced rapidly in the era of the 21st century has created a non-formal learning environment. The data has shown that children ages 8-18 years spending more than 7.5 hours per day a week using media in school (Victoria J. Rideout, Foehr, & Roberts, 2010). The use of screen media in communication has eliminated not only a direct communication, but also in personal activities (Giedd, 2012). The results of polling displayed the children have been exposed to technology, and they had used it since the age of 5 years. Its modern lifestyle has created psychology and physic discordance where humans and natural world. Reduction in contact with the natural world, means extinction of (ecological) experience. If this prompt is allowed to continue, it will negatively affect communication skills. Play and move as children please in their environment will refine their development naturally (Wang, Zhang, & Baillargeon, 2016). The transfer of playing and moving from one place to another makes children understand each other's differences. This is very important as a foundation for developing their social skills.

One among factors contributing to children social skills is parenting style. Parenting style is quite significant to the development of their social skills (Saltali & Arslan, 2012). These parenting styles contribute with parents' attitudes towards their children. That parents who actively participate in the children's education process, tend to make sure the training to have a higher quality, and the result of the training could be more permanent. The parents who have basic knowledge and skills taking roles in children’s education revealed that their children are more successful in their education. The children will think that their mothers represent the world, and that each person in the world behave and act the same as their parents. Therefore, the parenting

style is generally influenced by cultural features as shown (Riany, Cuskelly, & Meredith, 2016). Children's behavior in early child will be shape the parenting styles impact on children behavior.

In terms of children's needs, it is important to build close relationships with parents so that they can display consistent behavior in the community to socialize with enthusiasm, independence and extroverted humans. This is also called a one-to-one situation related to childcare. It is common for parents and kindergarten teachers to rarely invite students to do outside activities on the grounds for the attention of strangers and lack of supervision from adults or teachers. A preliminary survey conducted by researchers showed that 91% of parents forgive their children for playing outside with safety, 85% stated that children do not do outside activities because they are still too small and fragile, and 60% found that parents do not allow them to play outside because of safety. This condition is similar to conditions in a kindergarten in South Jakarta. It is normal for parents and teachers to restrict children from playing outside for several reasons such as safety, worry about falling and getting hurt, children's clothes will get dirty and other reasons to support children's safety. The reason that parents agree with orders, and believe that this is not wrong is to protect their children. However, if this condition is left to remain, it will have an impact on children's social skills.

In addition, the style of raising children from parents is very important for healthy growth and for the child's existence able to develop positive personality structures. A positive parenting style contributes to the child becoming an individual who helps both himself and the community. Children will begin to shape their personalities and social behavior by building identification with the closest models Kol, 2016). Based on previous research problems, it is important to prove it through research that seeks a relationship between outdoor play with parenting styles in children's social abilities.

2 THEORITICAL STUDY

Childhood period is viewed as a moment of a playing time, having fun, and without coercion. Children who outdoor activity are physic beneficial, especially in developing their motoric skills (Fjørtoft & Sageie, 2000). The free play in outdoor on children can offer physical health benefits, enhancing problem solve skills, building social interaction and emotional development. Some research has showed significantly the benefits of interact by environment are for emotional and physical health, especially through pathways that intertwined natural green spaces with higher levels of social cohesion and sense of community. The teachers in kindergarten carry out their obligations in assisting the growth and development of children as much as possible through stimulation with respect to develop all aspects of children's growth include motoric, and social aspects through playing activities that can be done outdoors. In fact, there is growth concern that children lose their willing on engage in environment world than spent doesn't enough outdoors activity, although there are many known benefits to children's health (Louv, 2008). Changes in society today has affected the children's play experiences in their childhood. The time to play outdoors is diminishing, contributing to a more sedentary lifestyle, cutting off from the natural world (Bento & Dias, 2017). The uneasiness faced by the kindergarten teachers.

Are reluctant as they do not let the children to play outdoors for several reasonable aims, in attempt to avoid the children from bad people, accidents, and due to the limited green land availability. Research shown that measures the scale of relationship playing outdoors using The *Attitudes* toward *Outdoor Play (*ATOP)–fear show that the ATOP-fear scale is critical, negative related to nature, involved ride a bicycle, climb a tree, explore by Interest, this

is negative related to have video games, even though this relationship is only slightly consequential. The ATOP-fear scale score was higher among children who reported that their parents did not support their outdoor play in nature, yet this association did not reach statistical significance. Additionally, the children in urban environments are less accessible, and lack of appropriateness in terms of having natural areas to play (Lindsey, Maraj, & Kuan, 2001). This statement can be interpreted that the children find it difficult to get access to the natural outdoor play, as happens in all major cities in the world, that the natural areas has been covered by high-rise buildings, forced the children not to have proper spaces to play outdoors.
Outdoor space is defined as an area with open space dominated by grass and trees. This definition does not include areas which are dominated by playground equipment nor recreation facilities where its use is controlled, but probably the areas with large portions of both (e.g., city parks may include abandoned fields, or tennis courts) (Beyer et al., 2015). Outdoor activities (e.g., playing, moving around) are very essential for the lives of children, allowing them to experience both natural and synthetic elements in their environment will result the development of their cognitive, physical and social skills. Azlina & S., (2012) also claim that the children who play in nature have more positive feelings about each other. Special features and stimuli from the outside environment offer different play opportunities that can hardly be imitated indoors because they are still natural. The outdoor space could explained as an outside activity and changing environment, that is to move freely, rough crowded, that is associate the real as pure things. When outside activity, the kids take value from exposure to light, pure things and fresh air, as give bone growth, health, becomes stronger, supports gross motor development (Bento & Dias, 2017).

2.1 *Outdoor Activities*

Playing outdoor is one of the things that characterizes childhood, giving children the chance to explore, discover, practice, change, make, ask questions, and learn about the world around them. The children's basic needs such as freedom, adventure, taking risks, experimentation, and just being children are supported by the outside environment. There are two common misconceptions about outdoor play: 1) outdoor play is the time for children only when they want to exert their excess energy, and 2) a playground is just a good environment for children to increase rough motor skills. Children learn best when all their senses are involved. They are drawn in direct exploration of the world around them. Interacting with the natural world instils them appreciation for the natural things in the environment and teach them to respect for nature. Thus, it can be interpreted that playing outside performs outdoor play activities which are crowded and has direct contact with natural objects, free to move, indeed provides benefits for the children's development and growth.
That abundant prove showing gain of outdoor activity are very broad. An important reason for playing outside for children in their early childhood is the number of developmental tasks that must be achieved by them, to name a few; exploration, taking risks, developing their fine and axial motor, along with maximal absorption of basic knowledge which learned effectively through playing outside and the increasingly unpredictable direction of academic development (Johnson & Christie, 2009). During outside activity kids, are further more attractive than when they are inside room. These case could them to train gross motor doing activities, such as run, climb, swing, jump, and ride a bicycle. By playing outdoors actively while implementing these activities, they will instinctively build fine motor skills and cardiovascular endurance (Kozina et al., 2016).

Early childhood education now requires children to master cognitive abilities yet the system is not carried out with activities which supports children's health, or the activities are only performed indoors. It explains why playing outdoor is deeply pivotal for their healthy development. Public health is improved by fresh breath, that is guarantee they can refresh respiratory infections, to defend virus, and advance a body health system. Moreover, the increase of social skills is promote by outdoor play. Kids become patient waiting their turn to descend slides, work with others to build sand castles, or play some organized games.

2.2 *2.1.2 Parenting Style*

Parenting style as a style that parents do in fulfilling child's rights starting from an early age even when the child still in the womb. The nurture and childcare must be give a reinforcement, in conduct with rules of family and communal life (Webster-Stratton, Reid, & Hammond, 2001). that the parents need to be trained in parenting. Parenting styles is also influenced by culture (Riany, Meredith, & Cuskelly, 2017). It leads the parents to take care their children, according to their understanding of their own cultures. The incorporation of cultures in parenting has positive patterns, and is a reinforcement for parents in carrying out nurturing and caring for children. There are three types of parenting styles applied by parents. They are called permissive, authoritative and democratic. Each parenting styles has advantages and disadvantages in the development and growth of children.

2.3 *Social Skills*

Social skills are believed to encourage good manners, school achievement, and child well-being. Good social skills are reasonably paramount for successful. Good social skills allow what we will say, make any decision, and know what should to do in unexpected condition. The peoples who have good social skills increase their personality, academic achievement, social activity, family engaging and embraced in extracurricular. Good behaviors are also pertained to the school environment quality and school security as well. Social skills as cognitive functions. It further covers to verbal and nonverbal functions and behaviors performed by individuals are intertwined as interacting with others, including verbal or nonverbal communication as pointed out by Coleman & Lindsay, (1992).

The outdoor environment suggests attractive atmosphere for kids, and for older ages shown various factors of their personalities, that usually do not appear if their inside room. Based on the research result of Maynard & Waters, (2007) we realize outside activity could high increase knowledge of kids, facilitating more education interventions of adults.

Likewise, less conflict occurs while playing outside and children tend to work more together. Space characteristics (e.g., open and unpredictable) reached the shared goals among children, which leads to experiences of friendship among peers. During outdoor activity, the children may become teachers and students, sharing their knowledge and skills to complete different tasks or challenges. In this collaborative process, it is possible to develop empathy when they begin to understand the feelings and needs of others. An essential difference about socialization in the outside environment is that the opportunity to interact occurs progressively. It gives the children the possibility to choose moments to interact and connect with others, or play individually, without having to keep walking with each other since it happens so often indoor, closed and adjoining rooms. Interaction with adults also seems to be facilitated in the outdoor play area. At different times throughout the project, the adults realize that they feel more available to support children

outside, where they can feel calm and relaxed. This statement shows that the outdoor environment is not only a healthy environment for the children.

As students, the children who have good social skills in school had able to take social choices than strengthen self-interpersonal interaction and boost several accomplishments at learning. Good behavior which are able to be controlled by child include: (1) secure school environment, (2). Children's ability to resilience in the face crises forward or other pressure life (3). Children who are needs attention to overcome aggressive and stress, (4). The child who take personal responsibility for promoting school safety. Conversely, the children who are deficient in social skills have been proven for: (1). feel the difficulties in engagement to others (2). generate extremely refused from others that lead become the highest rejection of their peers. The rejection from others causes to several react with school abuse, (3). The children signs appear of depression, aggression and anxiety, (4). Less academic achievement as an indirect consequence, (5). Expose a higher of involvement in the criminal justice system, later when they become adults. The results of observations conducted that the lack of social behavior interferes with learning, teaching, and that many young people have never learned behavior which is suitable for social settings (situations where they have to interact or deal with others). They probably never learn by parents, either due to lack of training by older people or other systems of values and behaviors. Causes they haven't a role model at home and the environment that promoted appropriate behavior, but most of them did not implement it.

3 METHODS

3.1 *Participant*

This research was conducted in August 2018-December 2018. The research location in DKI Jakarta Regional Kindergarten School where TK is homogeneous. The research method used is quantitative research. The study population was 125 parents.

3.2 *Instrument*

The measured variables are determined in advance namely outdoor play which is designed to measure the components of the construct variable, namely: (1) confidence in the benefits of playing in the open (2) fear related to playing outside (obstacles), and (3) orientation towards unstructured game. Next to the variable dimensions of social skills namely: (1). Cooperation (2) Assertion (3) Responsibility (4) Empathy (5) Engagement (6) Self-Control. The aim is to calculate the total score scale from the three subscales above to measure the main aspects of children's attitudes towards playing in the open.

Social skills are defined as learned behaviors that encourage positive interactions and prevent negative interactions. Subdomains included in the Social Skills scale are: Communication, Cooperation, Assertiveness, Responsibility, Empathy, Engagement, and Self Control. Behavior standard scores are changed to a standard score of 100 and a standard deviation of 15, according to the test norms.

3.3 *Research design*

The research method is a descriptive study using the relational screening model which is a kind of screening model is a research model that aims to determine the existence or level of covariance between two and more variables.

3.4 *Procedure*

Parents are asked to fill out an assessment scale form to evaluate both social skills and problem behavior to evaluate both Social Skills and My Behavior Problems. In this measure, parents are asked to indicate how often the child displayed a variety of different behaviors during the last 2 months (never, rarely, often, almost always)

3.5 *Data Analysis*

Statistical analysis used Descriptive statistics were calculated for scale items. Relationships between variables were investigated using polychoric correlations which estimate correlations between underlying normally distributed latent variables, because items represent the category of streaks of the underlying continuous variables.

Factor analysis, using tilt rotation to allow correlation between factors, is used to examine the factor structure of items in the proposed scale. Hierarchies factor analysis is used to determine the measured items of an underlying construct. The correlation between scores based on factors and the average score of the analysis to determine the best methodology for assessment. Reliability uses ordinal alpha statistics based on polychoric correlations.

In addition, for each item the researcher calculated Cronbach's alpha if the item was deleted, item-scale correlation, and the proportion of respondents missed the item. Validity analysis was conducted to see the relationship between each scale and size of outdoor activities, sedentary activities, and support of parents to play outdoors.

4 RESULT AND DISCUSSION

4.1 *Result*

The Description of the Data. The following data obtained after using a questionnaire, then was made in the table below:

Table 1 The Description of the Data outdoor activity

Statements	Hard disagree	Disagree	Agree	Hard Agree
Outdoor activity assists children to think clearly.	11 (3%)	17 (5%)	158 (44%)	174 (48%)
Children feel scared of wild animals or bugs outdoors.	83 (23%)	151 (42%)	99 (27%)	26 (7%)
Children feel free while playing outdoors.	11 (3%)	17 (5%)	158 (44%)	174 (48%)
Playing outdoor in the nature promotes children become healthier.	6 (2%)	16 (4%)	170 (47%)	167 (46%)
Children are afraid of being hurt playing outdoors.	108 (30%)	166 (46%)	67 (19%)	19 (5%)

Children do not like playing outdoors as they uncomfortable of their playmates.	73 (20%)	122 (34%)	111 (31%)	51 (14%
Children are into exploring new games outdoors.	11 (3%)	36 (10%)	170 (47%)	143 (40%)
When a child is angry, playing outdoors calm him down.	21 (6%)	67 (19%)	166 (46%)	105 (29%)
Children do not like playing outdoors if strangers around.	93 (26%)	153 (43%)	85 (23%)	25 (7%)
Children love to try toys and games when they are outdoors.	13 (4%)	(11%) 193	40 (54%)	114 (31%)
Children are afraid to fall while playing outdoors.	125 (35%)	125 (35%)	97 (27%)	44 (12%)
Children are afraid of getting lost.	120 (30%)	21 (6%)	51 (14%	166 (46%)

Based on the data about children's attitudes towards outdoor play activities can be described as follows: Table 1 show the frequency of responses each indicator. Child are very responsive that outdoor activity has a high value for personality. Were mostly believe (48%) in the benefits of playing outdoors, help them to think more clearly, they feel free when playing outdoors (48%), they like to explore new toys and games outside the environment (40%) playing outside the room makes angry children become calmer (29%), trying to play and move more when being outdoors (31%). Data also shows that there are fears of wild animals or insects outdoors (7%), afraid of being injured while playing outdoors (5%), they are not playing outside because they are not comfortable with playmates (14%), they also dislike playing outside because there are foreigners (7%), afraid to fall while playing outdoors (12%) and afraid to get lost (46%).

	Think clearly	Afraid of insects	Free	Healthy	Hurt	Uncomfortable	Exploring	Calm	Strangers	Playing games	Fall	Lost
Think clearly	1	0,3	0,41	0,5	0,31	0,01	0,01	-0,05	0	0,01	-0,1	-0,06
Scared of Bugs	0,3	1	0,45	0,46	0,41	0	0	-0,12	0,12	-0,09	0,08	-0,01
Free	0,44	0,45	1	0,44	0,46	-0,01	-0,09	-0,14	-0,04	-0,11	0,08	-0,01
Healthy	0,5	0,46	0,4	1	0,52	-0,1	-0,03	-0,26	-0,16	-0,06	-0,08	-0,01
Hurt	0,36	0,41	0,44	0,51	1	-0,16	-0,02	-0,16	-0,05	-0,13	-0,15	-0,14
Uncomfortable	0,01	0	-0,01	-0,1	-0,14	1	0,34	0,26	0,24	0,3	0,3	0,42
Exploring	0,01	0	-0,06	-0,02	-0,02	0,35	1	0,32	0,25	0,27	0,44	0,34
Calm	0,06	-0,12	-0,14	-0,24	-0,16	0,24	0,33	1	0,3	0,25	0,33	0,42
Strangers	0	0,11	-0,04	-0,12	-0,22	0,25	0,23	0,3	1	0,31	0,32	0,45
Playing games	0,02	-0,03	-0,11	-0,04	-0,11	0,3	0,23	0,22	0,36	1	0,32	0,33
Fall	-0,01	0,07	-0,05	-0,03	-0,13	0,3	0,41	0,32	0,34	0,34	1	0,43
Lost	-0,04	-0,01	-0,69	-0,01	-0,14	0,43	0,32	0,4	0,43	0,31	0,41	1

Figure 1. Psychometric Analysis

Figure 1 shown the correlation of indicators in the scale. There are two groups of correlation plots. The first group shows concern about playing outdoors, or in the natural world, that the children face fear of wild animals or bugs outdoors, fear of being injure if playing outdoors, not playing outside because they are uncomfortable with playmates, do not enjoy outdoor activity because there are strangers, afraid to fall while playing outdoors and fear getting lost. The second group illustrates a positive correlation between the benefits of nature such as helping to think more clearly, feeling free when playing outdoors, likes to explore new toys outside the environment, making calm, trying toys and games while outdoors. The highest correlation is observed between

the fear of strangers (r = 0.45), fell (r = .043), uncomfortable (r = 0.42), calm (r = .42), lost (r = 0.41), explored new games (r = 0.34), think clearly (r = .0.06), and found a negative correlation on the scale of injury, illness, freedom, fear of insects which is (r = 0.01) and there is no sharp negative correlation between each measure of fear and benefits.

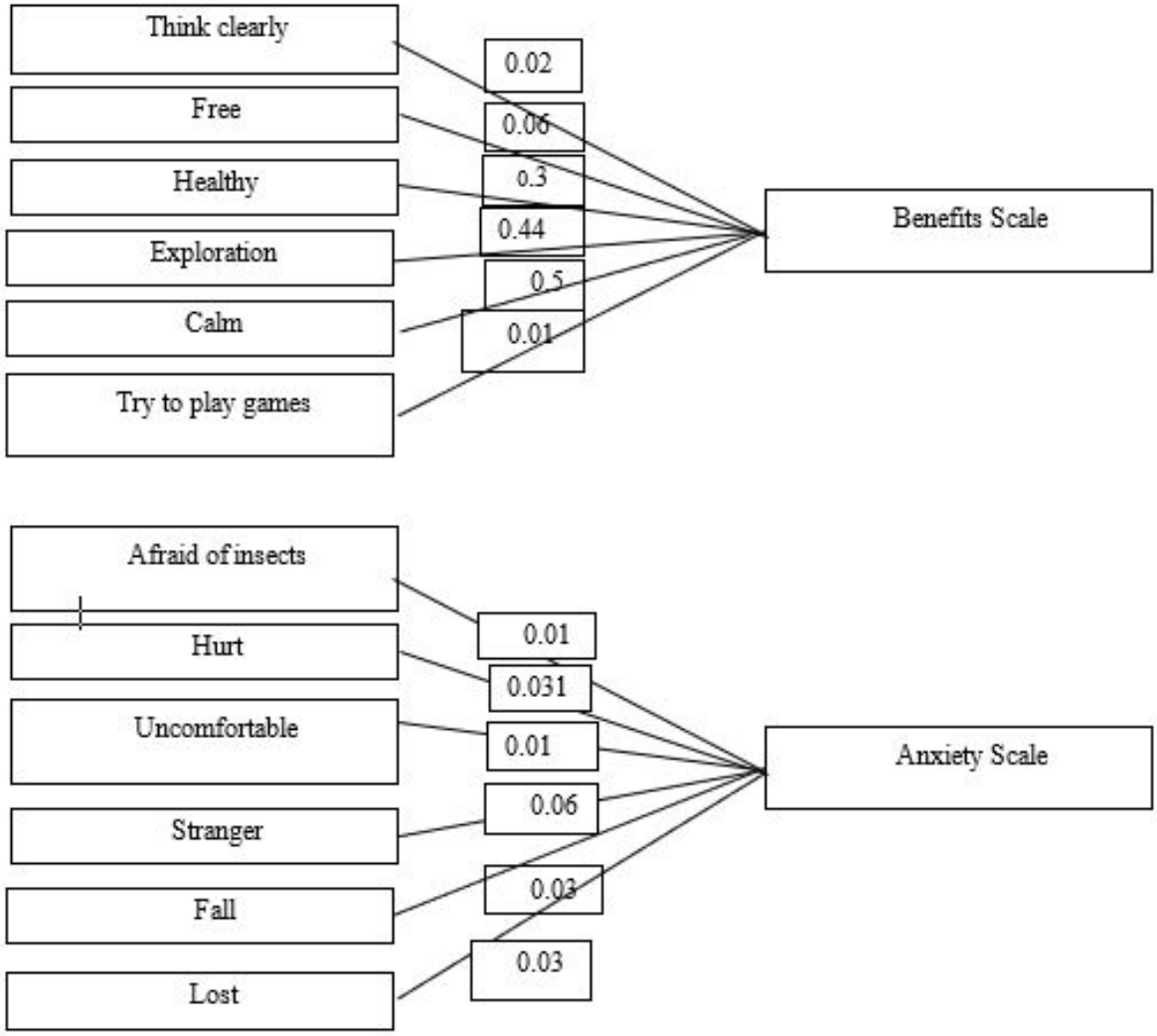

Figure 2. The Correlation Between Two Scales of Outdoor Play Attitude

This study uses a test of children's social skills, 23 items were finding out in a 3-point Likert-type scale, divided into three dimensions: civility and altruism, resources and self-control in social situations, and assertiveness with confronting. But the researchers determined only 7 items to be tested in the research sample. First– dimensions, politeness and altruism which involved abilities such as: The children behave politely, they convey thank you when praised, they say sorry, help their friends, and express positive feelings (smile, laugh, be happy).

Table 2. The Pearson Product Moment Correlation

No	Category	Number of Participant	Percentage
1	Authoritative	25	20.6%
2	Permisive	50	50.1%
3	Democratic	50	50.1%

Findings of Table 2 The Pearson product moment correlation is a result from changes in parental attitudes to children's social abilities. Positive correlation is attained in parenting democratic parents, and sub-dimensions of social skills rating scale reached– interpersonal skills, emotional management, and adaptation to change, ability to express verbally, self-control, listening skills. These results indicate that parenting democracy expands children's social skills. Despite of a correlation in a positive result in the sub-dimension of completing task skills, it is found that significant differences exist. In authoritative parents' side, it is found that there is a negative correlation in interpersonal skills, emotional management and adaptation to change, ability to express verbally, self-control, listening skills. These results indicate that as parents, they more actively protect the children, or their attitudes to their children was exaggerating which dwindle the children's social skills. In sub-dimensions of anger management and adaptation to skills change, lies a significant difference between the authoritative and permissive parenting style with children's social abilities, although weak negative correlations appear to be different significant.

4.2 *Discussion*

Both interpretable, valid scales emerge these studies were the scale of attitudes towards the gains of outdoor play ($\alpha = 64$) and attitudes towards the outdoor playground ($\alpha = 64$). The benefit scale includes the idea of playing in the open environment where it is beneficial to health, as well as to get the participants' understanding of the benefits of playing outdoor. The anxiety scale includes five statements which include concerns about outdoor play, including one item (strangers, and getting lost) that shows children's fear as one of a reason for playing outdoors. The purpose of this study is to find a connection between outdoor play and parenting style for these early childhood social abilities.

It seems child's perceptions of benefits and scary were of their understanding that the more complex outdoor play environment available, they see it as an opportunity to play outdoors. The findings in this study are purposeful and spontaneous, given the recognition that fear of playing outdoors cannot be understood as completely negative emotions, and is not always a boundary to perceive the benefits of playing in natural or outdoor environment, because somehow, these fears can be interpreted to have important benefits that is, self-care and caution against any danger that may arise when children play outdoors. Norðdahl & Einarsdóttir, (2015) show that children want to challenge themselves also to be safe, explore things, connect with others, find or make nests and enjoy beautiful things outdoors. Children really appreciate the natural environment and like diversity in play equipment.

The ability to express verbally, self-control, listening skills, these results indicate that parenting democratic parenting increased, the social skills of children also increased. In the sub-dimension of the skill to complete the task even though there is a correlation in a positive way, it was found that there were significant differences. Authoritative parenting style found negative correlations seen in interpersonal skills, emotional management and adaptation to change, the ability to express verbally, self-control, listening skills, these results indicate that as parents more actively protect children or parental attitudes towards children who are overly, children's social skills are reduced. This concludes the results of research that states that psychologically parents who control the psychology of children in care will provide psychological experience in psychological development such as fear, guilt, negative behavior and tend to control others (Kemple, Oh, Kenney, & Smith-Bonahue, 2016).

Furthermore, parents with parental control highly control their child's psychological impact on the low academic achievement of children (Pinquart, 2016). In the sub-dimension anger

management and adaptation to skills changes, although there is a correlation in a negative way, a significant difference is found between parental authoritarian parenting and parents who implement permissive parenting with social abilities of children, although weak negative correlations are seen to exist significant difference.Two scales that can be interpreted and valid emerged from the research conducted, namely the scale of attitudes toward the benefits of playing outdoors (alpha = 64) and attitudes towards the scale of concern playing outside (alpha = 64). The benefits scale includes the idea of playing outdoors that is beneficial to health, as well as an understanding of the benefits of playing. The worries scale includes five statements that include the anxiety of playing outdoors, including one item (strangers, and being lost) which shows the children's fear of the reason for playing outdoors. The purpose of this study is to find an association between play outside the room and care for social abilities of these early childhood. It seems that children's perceptions about the benefits and fears are part of understanding more complex outdoor play environments as opportunities for outdoor play.

The findings in this study are very meaningful and intuitive, given the recognition that fear outdoor play cannot be understood as a completely negative emotion, and it is not always an obstacle to recognize the benefits of outdoor or natural play, because fear can be interpreted to have important benefits (Louv, 2008) namely, self-preservation and caution towards all the dangers that may arise when children play outdoors. Caution is needed given the significant health benefits of outdoor play for children (Boxberger & Reimers, 2019). Outdoor play provides important skills development and health benefits for children (Wilkie, Standage, Gillison, Cumming, & Katzmarzyk, 2018). Playing outdoors gives children the opportunity to perform executive functions (Moriguchi, Zelazo, & Chevalier, 2016). Playing outdoors is preferred by children rather than watching videos and improving social skills in early childhood (Hinkley, Brown, Carson, & Teychenne, 2018). Larson et al., (2019) show that contemporary children spend less time outside than their predecessors. The report also highlights the widespread use of electronic media in the lives of young people. More and more evidence is highlighting the negative effect of increasing screen time on outdoor time and on connections to nature. The attitude scale developed is a reliable and valid instrument for measuring attitudes toward outdoor play that can mediate physical activity in early childhood outside the room when in contact with nature. The attitude scale developed can be a useful tool for evaluating the impact of programs that will be carried out, such as environmental education programs, improving children's attitudes and behaviors towards the benefits of braininess outdoors and reducing children's concerns.

In addition, the scale can predict more optimal results between parenting patterns including the involvement of children in outdoor activities. Perhaps the most interesting finding from this study is the lack of a strong negative correlation between the benefit-scale scale and the scale of concern. Playing outdoors can be a therapy for children when interacting with nature outside the room, this is in line with the results of literature studies on the therapeutic landscape must describe the relationship between outdoor play and parenting towards children's social skills. This can be understood exploring children's understanding of the nature of the structure of play in the outdoor space in relation to their involvement in outdoor play. Parents play an important role in modeling healthy behaviors to their children. The relationship between physical activity of parents and children and screen time behavior across certain domains, including the effects of moderation by parents and the sex of the child. Children like to spend more time playing outdoors when they have parents who also spend more time in outdoor activities (Schoeppe et al., 2017). Another advantage of outdoor play for children is connecting to nature and spending time outdoors as

children have been indicated as predictors of environmentally responsible behavior (Mullenbach, Andrejewski, & Mowen, 2019).

Parents need to get reinforcement to apply parenting to children (Webster-Stratton et al., 2001). Thus, parents are expected to attend childcare training. Agreeing with this is the benefit of parents who participate in parenting program training to have experience and positive benefits when with their children (Moreland & McRae-Clark, 2018). Furthermore, parental care that is not good to be one source of causes of children become stressed in achieving social competence as an adult (Cui, Janhonen-Abruquah, Darling, Carlos Chavez, & Palojoki, 2019). Parents need not interfere in children's activities (Waters & Rekers, 2019). It is hoped that parents can give children the opportunity to play outdoors in the hope that children's growth and development will be maximized through outdoor play activities.

5 CONCLUSION

5.1 *Conclusion*

Based on the results of research conducted, the researchers conclude as follows: The results of the study conducted are the scale of attitudes towards the benefits of playing outdoors and the attitude to the scale of concern playing outdoors, the benefits scale includes the idea of playing outdoors that is beneficial to health, as well as an understanding of -the benefits of play, the anxiety scale includes five statements that include the worry of playing outdoors, including one item (strangers, and being lost) that shows children's fears about the reason for playing outdoors. In the study found a relationship between play outdoors and parenting towards these early childhood social skills, children's perceptions about the benefits and fears are part of understanding more complex outdoor play environments as opportunities to play outdoors.

The results showed parenting democracy parenting improved children's social skills. In the subdimension of the task completion skills although there was a correlation in a positive way, it was found that there were significant differences. Authoritative parenting style found negative correlations seen in interpersonal skills, emotional management and adaptation to change, the ability to express verbally, self-control, listening skills, these results indicate that as parents more actively protect children or parental attitudes towards children who are overly, children's social skills are reduced.

In the subdimension of anger management and adaptation to skills changes, although there is a correlation in a negative way, a significant difference is found between parental authoritarian parenting and parents who implement permissive parenting with social abilities of children, although weak negative correlations are seen to exist significant difference. The findings in this study are very meaningful and intuitive, given the recognition that the fear of playing outdoors cannot be understood as a completely negative emotion, and it is not always a barrier to recognizing the benefits of outdoor or natural play, because of the fear can be interpreted to have benefits, namely, self-care and caution against all the dangers that may arise when children play outdoors.

5.2 *Suggestion*

Suggestion In this study the researchers suggested several things including: Parenting patterns will determine the courage of children to play outside the room. Parents should not be too protective of children to play outside the room. Playing outdoors can be done as an emotional therapy for children, but parents should provide assistance to children so that children get the attitude of benefits higher than the scale of concern. Playing outside the room provides benefits including the scale of the attitude of benefit and concern, but anxiety is precisely a means for children to be more careful and take care of themselves. Researchers only examined the relationship between outdoor play, parenting and social skills of children. Researchers can then develop to look for relationships with other aspects of ability in early childhood.

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Antecedents-Consequences Modification to Decrease Hyperactivity and Improve Attention of Child with ADHD

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ABSTRACT: The prevalence of ADHD children increases every year. Some researchers have shown that psychosocial behavior therapy (antecedents-consequences modification) was effective to decrease hyperactivity and increase attention to ADHD children. This study aims to find out the effectiveness of antecedents-consequences modification by parents and teachers to decrease hyperactivity and increase attention to a 6 years old boy with ADHD. The study was a single case experimental design. Psychosocial behavior therapy has been used with antecedents-consequences modification. The antecedents-consequences modification was applied by teacher at school and parents at home. Data were analyzed using Wilcoxon Signed Rank Test. Results showed that there's a significant decrease of hyperactivity behavior and significant increase of doing his assignment both at school and also at home. Not only about the content of behavior therapy itself, but how to give the therapy is important. Parents and teacher should do the therapy consistently, immediately, specifically and saliency to reach the target of intervention.

Keywords: ADHD children, antecedents, consequences, modification

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1 INTRODUCTION

ADHD (Attention Deficit/ Hyperactivity Disorder) is the development resistance characterized with inconsistent attention, excessive activity, and impulsive behavior (Nigg, J.T ; Barkley, 2014). The symptoms often appear during the early years of school (U.S. Department of Health and Human Services, 2014) and remain fairly stable during development (Riddle et al., 2013). They often make noise in class and tend to often fight (especially boys). They fail to follow or remember instructions and even complete assignments. They most likely have learning difficulties, repeat classes, and are placed in special classes (Davidson, 2010).

A wide range of research on the prevalence of ADHD in the world increase from year to year. A result of the analysis on the reports by parents based on the National Health Interview Survey (NHIS) 2011 – 2013 showing that there was an increase in children diagnosed with ADHD by 7.0% in 1997 – 1999 to 10.2% in 2012-2014. The survey also reports that 9.5% of children aged 4-17 years were diagnosed ADHD. The analysis was performed based on age groups, 2.7% of children in the ages of 4-5 years was diagnosed with ADHD; 9.5% of children in the ages of 6-11 years, and 11.8% of children in the ages of 12-17 years. From the data obtained, there were 13.3% of boys and 5.6% of girls experiencing ADHD (Pastor, Reuben, Duran, & Hawkins, 2015). A meta-analysis study of 175 research around the world regarding the prevalence of ADHD to 18 years old children and below determines the population of 7.2%. The population of 7.2% is derived from a total population of 129 million children around the world (Thomas, Sanders, Doust, Beller, & Glasziou, 2015). The increasing prevalence from year to year is urgent for educational practitioners, parents, and teachers to intervene in order to decrease hyperactivity and increasing attention in children with ADHD. This is because ADHD affects academic performance, social ability, and quality of life in their adult stage later on (Saputro, 2009).

Various intervention was effective to decrease hyperactivity and increase inattention to children with ADHD, such as psychosocial treatment with behavior therapy (Linda J Pfiffner & Haack, 2014) and medication (Taylor, 2009). Most professional believe that effective psychosocial treatment is the backbone of good intervention for ADHD (Center for Children and Families, 2019), while medication is not always effective or acceptable to patients and their parents and giving side effect. Medication is often used to treat severe ADHD and adults with ADHD, while children is not recommended using medication (Baumeister et al., 2018). In Indonesia, few researches have examined the effectiveness of behavior therapy, most researches using music therapy (Suyanto & Wimbarti, 2019) and also play therapy (Amalia, 2018; Erinta, 2012). Treatments using music therapy is not always recommended, because the standard for music therapy itself. This is related to the type of musical instrument, number of beats and tones (Jackson, 2003). Besides that, not all cities in Indonesia have music therapy facilities, so parents with ADHD children will difficult to seek help for their children.

Behavior therapy with time-out has been used to treat 2 children with ADHD (age 3-10 years), and significantly effective to decrease hyperactivity (Hidayati, DM Ria ; Purwandari, 2010) but actually some professional recommended using behavior therapy with psychosocial treatment to treat children with ADHD (Center for Children and Families, 2019). Time-out was less effective to treat children with ADHD, because they paid more attention to reward than punishment, and time out was considered as a punishment cues (Haas et al., 2011). Psychosocial treatments are regarded as the most effective treatments for children with ADHD because the treatments teach skills to parents and teachers to overcome children's impairments. ADHD is a chronic condition, teaching skills help overcome their impairments and are useful for a child's lifetime (Center for

Children and Families, 2019). In the psychosocial treatments, teacher and parents are taught to conduct behavioral therapy because they interact with the children in daily life, but unfortunately, few researches in Indonesia study about psychosocial treatments for children with ADHD.

2 THEORITICAL STUDY

2.1 *Children with ADHD*

The essential feature of ADHD is a persistent pattern of attention and/or hyperactivity-impulsivity that interferes with functioning or development. Inattention manifest behaviorally in ADHD as wandering off task, lacking persistence, having difficulty sustaining focus, and being disorganized and is not due to defiance or lack of comprehension. Hyperactivity refers to excessive motor activity (such as a child running about) when it is not appropriate, or excessive fidgeting, tapping or talkativeness ((APA), 2013).

ADHD affects academic performance, social ability, and quality of life in their adult stage later on. ADHD in children result less optimal learning achievement even at low levels of achievement and poor psychomotor performance as a result of the difficulties in coordination functions, emotional responses, social skills, and learning skills (Saputro, 2009). Children with ADHD are more likely to fail to finishing the assignments, being suspended from school, and requires advanced interventions during adolescence, compared to other peers (Davidson, 2010). The one of short-term impacts of ADHD children is social interaction problem including conflict with the family and friendship, such as the refusal of peers which is quite frequent (L. J. Pfiffner, Calzada, & McBurnett, 2000). In fact, follow-up studies show that children with ADHD have interpersonal problems and risks for educational problems, and the girls had a greater risk for hurting themselves and committing suicide (Stephen P. Hinshaw et al., 2012).

Many ADHD children experienced low academic achievement (Barkley, 2006). In class ADHD children often show behavioral problems. ADHD children have more difficulties to respond instruction and less able to complete academic assignments compared with their peers (Pfiffner, L. J ; Barkley, 1990). More than 80% of children with ADHD were found having learning problems, and some of them were included as underachievers in their adolescent (having low academic achievement but good cognitive abilities) (Cantwell & Baker, 1991). Due to low academic achievement, many ADHD children (about 40%) are placed in a special education program including children with learning disabilities and children with behavioral disorders so that the number of dropped-out ADHD children become higher with approximately 10% (Barkley, Russell A; DuPaul, G.L ; McMurray, 1990). In adolescence only 20% of ADHD children can continue their education to the higher-level education (Weiss, Gabrielle ; Hechtman, 1993).

2.2 *Behavioral Psychosocial Treatments with Antecedents-Consequences Modification*

A number of researches determine the effectiveness of behavioral therapy for children with ADHD. Some behavior interventions are effective to ADHD Children (Linda J Pfiffner & Haack, 2014). Children with ADHD are often inattentive, unorganized, off-task, destructive, and demonstrating low completing tasks, both at school and also at home (Langberg et al., 2011). At home, treatments aimed to form children's behavior. Usually parents of children with ADHD show more negative, ineffective, and less warm parenting because increasing conflict at home (Gerdes, Hoza, & Pelham, 2003; Johnston, Charlotte; Mash, 2001). Behavior management interventions such as parenting training aimed to enhance parenting to improve child and parents' behavior, so this way

could reduce family conflict (Linda J Pfiffner & Haack, 2014). But some professional believe that best behavior therapy for children is not only conducted at home, but also at school (psychosocial treatments).

Children with ADHD get more benefit from behavioral psychosocial treatments to improve attention and productivity rather than traditional ADHD medication treatments or other behavioral therapies (Tran et al., 2018). A study compared the efficacy of a behavioral psychosocial treatment integrated across home and school with parent-focused treatment (PFT) and treatment as usual (TFU) for children with ADHD. The study reported that behavioral psychosocial treatment resulted in greater improvements in teacher-reported inattention, organizational skills, social skills and global functioning relative to both PFT and TFU at posttreatments. Parents also reported that their children showed greater improvement in organizational skills than PFT and TFU (Linda J. Pfiffner et al., 2014).

Psychosocial treatments (involve parents and teachers to conduct the behavior therapy) is now recommended as one of important element in multi-modal intervention for ADHD children, especially for the children at the PAUD level (early age education level) (Center for Children and Families, 2019). Based on social learning principles theory, more intervention approaches aim to use adult such as parents, to increase positive behaviors and reduce behavior problems in children (Fabiano et al., 2009; Helseth et al., 2015). Parenting training in the BTP is focused to increasing the expected behavior and decrease problematic behaviors through modification of antecedents and consequences (Anastopoulos, A.D; Farley, 2003; Kaiser, McBurnett, & Pfiffner, 2011).

Some experts said that some of problems that occur in ADHD children affected by reinforcement of the environment. The pattern of these interactions is often viewed as coercive process, i.e. a circle where children and parents control the behavior of one another through the negative reinforcement (Patterson, 1982). For example, this process occurs when the children exhibit behavior that not appropriate with expectations of parents (does not obey the parent's command) and then parents respond negatively by creating a circle of accusing with high tone. Many of the problems on ADHD children is reinforced by this process. Though it is not due to the ADHD problem, such a child-parent coercive interaction will make negative impacts such as low academic achievement, peer relationships, social skills, and aggressive behavior (S. P. Hinshaw et al., 2000; Kaiser et al., 2011). Thus, the behavior management training is directly targeted on parenting practices to reduce the coercive processes and to enhance the children's behavior and the relationships with the family (Linda J Pfiffner & Haack, 2014).

Effective treatment for students with ADHD is through behavior therapy that includes strategies based on antecedent-consequence (Barkley, 2006) . Furthermore, he explained the concept of antecedent-consequences modification is basic models of operant conditioning, namely the concept of A-B-C (Antecedents-Behavior-Consequences). **Antecedents** (Stimulus Discriminative) is a stimulus which was created to provoke **a response (Behavior)** which is then followed by a reinforcing stimulus (**Consequences**). Consequences is any stimulus, such as events or consequences that can increase the chances of a response that is expected to reappear (Schunk, 2012). Rules become very important and weak response (no reinforcement) from environment caused the emergence of ADHD. If there are no rules, children won't understand what to do, and no reinforcement will make them do not recognize whether their behavior is acceptable or not in their environment. So, the intervention with behavior therapy directly targets to these deficiencies. An antecedent-based intervention has been widely used to prevent inattention and disruptive behavior. Antecedent will give children cues what behavior they should do. First of all, the teacher can strategically

place the class rules (DuPaul & Weyandt, 2006). Rules should be slight and expressed in the positive behavior (for example say to students what to do, not just the behavior that should be avoided), and puts the rules that can be viewed by all students. Furthermore, teachers should regularly praise the students who follow the class rule. Children with ADHD need more intense rules and must be provided with more praise when they obey the rules (Pfiffner, Linda J; Barkley, R; DuPaul, 2006).

The antecedent-based strategy is frequently recommended in students with ADHD to increase engagement in the task by modifying the length of workmanship and the quality of the task (DuPaul, George; Stoner, 2003). Reducing the length of task completion is associated with the students' attention span, reduction of off-task behavior, and disruptive behavior. This strategy is often paired with teacher praise when the task is completed. As long as students demonstrate their success in doing tasks, the length of time of task completion can be increased in stages thereby forming behavior of following and obeying class rules.

In addition to modifying the antecedents, consequence-based strategies could be performed through environmental manipulation after the behavior. A study has reported an effectiveness of consequence-based strategies in ADHD children using contingent positive reinforcement and response cost (DuPaul & Weyandt, 2006). The use of contingent positive reinforcement example praise from teachers or token reinforcement is effective in forming the expected behavior (DuPaul, George; Stoner, 2003).

The importance of psychosocial treatments using behavioral therapy (antecedents and consequences modification) makes the researcher interested in exploring the effectiveness of behavioral psychosocial treatment based on modification of antecedents-consequences in ADHD children. The uniqueness of the present research lies in comprehensive therapy involving teachers and parents as the therapy practitioners, which in Indonesia is still a little that would examine it. The hypothesis of this research is the antecedents and consequences modification by parents and teachers are effectively decrease hyperactivity and improve attention on ADHD children.

3 METHODS

This research is single case experimental design because researchers want to determine the effectiveness of a treatment. Single case experimental designs refers to a set of experimental methods that can be used to test the efficacy of an intervention using a small number of patients (typically one to three), and involve repeated measurements, sequential introduction of an intervention, specific data analysis and statistics (Krasny-Pacini & Evans, 2018). In the single case experimental design, participant was measured repeatedly and frequently the outcome in all phases of the study, at minimum two phases, generally baseline (by convention designates with the letter, A) and treatment or intervention phase (designated with the letter, B) (Krasny-Pacini & Evans, 2018). In this study, researcher used 3 phases, A-B-A, because we wanted to know the effectivity of treatments after intervention (follow-up)). Phase A was a phase of baseline that contains of a number series observation of the behavior in the target in a natural situation (before he gets the intervention). Phase B was the phase in which the intervention or treatment was given, by observing the changes in dependent variable. Measurements are continuing after treatment (Phase A) (Barlow, D.H ; Hersen, 1984).

Table 1. Experiment Design

Phase A	Phase B:	Phase A:
Baseline	Intervention	Follow up
X	O	X

The measuring instrument used behavioral observation during the baseline phase, intervention, and follow-up. Measurements include dependent variables, which is the span of attention and hyperactivity. Baseline measurements were performed over 6 times (Shriver, Segool, & Gortmaker, 2011). Observations were carried out for 28 times, i.e., 6 times in the baseline phase, 16 times in the intervention phase, and 6 times in the follow-up phase. The number of baselines contributes to the strength of the experimental results, where the minimum number of baselines is 2. If the number of baselines a lot is 5 times and one of the five measurements is not different, the influence of the intervention will be very clear (Kazdin, 1984).

This design contains several numbers in every phase, 6 times in baseline phase, 16 times in intervention phase and 6 times in follow up. When repeated measurements are taken during the baseline phase, several threats to internal validity are controlled. Data were analyzed using the Wilcoxon Sign Rank Test. The researcher used the Wilcoxon Sign Rank Test analysis because the data distribution was not normal. The analysis was done by comparing the baseline phase, the intervention phase, and the follow-up phase.

3.1 *Subject*

This research is a single case experimental design, with one single subject of research that meets the criteria of the study. Criteria of the subject were listed below:

- A boy. The researcher took the sample of a boy because ma ADHD children are much greater than that of girls by comparison 13.3% for boys and 5.6% for girls (Thomas et al, 2015).
- The age is 6 years old. The researcher took the sample of 6 years old because this age is a starting point of a child suspected or diagnosed ADHD by teachers or parents. If the diagnosis is done early, the intervention can be performed immediately. More early intervention, the risk of appearance ADHD behavior symptom in the next age will be getting smaller and the negative impact will be smaller.
- At the kindergarten class B. The criteria were used because the kindergarten level (school) is the prevalence of ADHD often found, and the assumption that teachers may also intervene in the school so that the success of the interventions is increasingly achieved fast.
- Availability of parents, teachers, and schools as the subject of the research. It is considered very important for the researcher because without availability and cooperation of the parties, the research will be accomplished.
- Diagnosed ADHD. Diagnosis uses Vanderbilt ADHD Diagnostic Rating Scale (American Academy of Pediatrics and National Initiative for Children's Healthcare Quality, 2002).

Based on the above criteria, there was 1 of 6 years old boy, diagnosed with ADHD and there was willingness of teachers and parents to cooperate in this research.

3.2 *Assessment*

3.2.1 *Enforcement of Diagnosis*

Diagnosis was enforced based on criteria of diagnosis DSM V (2013) about Attention Hyperactive Disorder derived from Vanderbilt ADHD Diagnostic Rating Scale. Vanderbilt Rating Scale is filled out by parents and teachers that daily interacted with the subject. Teachers and parents were asked to do a rating based on the subject's behavior indicators in the Vanderbilt ADHD Diagnostic Rating Scale. In addition to filling the questionnaire based on the rating scale, teachers and parents were also interviewed by a psychologist. Enforcement of the diagnosis was performed by a psychologist.

3.2.2 *Determining the Identification of the Problem / Target Intervention.*

Based on the analysis of the problem completed through filling in questionnaires of rating scale and the interview, the researcher and the psychologist focused on three problem areas, which were also the targets of intervention. They are:

- reducing the behavior of standing and walking in the classroom during the learning process.
- increasing the range of concentration on-task undertaken at the school.
- increasing the span of concentration on-task at home.

3.2.3 *Determining the Behavior Baseline*

Baseline determining procedure was performed through observation and interview. The observed behaviors were hyperactivity-impulsiveness and lack of attention during the learning process. The behavior was recorded by the momentary event sampling method. The sample of behaviors was taken during the lessons and work tasks at home.

- The behavior of hyperactivity at school were counted when the subject left his seat when the teacher explained the lesson and ran out of class when working on assignments for a 2-hour lesson.
- Attention was calculated from the time of subject could sit quietly finishing his work on school assignments.
- Attention at home is calculated from the time the subject can sit quietly focusing on tasks at home.

3.3 *Intervention*

The behavior therapy based on antecedents-consequences modification to the subject were given by teachers and parents because teachers and parents directly interacted with the subject in daily life. Behavioral therapy procedures given by teachers and parents were through the psychoeducation, ranging from definition and the scope of ADHD, the impact brought about if not well handled, and then the procedure of delivering the behavioral therapy.

The intervention was carried out at home and school with the goal of keeping the subject familiar/consistent with new patterns of behavior. This way made the success of intervention achieved more quickly. The psychoeducation performed was as follow.

3.3.1 *Psychoeducation of parents*

Explain to parents about antecedents-consequences based behavioral therapy that can be given to the subject at home. Antecedents are modified by creating rules at home that are placed in the subject's room visually and there are symbol images. Consequences in the form of father and mother are asked to provide positive reinforcement in the form of praise, hugs and kisses on the subject if he is obedient and follows the orders of the father and mother, for example if the subject is obedient to sit quietly doing the task, the parent provides positive reinforcement in the form of hugs, praise or kisses. This is done considering that the subject is happy if he gets the attention of the father and mother. The rules are given to the subject:

- obeying the commandments of the father and mother
- speaking politely and responding well if called or asked mom and dad.
- behave politely, no stair climbing and no running around the house.

3.3.2 *Psychoeducation of teachers*

Explain to the teacher about the behavioral therapy procedures that can be performed by teachers through modifying antecedents and consequences.

3.3.2.1 Modification of Antecedents

Emphasize more rules in the class. Rules are given by the teacher in verbal form when the lesson starts and between lessons. Rules are given to the students:

- No run in the class
- Sit quietly when teacher explains
- Finish the task

3.3.2.2 Modification of Consequences

Use positive reinforcement to each student's behavior that is obedient, not run around and be able to sit quietly during the teacher explained the lesson and doing the task. Positive reinforcement is given in the form of a compliment as that children with ADHD need more regulation and should be provided with more praise when they obey the rules.

- Use positive reinforcement if he obeys the rules (no run in the class and sit quietly when teacher explains).

  When the subject obeys the rules, teachers give the praise to the students.

- Use positive reinforcement in task completion.

  When the subject was successfully complete his task, he was given positive reinforcement in the form of stamp on the workbook with a picture of a train because it was one of the favorite toys of the subject. The stamp scale ranges from 1-4 where: (1) 1 stamp was the indicator that the subject works on the given task but it is not completed (2) 2 stamps was the indicator that the work is completed but he is careless and does mistakes and not follow the teacher's instructions) (3) 3 stamps was the indicator that the subject performs the task in accordance with the teacher's instructions. (4) 4 stamps were the indicator that the subject successfully executes tasks and there is creativity in doing the task.

Stamps was given immediately on the task submission so that the subject can feel the impact of what he accomplishes.

4 RESULT AND DISCUSSION

4.1 *Result*

The results of 4-week implementation of behavioral therapy through modification of antecedents-consequences by teachers and parents are as follow.

4.1.1 *Hyperactivity in the Class*

The subject had decreased his hyperactivity behaviour, either when the teacher explained the lesson, nor when working on tasks. On the first day of implementation of the intervention, the hyperactive behaviour of the subject did not decline, while entering the third day the hyperactive behaviour of the subject was declining. The behaviour of running around the classroom and running out of the class during task completion decreased from day to day during the process of implementation of the intervention. The decrease in hyperactivity behaviour of the subject can be seen in the graph below.

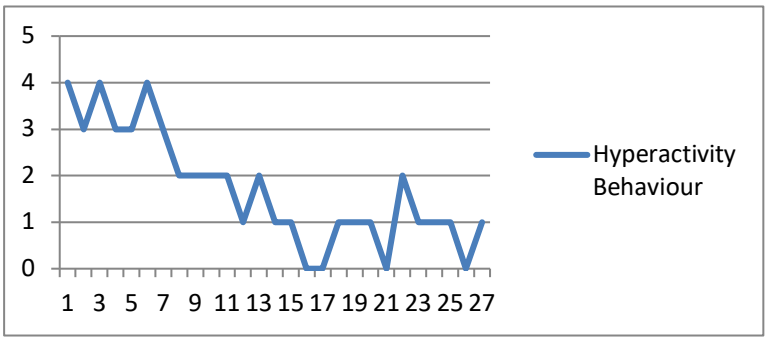

Figure 1. The decrease in hyperactivity behaviour in the class

Note:

X axis = The Frequency of Hyperactivity Behaviour

Y axis = Day

The results of the analysis show that there is a decrease in hyperactivity behavior in the classroom was significant during the *baseline*, intervention, and *follow-up* phases, which is indicated by the following table:

Table 1: Descriptive statistics of the decline of hyperactivity behavior in the class

Phase	N	Mean	Std. Deviation	Minimum	Maximum
Baseline	6	3.5000	.54772	3.00	4.00
Intervention	16	1.1875	.91059	.00	3.00
Follow-sup	6	1.0000	.63246	.00	2.00

Table 2. Results of analysis of hyperactivity decline in class

	Intervention-Baseline	Follow Up-Intervention	Follow Up-Baseline
Z	-2.264[a]	-2.121[a]	-2.251[a]
Asymp.Sig. (2-tailed)	.024	.034	.024

a. Based on positive ranks

b. Wilcoxon Signed Ranks Test

Based on the results, it is determined that the hyperactivity behavior of the subject decreased significantly between the baseline phase to the intervention phase with the value of p = 0.024 (p < 0.05) and the value of Z = -2.060. The decrease in hyperactivity also occurred between the interventions and follow-up phases with the value of p = 0.034 (p < 0.05) and after the therapy was not given, the subject's behavior was consistent that there were differences between the base-line phase with the *follow-up* phase, which shown with the value of p = 0.024 (p < 0.05) and the value of Z = -2.251.

4.1.2 *Time range of task completion at school*

Subjects experienced the increase of on-task completion. Before the intervention, the subject worked on one task for 5-8 minutes in average, then he left that task and then run around the class. During the intervention, the subject could sit in working on one task for 10-20 minutes in average. The increase of the concentration of the subject is presented in the following graph.

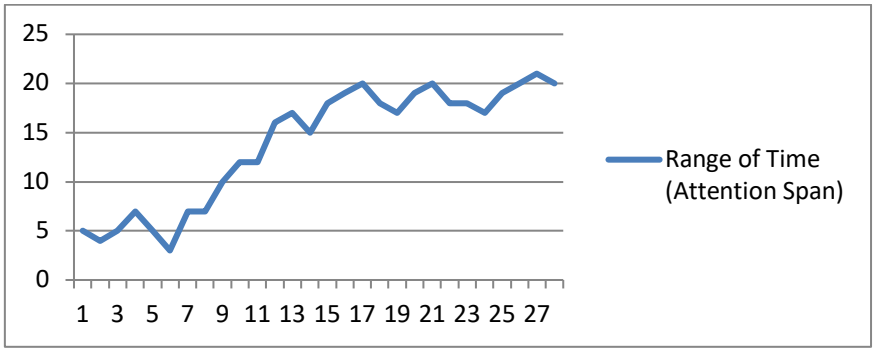

Figure 2: The increase of time range in school task completion

Note:
X axis: Time range of task completion (minutes)
Y axis: Day (*Baseline*: 1-6; Intervention: 7-21, *Follow-up*: 22-28)

Table 3. Statistical analysis of time range in school task completion

Phase	N	Mean	Std. Deviation	Minimum	Maximum
Baseline	6	4.8333	1.32916	3.00	7.00
Intervention	16	15.3125	4.37750	7.00	20.00
Follow-up	6	19.1667	1.47196	17.00	21.00

Table 4. Results of statistical analysis of the time range increase of school task completion

	Intervention-Baseline	Follow Up-Intervention	Follow Up-Baseline
Z	-2.207[a]	-2.207[a]	-2.226[a]
Asymp.Sig. (2-tailed)	.027	.027	.026

a. Based on positive ranks

b. Wilcoxon Signed Ranks Test

The above Statistical analysis shows that there were significant differences between the baseline phase and the intervention phase, with a value of $p = 0.027$ ($p < 0.05$), so was with the follow-up phase and the intervention phase with the value of $p = 0.027$ ($p < 0.05$), and the difference between the follow-up phase with the baseline phase indicated by the value of $p = 0.026$ ($p < 0.05$).

4.1.3 *Time range of task completion at home*

Through the given behaviour therapy by the parents, one of the measurable implications is that the subject increased the attention span of task completion at home. He could sit quiet for much longer and his hyperactivity behaviour was reduced. Prior to the implementation of the intervention, the length time that the subject could sit quietly studying with his mother was 5-10 minutes, and after the intervention the subject could sit quietly for studying for 15-20 minutes. The development recorded by the mother is presented in the following graph.

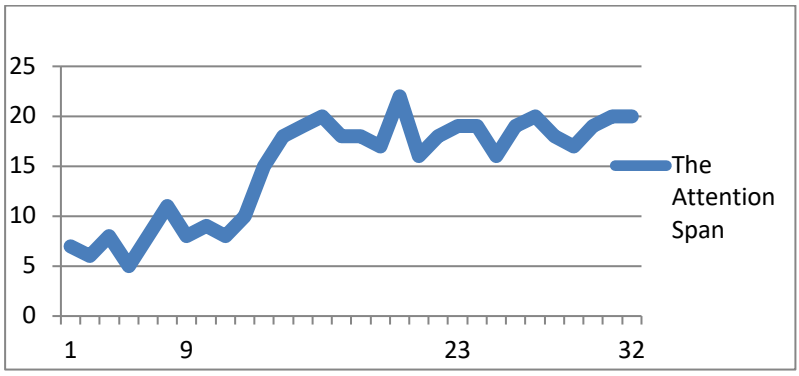

Figure 3: The increase of time range in home task completion

Note:
X axis : Time range of attention span (minutes)
Y axis : Day

Table 5. Statistical analysis of time range of home task completion

Phase	N	Mean	Std. Deviation	Minimum	Maximum
Baseline	6	7.5000	2.07364	5.00	11.00
Intervention	14	15.4286	4.70212	8.00	22.00
Follow-up	10	18.7000	1.33749	16.00	20.00

Table 6. Results of statistical analysis on the increase of time range of home task completion

	Intervention-Baseline	Follow Up-Intervention	Follow Up-Baseline
Z	-2.032[a]	-2.199[a]	-2.207[a]
Asymp.Sig. (2-tailed)	.042	.028	.027

a. Based on positive ranks

b. Wilcoxon Signed Ranks Test

Statistical analysis showed that there were significant differences in the attention span of task completion at home during the baseline phase and the intervention phase indicated by the value of $p = 0.042$ ($p < 0.05$), as well as significant differences between the follow-up and baseline phases indicated by the value of $p = 0.027$ ($p < 0.05$).

4.2 *Discussion*

The essential feature of ADHD is a persistent pattern of attention and/or hyperactivity-impulsivity that interferes with functioning or development. Inattention manifest behaviorally in ADHD as wandering off task, lacking persistence, having difficulty sustaining focus, and being disorganized and is not due to defiance or lack of comprehension. Hyperactivity refers to excessive motor activity (such as a child running about) when it is not appropriate, or excessive fidgeting, tapping or talkativeness ((APA), 2013). ADHD is a chronic disease that affects the functions at school, home, and community, so it is very important to do treatments as soon as possible (Barkley, 2006).

This study determines the effectiveness of psychosocial behavioral therapy using antecedents – consequences modification in lowering the hyperactivity and increases the attentiveness for children with ADHD. The present research proved that the hyperactivity decreased significantly ($p= 0.024$, $p < 0.05$), attentive behavior to sit for a long-time doing tasks in school increased significantly ($p = 0.026$, $p <0.05$), and attentive behavior of sitting for long time working on tasks at home also increased significantly with the value of $p = 0.027$ ($p < 0.05$).

In this study, intervention used psychosocial behavioral treatments with modifying antecedents and consequences. One of the interventions that are quite successful in lowering hyperactivity and increasing attention span of ADHD children is psychosocial behavioral interventions. Teacher and parents as significant person to conduct the behavior therapy (Linda J Pfiffner et al., 2015; Tresco, Lefler, & Power, 2010). There is some reason why psychosocial behavioral treatment effective to treat children ADHD, first because psychosocial treatments focus on these problems rather than the core symptoms. It will help children with ADHD cope the situations in daily life. Second, the psychosocial behavioral treatments will teach parents and teachers how to overcome with the children's impairments and are useful for a child's lifetime (Center for Children and Families, 2019).

In psychosocial treatments, teacher and parents conducted the behavioral therapy (Tresco et al., 2010). The principle of the behavioral therapy is changing the antecedents and consequences. Antecedents is a term describing the environment or the events that affect the occurrence of the behavior. For example, the teacher gives orders that would probably affect the behavior of students. The environment of the classroom (e.g., structured and predictable class rules) had significant effects on students' behavior. Consequences can be described as any of the following behaviors and affecting the increase or decrease of the behavior.

In this study, modifying antecedents by the parents at homes lies on several rules by the parents. Rules will give cues to the child what behavior they should do. After the child showed expected behaviors, parents should reinforce adaptive behaviors with positive reinforcements (hug, kisses and praises). At school, teachers give him several rules as cues how he should behave. After the child showed expected behaviors, teachers gave several reinforcements, praise and stamp of train as his favorites. This strategy is aimed at increasing the frequency of appropriate and adaptive behaviors and has been demonstrated to be an effective strategy for changing behavior (Jr,

Fabiano, & Pelham, 2008). The success of this therapy was related to the support and great consistency of parents and teachers. As explained on the methods, that the parties implemented this behavior therapy are teachers and parents that were directly interacting with, providing rules for, and providing reinforcement for the subject. Factors determining the success of the therapy on ADHD children are strong commitments of parents and teachers on the plan that has been arranged and has a great willingness to really implement *antecedents-consequences* modifications on the children. This is because children have to look at the system of consequences in places associated with adults and happens every day (Tresco et al., 2010). In this study, teachers and parents consistently applied the regulations that had been planned and provided reinforcement on what the subject has promised. The subject learned how to behave both at home and at school. This was what made the therapy process run smoothly and showed a significant progress on the subject within 1 month.

The basic components in the modification antecedents-consequences program is abbreviated as CISS-4 (Tresco et al., 2010). The component consists of Consistency, Immediacy, Specificity, and Saliency. Consistency refers to the adherence to a specific behavior plan. In this study, parents and teachers consistently applied regulations and give consequences of what the subject had promised. Immediacy means consequences should be given to the child as soon as possible after the behavior occurs. A gap of time between behavior and consequence will result in ineffective interventions. The subject get reinforcement when he managed to run the rules given by the teacher. Specify refers to parents and teachers revealing explicitly and clearly on target interventions that will result in specific consequences. Parents and teachers provided the regulations explicitly on the subject of how he should behave. In addition, teachers and parents provided pictures of examples of good behavior mounted on the wall. This sample image can be a *prompt* to provoke the behavior of the subject. Saliency refers to the facts if the consequences should be meaningful, important, and attention drawing for the subject (Tresco et al., 2010) . Thus, interventions on children's cases need modification of antecedent consequences that will vary slightly between one child to another. Therefore, studies on children in need are often *single case study* (Shriver et al., 2011). In this study, the subject likes trains and the figure of the affection of the mother, therefore the consequence given by teachers at the school when the subject managed to sit long task was the train pictorial stamp. The more perfect he did his duty, more and more of a train stamp he got. Likewise, with planning the task at home, where the subject was very close to his mother and very fond of more attention from his mother and father. Therefore, reinforcement such as hugs and kisses were very favored by the subject. By applying 4 principles in carrying out behavioral therapy based on antecedents-consequences modification, the success percentage of the intervention increased.

This result in line with previous study about effectivity of psychosocial behavioral treatments using antecedents-consequences modifications (Evans, Steven W; Owens, Julie; Bunford, 2014; Linda J. Pfiffner et al., 2014). Other behavioral therapy modification studies for ADHD as also stated that behavior intervention for students with ADHD were very effective if include antecedent-consequence-based strategies (Barkley, 2006). The rules become very important and weak responses on the environment is fundamental to the emergence of ADHD. The intervention includes behavior modification of the environment that are directly targeted on the weakness. An intervention based on antecedent has been widely used to prevent the inattention and disruptive behaviors. First of all, the teacher can put class rules on a convenient spot (DuPaul & Weyandt, 2006). Regulation should be fewer and contain the positive behaviour (for example asking stu-

dents what to do, not only the behaviour that should be avoided), and puts the regulation on convenient spots so that it can be viewed by all students. Furthermore, teachers should regularly praise the students who follow the rules. Children with ADHD need regulation that is more intense and must be provided with more corpulent praise when following the rule (Pfiffner, Linda J; Barkley, R; DuPaul, 2006).

The antecedent-based strategy is frequently recommended for students with ADHD to increase engagement on task completion through modifying the content or the time range (DuPaul, George; Stoner, 2003). Reducing the length of the task completion is associated with the student's attention span that might decrease *off-task* behaviour, and disruptive behaviour. This strategy is often paired with teachers' compliment upon the completed task. As long as students demonstrate their success in doing tasks, the time range of task completion can be increased in order to help the behaviour of doing school task and following the regulations.

5 CONCLUSION

This research gave evidence that psychosocial behavior therapy using antecedent-consequences modification is effective to decrease hyperactivity and improve span of attention to child with ADHD. Parents and teachers as significant person to conduct behavior therapy with modifying antecedents and consequences. Another important thing is not about the therapy itself, but also how therapy is delivered. Consistency, Immediacy, Specificity, and Saliency were needed to make the therapy succeed. Not only about that, the consequences should concern to something meaningful to the child. More meaningful consequences to the child, more behavior that are expected emerge. Further research is suggested to do follow-up after several months after the intervention (e.g six months). Follow up is needed to find out whether the parents and teacher still conduct the behavior therapy and how the impact to the child.

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Modified Bottle Cap for Improving Children's Arithmetic Ability

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ABSTRACT: The preliminary study showed that the main problem, however, faced by kindergarten students are lack of mathematics skill, such arithmetic ability in kindergarten Galis. Therefore, the present study aims to investigate the effectiveness of a modified bottle cap as an educational game tool towards enhancement of arithmetic ability. Samples were prepared for the quasi-experiment research design involving 60 children, aged 4-5 years. A detailed comparison is made between the experimental condition, consisted of 30 students, received the educational game tool activities and the control condition which consisted of 30 students, received the instructional activities as usual. Before and after two weeks of the intervention with the game tool of a modified bottle cap, measures of arithmetic ability were administered to either experiment or control class. The results of the study indicated that in the experiment class, children's arithmetic ability increased significantly compared to children in the control class. The differences may have been due to the intervention. To conclude, the modified bottle cap as an educational game tool effective to improve children's mathematics skill, especially for arithmetic ability. However, the findings required the extended study on other research methods and the bigger size of the samples.

Keywords: Early Childhood, Modified bottle cap, Early Arithmetic Ability.

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1 INTRODUCTION

Early childhood develops a fundamental understanding of concepts during the early years of school. The development of concepts and skills from infancy to early childhood would become the basic and strategy for teachers needed in inquiry learning. The concepts which provided for early childhood must always pay attention to and prioritize about child development. Mistakes regarding the level of material concepts given to children are a barrier that must be avoided before giving the concepts to children.

Mathematics is one of the important materials that can improve concepts or skills, especially high order thinking skills such as logical thinking, critical thinking, creative thinking, analyzing and solving problems in everyday life. In this era, high order thinking skill is one of the important skills to be able to keep abreast rapidly of current development of science and technology. Education has the responsibility in fulfilling the ten main abilities needed to face the future. Children are not only equipped with knowledge but also must be equipped with ways of thinking. The way of thinking must be introduced and familiarized from children so that later they are accustomed to being able to think critically, analytically, and creatively. By having high order thinking skills, students are expected to find the right concept of knowledge based on activities.

The most recent results of the Program for International Student Assessment (PISA) 2015 (OECD, 2019) showed that Indonesia underperformed and was position in the bottom eight out of 70 participating counties for mathematics. Even though the PISA was conducted for 15 years old, the results can be assumed for the mathematics skill in the early childhood which means early math in kindergarten students assumed also underperformance because through identifying predictors of performance in the early grades will determine the performances in the later grades (Martin, Cirino, Sharp, & Barnes, 2014). The preliminary study on Kindergarten students showed that they lack arithmetic ability because of the inappropriateness teaching method such teachers used traditional methods that offer either a passive child acting or didn’t involve the element of playing.

Early childhood is still in a concrete operational stage. Ideal learning can be done through learning that provides direct experience with concrete objects, interesting media, or the use of certain techniques to arouse children's interest and motivation to get to know and understand mathematical concepts. Children master their cognitive skills through real interactions using various materials found in their environment. Play activities are valuable but direct for children. However, understanding the concept of play in the context of education remains unclear among educators and practitioners of early childhood education curriculum.

A stimulating environment to encourage learning while playing in preschool is very important. Therefore, to ensure the effectiveness of mathematics learning, teachers must recognize the different cultures and needs of various groups of children. Teachers must also realize that managing classrooms requires the ability to do many things at once, to make important decisions immediately every day and also to adapt and be flexible to sudden changes. Mathematics is an abstract and complex concept, so meaningful learning through play activities to nurture children's interests and attitudes towards mathematics must be the focus of the preschool curriculum. Teachers must avoid personal emotions during their interactions with young children because the field of education is quite challenging given the various play activities that will be held and achieved. In the end, teachers must always pay attention to the progress and development of their professionalism as a role model for children.

There are substantial benefits to be gained from a traditional game tool. However, this game tool has been declined these days due to an increasing number of digital game (Schacter & Jo, 2017) tools which is not accordingly with a rural area. Moreover, the traditional game tool could be gained through utilizing some kinds of stuff in around either a school or home (Suryadi, 2007) such as modified bottle cap.

Several recent kinds of research have shown that learning through games by intervention an object can develop mathematical competence proven effective (Rohmah & Waluyo, 2014); (Fitri & Syamsudin, 2019); (Vogt, Hauser, Stebler, & Rechsteiner, 2018) and more interesting as well as enjoyable (Ayuni & Setiawati, 2019); (Malapata & Wijayanigsih, 2019). This because play has an important part in children's life. However, in this study will modify a bottle cap as a counting tool. In line with this, one of the most suitable instructional activities in the kindergarten is learning while playing and combining some methods, media, and techniques which allow all senses to be used (Depdiknas, 2005). Therefore, the main aim of the present study is to investigate the effectiveness of the educational game tool of a modified bottle cap in enhancing the ability of kindergarten students' arithmetic in Galis. Additionally, this educational game tool can be an alternative approach in teaching mathematics skill for early childhood education.

2 THEORITICAL STUDY

2.1 *Educational Game Tool of a Modified Bottle Cap*

Generally, the educational game tool refers to as tools for a play that deliberately designed specifically for the instructional goal and the development of children (Guslinda; Kurnia, 2018). In line with (Aqib, Zainal, 2010); (Rahman, 2010); and (Depdiknas, 2007) the educational game tool is everything that could be used as a medium or tools to play and contain the educative value. From this definition, it could be concluded that educational game tools have some characteristics such as designed and developed for kindergarten students, to support the development of children, can be used with multiple ways and shapes, safety for the children, and relevance with the children's development and needs, as well as based on the instructional goal. Therefore, a modified bottle cap can be defined as an educational game tool to play and to count as an effort to improve the mathematics skills of the children.

2.2 *Why Educational Game Tool of a Modified Bottle Cap?*

Teaching mathematics in kindergarten students with educational game tools can support the development of mathematics skills because the children will learn best when they directly interact with an object, not just with the words (Khasanah, 2013). Therefore, the educational game tool of a modified bottle cap can be assumed effective in teaching the mathematic skill of kindergarten students. Even though a bottle cap from the kind of stuff which not used and as a non-digital game, (Zulkardi, 2011) proved that traditional game can be built mathematics skill of children. Thus, a bottle cap can be assumed effective to support the kindergarten students improving their mathematics skill. Therefore, those assumptions imply that to support mathematics skill teachers are encouraged to provide rich resources learning to facilitate instructional activities that can enhance the mathematics skill. The development of early mathematical skills, arithmetic ability, teachers should apply multiple methods and media which offer an active child and involve the element of play with an intervention either with an object or a process (Blevins-Knabe, 2016).

Therefore, teacher-student interactions are vital activities that build the kindergarten students' understanding of the arithmetic ability (Jacobi-Vessels, Todd Brown, Molfese, & Do, 2016).

In principle, to develop learning media in learning is through materials that are easily obtained and available in the surrounding environment. Creative teachers will be able to create, develop media at affordable costs, but provide optimal effects in learning. This media bottle cap was modified and developed with the aim of improving children's mathematical abilities. However, on the other hand this media can also be used to stimulate a child's sense of care for the environment. This is because the media used is made from recycled materials, which are used bottles. Children's creativity will also be stimulated because they are inspired by teachers who creatively create interesting media from these recycled materials. Additionally, the bottle cap is not only easy to modify but also easy to find around the home or schools as well as suitable for the rural area. In additional, educational game tools can be divided into the digital game and non-digital game ((Lai, Ang, Por, & Liew, 2018). They said that non-digital game may require physical contact and/or equipment which are not digital devices. However, this study defines educational game tools as utilization non-digital games in terms of the bottle cap as a tool to count for kindergarten students.

2.3 *Learning and Playing in Kindergarten Students*

Play and games are very important for children. Play is one way to help develop various aspects of early childhood. Playing according to Piaget (1951) is an activity carried out repeatedly for fun (Hurlock, Elisabeth, 1978). Additionally, Hurlock (1987) alsos saod that play is every activity carried out with pleasure without thinking about the final result. In its general definition, in psychological terms, is defined by Joan Freeman and Utami Munandar (1991) that play is an activity that helps children achieve complete development in terms of physical, moral, intellectual, social and emotional aspects (Ismail, 2006).

Mulyadi (2004) provides 5 definitions of play, namely: something that is fun and has intrinsic value in children; has no extrinsic purpose, the motivation is more intrinsic; spontaneous and voluntary, there is no element of compulsion and freely chosen by children; involves the active participation of children; have a special systematic relationship with something that is not playing, such as creativity, problem solving, language learning, social development and so on (Ismail, 2006).

Games according to KBBI are something that is used to play, goods or something to be played with ("Kamus Besar Bahasa Indonesia Online," 2019). There are some experts who explain theories about games. The game must be seen as an exercise of functions that are very important in later adult life. Meanwhile, the game provides respite after doing the task and at the same time has the nature of cleaning, he argues that the game is the opposite of work.

One of the most important principles of the brain is facilitated meaningful learning experiences through hands-on, immersed in real-life and meaningful learning (Rushton, 2011). It means that the best way of a child to learn is through hands-on learning experiences because when a child learns through this experience, they will use their senses so that the meaningful learning experience will take place. Therefore, a modified bottle cap as an educational game tool can support a child to learns and use their senses such as sound, sight, touch. Thus, learning with this educational game tool would create a meaningful learning experience.

Piaget, known as a cognitive theorist, consider playing to be a major tool for facilitating children's cognitive development. Simply, play is known as activities in which children are deeply involved (Grindheim, 2017). Additionally, Early childhood education has been based on a strong ideological commitment to a child-centered approach, which embraces learning through play, exploration, hands-on experiential activities (Elizabeth, 2011) because the play has a vital role for cognitive development. The study showed that children who play freely with designed non-digital play can stimulate cognitive development. (Lai et al., 2018). Additionally, to make children choose and practice over and over again, games and playful activities are the foundation of children's learning (Schwartz, 2005).

In the kindergarten, to facilitate children's learning and development should consider learning to play as an important pedagogical practice Barblett, Knaus, & Barratt-Pugh, (2016) because playing is vital for children as an attempt to understand and consolidate learning experience. Furthermore, Vygotsky's theory claims that the importance of young children learning is appropriating tools, it claimed that a direct impact on children's future abilities and learning experiences are learning using tools during early childhood (Johnson & Wu, 2019).

Therefore, (Barblett et al., 2016) proposed seventh characteristics of playing such as: pleasurable – is often repeated, because play makes a deep sense of joy; voluntary – event though the play is free to choose activities, it can be invited; symbolic – play, sometimes, has an "as if" activities; meaningful – play has meaning to the children; active – play with objects or ideas are requires active mental, verbal, or physical engagement; process-oriented – the most important of playing to the children is focused on the process, thus usually not about a predetermined outcome or product; intrinsically motivating – play is located in children itself. Based on the characteristic above, this study define play as a joyful activity with a physical engagement such a modified bottle cap as an educational game toll in order to make the kindergarten students deeply involved.

2.4 *Mathematics skills for kindergarten students aged 4-5 years*

The introduction of early mathematical concepts is very important because it is the basis for children in understanding higher mathematical concepts in the future (Bakar, 2017). Early mathematical knowledge gained through direct and meaningful experience in a pleasant environment helps in growing students' interest in learning mathematics (Ginsburg et al., 2008). Concepts such as pre-numbers, initial numbers, number operations, measurements, shapes, time and space must be learned after the student development stage and are important components in early mathematics learning in preschool.

Important mathematical developments among children begin with their experiences related to real objects or objects that have different quantities or qualities such as colors, sizes, and shapes when manipulating numbers around them. According to Piaget (1962), every normal child is able to understand mathematics well when the activities and methods used can interest them. Mathematics is an example of logical thinking that forms the concept of numbers among children who need experience, social interaction, time, language, and understanding of children's minds. Mastery of mathematical concepts does not come from workbooks or assignments or paper and pens. Children build their mathematical knowledge and develop mathematical skills through direct experience with real life activities. Children will use their mathematical thinking in solving actual problems in building mathematical abilities.

The term mathematic skill refers to basic concepts of counting, quantity, shapes, spatial relations, measurement, and pattern (Harris & Petersen, 2017). These basic concepts can be seen in table 1 as below:

Table 1. Development of early math skills for children.

Years	Basic Concepts
4-5 years old	Be able to add or subtract small quantities of objects

To define the mathematic skill, this study divides the mathematics skills into four center numerical skills for learning mathematics in children aged 4-5 years (Aunio, Pirjo; Tapola, Anna; Mononen; and Niemivirta, 2016). These are symbolic and non-symbolic number sense, understanding mathematical relations, counting skills, and basic skills in arithmetic (see table 2.)

Table 2. Core numerical skills for learning mathematics in children aged 4-5 years

Symbolic and non-symbolic number sense	**Counting skills**
	Number word sequence skills
	Knowledge of number symbols
	Enumeration skills
Understanding mathematical relation	**Basic skills in arithmetic**
Early mathematical-logical principles Operational symbols in mathematics	Simple addition and subtraction skills

Based on table 1 and 2, mathematic skills categorized into six and four core skills. However, this study concentrate on the basic skills in arithmetic refers to as simple addition and subtraction task with concrete materials in the limited number or small quantities, because the subjects of the study average in 4-5 years old. Thus, the adoption of bottle cap as an educational game tool the educational game tool called as concrete material. Therefore, mathematic skills can be defined as a simple addition and subtraction ability with the number less than 5.

Features of the learning environment an effective, supportive learning environment that ensures young children will be actively and successfully involved in learning mathematical content and processes includes the following features such: rich problem solving tasks, productive discourse opportunities, learning resources, differentiated learning experiences, observation of children's learning (Copley, 2016).

2.5 *Definition of Arithmetic*

Arithmetic (sometimes spelled incorrectly as arithmetic, derived from Greek αριθμός - arithmos = numbers) or formerly called arithmetic is a branch (or precursor) of mathematics that studies the basic operations of numbers. By ordinary people, the word "arithmetic" is often considered a synonym of number theory. Basic arithmetic operations are addition, subtraction, multiplication and division, although other more sophisticated operations (such as percentage, square root, removal, and logarithm) are sometimes also included in this category. Calculations in arithmetic are carried out according to a sequence of operations which determines which arithmetic operations are performed first.

Arithmetic, on the other hand, requires understanding fact numbers, counting, ordering serial numbers, mastery the sum of the number, reading and manipulation of symbols, and knowledge

of the rules governing the four basics addition, subtraction, multiplication, and division operations. In arithmetic, a number of discrete operations must be done in the right order. For example, additions involve the strict organization of numbers order. The symbol is used to indicate the nature of operations that must be performed, for example, the sign (+) is to add. In all these operations, unambiguous rules govern notation system spatial settings (Haskell, 2000).

3 METHODS

3.1 *Participants*

The study was conducted in kindergarten students in Galis, Madura with an average age of 4-5 years. This study involved two classroom that consisted of 60 students (30 for experimental class and 30 for control class).

3.2 *Research Design*

This study employed quasi-experimental design with two classes. These classes were divided into two conditions: experimental condition and control condition. In the control condition, the children received their learning activities as usual. Whereas, in the experimental condition, the children received learning activities used the educational game tool of modified bottle cap. Additionally, those classes received the same course in early math especially at the simple addition and subtraction.

3.3 *Mathematic Measures.*

This study defined the concept of the mathematic skill as the ability of arithmetic, in which the children can conduct a simple number of addition and subtraction. However, the simple number has been decided start from 1 number to 5 number. Moreover, these abilities are fit with the characteristic of the children age 4-5 years. (Harris & Petersen, 2017).

Measurement involved an assessment of the arithmetic ability, in which the children's skill level was measured by asking questions for arithmetic ability. To collect the children's responses a rubric using the 4-point scale for each task is employed (See table 3). The same mathematical measures were used in the pretest and posttest of two classes.

Table 3. Scoring Rubric for the Arithmetic Assessment.

Key Tasks Assessed	0 point	1 point	2 point	3 point	4 point
Addition	0 question answered	1 question correctly answered	2 question correctly answered	3 question correctly answered	4 question correctly answered
Subtraction	0 question answered	1 question answered	2 question correctly answered	3 question correctly answered	4 question correctly answered

3.4 *Procedure.*

The research of the study consisted of three steps, these are pretest (step 1), implementation (step 2), and posttest (step 3). In the pretest, a group of 60 students gathered in the classroom, three

teachers and two researchers would engage with each child for the assessment. During the assessment process for each child, the other children engaged in playful resources. Additionally, 60 students were divided into two schools where each school consisted of 30 students.

In the implementation step, there are two condition. These are: in the control condition the children participated in the learning activities led by a teacher and researcher. Whereas, in the experimental condition the children participated in the learning activities (educational game tool of a modified bottle cap) where the activities were given by the teacher and researcher. Additionally, this step was conducted in two weeks. The posttest step was conducted in the week after the implementation step was done with the same procedure to the pretest step.

3.5 *Data analysis*

Because of the absence ten of the 60 children who participate in the intervention study did not complete either in the pretest and posttest steps, thus only 50 children who completed all steps. Due to the distribution of data on the pretest and posttest did not fulfill the assumptions for normality and homogeneity of variance, this study reported the finding using nonparametric tests (i.e., Mann-Whitney *U* test) by SPSS.

4 RESULT AND DISCUSSION

4.1 *Result*

4.1.1 *Descriptive Statistic of the Scores Mean of arithmetic ability.*

Table 4 shows the mean item scores for the arithmetic ability for each class, control class and experimental class. These mean scores show that the scores on the arithmetic ability pretest did not differ between those class, it was proved by the control class obtained mean score 2.6 and the experimental class obtained mean score 2.8. In contrast, there was a significant difference on the arithmetic ability posttest between the control class and experimental class, it was proved by the control class that obtained mean score 3,4 and the experimental class obtained mean score 5,6.

Table 4. Descriptive Statistic for mean scores of arithmetic abilities in pretest and posttest,

Condition	Pretest (Mean)	Posttest (Mean)
Control class (n=25)	2.6	3.4
Experimental class (n 25)	2.8	5.6
Total (n=50)		

scored on 2 – 8 points scale, 8 is the highest score.

4.1.2 *Test of Mann-Whitney U for Pretest.*

4.1.2.1 Test of Normality Data.

Based on table 5 below, the Sig. value of Shapiro-Wilk test was obtained 0,00 < 0,05. Thus, it can be concluded that the data in the control class was not normal. In line with the experimental class the Sig. value of Shapiro-Wilk test was obtained 0,00 < 0,05. Thus, it can be concluded that the data in the experimental class was not normal.

Table 5. Shapiro-Wilk Test of Normality.

	Shapiro-Wilk		
	Statistic	d f	Sig.
Control Class	.785	25	.000
Experimental Class	.815	25	.000

4.1.2.2 Test of Homogeneity of variances.

Based on table 6 below, the value of Based on mean Sig. was obtained 0,607> 0,05. Thus, it can be concluded that the variance of data for the control class and experimental class was homogeny.

Table 6. Test of homogeneity of variances

	Levene Statistic	Sig.
Based on Mean	.269	.607

Even though the data was not normal but was homogeny. This study using nonparametric test to compare differences between the control class and experimental class. Based on the table 7 below, the asymptote. Sig. value of Mann-Whitney Test was obtained 0,556 > 0,05. Thus, it can be concluded that there was no statistically significant difference between control class and experimental class on arithmetic ability for pretest.

Table 7. Mann-Whitney Test for Pretest.

	Arithmetic Ability
Asymp. Sig. (2-tailed)	.556

4.1.3 *Test Statistic of Mann-Whitney U for Posttest.*

4.1.3.1 Test of Normality Data.

Based on table 8 below, the Sig. value of Shapiro-Wilk test was obtained 0,00 < 0,05. Thus, it can be concluded that the data in the control class was not normal. In line with the experimental class the Sig. value of Shapiro-Wilk test was obtained 0,00 < 0,05. Thus, it can be concluded that the data in the experimental class was not normal.

Table 8. Shapiro-Wilk Test of Normality.

	Shapiro-Wilk		
	Statistic	d f	Sig.
Control Class	.634	25	.000
Experimental Class	.732	25	.000

4.1.3.2 Test of Homogeneity of variances.

Based on table 9 below, the value of Based on mean Sig. was obtained was obtained 0,039 < 0,05. Thus, it can be concluded that the variance of data for the control class and experimental class was not homogeny.

Table 9. Test of homogeneity of variances

	Levene Statistic	Sig.
Based on Mean	4.489	.039

Due to the data was not normal and was not homogeny, the study using nonparametric test to compare differences between the control class and experimental class. Based on the table 10 below, the Asymp. Sig. value of Mann-Whitney Test was obtained 0,00 < 0,05. Thus, it can be concluded that there was statistically significant difference between control class and experimental class on arithmetic ability for posttest.

Table 10. Mann-Whitney Test for Posttest.

	Arithmetic Ability
Asymp. Sig. (2-tailed)	.000

4.2 *Discussion.*

The results of the study revealed the pretest scores showed that there were no differences in the mean arithmetic ability in the control class and experimental class. Whereas the posttest scores showed that there were differences in the mean arithmetic ability between the control class and experimental class. The differences may have been due to learning activities utilized the educational game tool of modified bottle cup so that this intervention had a significant effect on the children's arithmetic ability. Literature that investigates the factors underlying arithmetic problem-solving achievement extensively evaluates the cognitive components, such as working memory (WM) and processing speed, at the basis of this acquisition (Passolunghi, Cargnelutti, & Pellizzoni, 2019). The presence of learning media can affect the level of understanding and the level of memory of the brain to store material/knowledge compared to just listening to the material from the instructor or without learning media (Arsyad, 2017). This means that there is a difference in the level of understanding between learning by using media and learning without using media. Learning media provides psychological effects for students, namely giving their own interests, impressions and enthusiasm in obtaining a knowledge and learning atmosphere becomes more enjoyable so that the knowledge obtained lasts long in the brain of students (Smaldino, Russel, & Lowther, 2014; Wati, 2016).

In this context, the current research is consistent with other international research which indicate active involvement of children in the learning process as the most important factor in designing effective teaching interventions aiming at the development of children's mathematical ability. This result accords well with earlier literature showing that when the mathematical activities that take place in a school, are meaningful and help children approach the mathematical knowledge and discover mathematical concepts through various kinds of stimuli, can effectively help them develop their mathematical ability (Papadakis, Kalogiannakis, & Zaranis, 2017).

Whereas the children in the control class showed little improvement in the arithmetic ability. The role of the media in the development of education is very important. It has played an important role in influencing the underdeveloped and socioeconomic sections of society in recognizing the importance of education (Preeti, 2014). Various forms of media such as newspapers, television, radio, internet, etc. have contributed greatly to the spread of the perspective of the masses that they must focus on developing reading, writing and arithmetic skills, to make them live efficiently. In the development of education, media and technology are not only limited to classroom settings, but are also broad, make the provision of equal opportunities for learning, and are part of the real world that limits their use in the classroom. It is to limit the ability of students to compete in the world. The role of the media has been considered important not only in the development of education, but also in other fields such as, communication, motivation, social welfare, employment opportunities and understanding how to utilize technology effectively (Naz & Akbar, 2010).

The finding showed that the effect of the educational game of modified bottle cap activities on arithmetic ability were promising. Consistent with the previous studies, (Vogt, Hauser, Stebler, Rechsteiner, & Urech, 2018) said that the children gained higher learning outcome in early childhood mathematics through play-based approach, in which they used the object as an intervention. New strategies in basic mathematics education might be designed: strategies that make use of preexisting arithmetic intuition for children to drive acquisitions knowledge of symbolic numbers (Barth, La Mont, Lipton, & Spelke, 2005). Lai also claimed that non-digital games can stimulate the cognitive development of preschool age children. However, the kind of non-digital game in this study used a modified bottle cap as an educational game tool (Lai et al., 2018).

In addition, this research also showed from teachers' point of view who has the difference of knowledge and beliefs about mathematics. A teacher who has better knowledge and beliefs about mathematics leads to better teaching practice such as providing and applying adequate lesson plans. Whereas, a teacher who has bad knowledge and beliefs about mathematics lead to worse in teaching practice. This finding is in line with a prior study that knowledge and believe can predict teachers' perception skills and abilities in planning and applying adequate action (Dunekacke, Jenßen, Eilerts, & Blömeke, 2016). Teachers also need to improve knowledge and skills to enhance, improve and explore their teaching practices (Selvi, 2010).

In line with the findings, the presence of media that plays a role in creating an effective atmosphere in learning, the media also plays a vital role in increasing active participation and student ability. This is as stated by Manjale & Abel, (2017) in their research that learning media play a vital role for students and teachers to improve the learning process, increase active participation and a variety of student abilities and trainings on media for teachers are also important to improve teacher competence in developing learning media with the aim of improving the learning process. If this is done optimally, the learning process will have good quality.

This research consists of a small sample of children who involved in the assessment. Thus, it is recommended that for the future study on using the bigger sample sizes. A second methodological limitation in the research was conducted based on quantitative approach. Therefore, for the future research, it is recommended to utilize another research design.

5 CONCLUSION

To conclude, the research indicated that the utilization of educational game tool of modified bottle cap has a significant potential and may eventually lead to enhancing the arithmetic ability for kindergarten students, aged 4-5 years. Even though a play-based approach with an object to early mathematics certainly has a great potential to become an innovation, which will be adopted readily and widely by the practitioners in the early childhood education, future studies might consider utilizing educational game tool of modified bottle cap to another mathematics skills such problem-solving ability. In additional, a teacher has to have adequate knowledge and beliefs about mathematics in order to able to provide better teaching practice that leads to better planning and applying adequate action.

Media bottle cap was modified and developed with the aim of improving children's mathematical abilities. However, on the other hand this media can also be used to stimulate a child's sense of care for the environment. This is because the media used is made from recycled materials, which are used bottles. Children's creativity will also be stimulated because they are inspired by teachers who creatively create interesting media from these recycled materials. Additionally, the bottle cap is not only easy to modify but also easy to find around the home or schools as well as suitable for the rural area. As a teacher/practitioner of education, especially early childhood teachers, are required to have creativity to always present the media in each of their learning because early childhood is in the stage of thinking concretely to receive an understanding.

This bottle cap media can facilitate the teacher in learning so that children are easier to have knowledge and insight about arithmetic. The bottle cap media was developed and arranged with an attractive appearance so that children can slowly stimulate and unconsciously stimulate children's mathematical knowledge.

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Muslim Women's Roles in Early Childhood Education

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ABSTRACT: The role of Muslim women in early childhood education is very urgent in education because women are the first source of knowledge for children. There are many supporting and inhibiting factors for the role of Muslim women executors. This study aims to find the role of female educators in Islam as a dual function that functions as a teacher, parent, and community member. The research method uses qualitative with a phenomenological approach. The findings show the role of Muslim women is not ideal, including the role of women as educators in schools, parents, and education experts. Women's awareness of early childhood education is still very low. Suggestions for future research to dig deeper into the causes of the role of women is still low, and influence government policy in increasing the role of Muslim women or non-Muslim women.

Keywords: Role of Muslim Women, Early Childhood Education

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1 INTRODUCTION

Women always play an important role in human development, but the roles are largely unmarked and not recognized. In very few cultures, until relatively recently, women were recognized to have the same role as men and had the same right to participate in all social fields. Muslim women have the same role in society but show that society depends on women as caregivers, child educators, academics for the development of children both at home and at work (Khan, 2003). Women make up half of the community and they are responsible for nurturing, guiding and reforming the next generation of men and women by educating and bringing early children to the appropriate ECE institutions. It is women who instill principles and faith into the souls of the nation and raise children of noble character.

New trends and family patterns have been paralleled by changes in gender roles, especially expanding the role of women into economic providers for families, this makes the focus of women on childcare and education divided. Developments related to the new role of women are seen as weakening the family (Frejka, Goldscheider, & Lappegård, 2018). Women as mothers are the first madrasas for children to have been displaced because women's roles have shifted to being responsible for the family economy. To understand the everyday reality of modern society, it is necessary to recognize that the family is a dynamic entity, characterized by increasing complexity in relation to the decision-making process related to the transition in the course of family life and the organization of family life. Indeed, family can no longer be described only as a well-defined set of roles; it is negotiated every day, built by interactions between partners at the micro level. Work life and family are increasingly influencing each other because both women and men are involved in earning and caring.

Based on this phenomenon, women's critical awareness is needed, about their role in early childhood education. especially acting as an early childhood teacher both in the institution and in their homes when she was a mother. Kohli, Lin, Ha, Jose, & Shini, (2019)'s research revealed critical awareness that was embedded in the position of women, in all domains of women's lives, not something that was processed only in education. Through family and community, critical education experiences and ongoing access to critical discourse, critical awareness is a way to understand and at the same time the existence of women in the world of education. A complex and sustainable workforce that develops into justice-oriented teachers, believes that teacher education programs and schools must recruit and support women who are already involved in developing their critical awareness.

The United Nations Sustainable Development Goals provide a historic opportunity to implement interventions, at scale, to promote early childhood development. Britto et al., (2017) review concludes that to make interventions successful, intelligent and sustainable, it needs to be implemented as a multi-sectoral intervention package that is tethered to care fostering. Various studies emphasize that interventions for early childhood should be applied at times that are suitable for development during the life span and are built on the feasibility of improvement platforms. Interventions will continue to increase with the development of developmental science, evidence now strongly suggests that parents, caregivers and families need to be supported in providing care and protection so that early childhood can reach their developmental potential. Women's awareness of their role to be a part of giving intervention to children. Based on the background of the problem and previous research, the following research aims to examine the role of Muslim women in early childhood education.

2 THEORITICAL STUDY

2.1 *Theoretical Study*

Before elaborating further on early childhood education in the perspective of Islamic education, it is first described about children both in language and terminology. Etymologically (language) found six kinds of expressions in mentioning children, name-ly: al-awlãd, al-banûn, al-atfãl, al-ghilmãn, al-ghulãm, and al-wildãn. The first two terms have the connotation of the opposite meaning; al-awlãd connotes negative meanings and al-Banon has positive connotations; therefore, it has its own implications in children's education (Shihab, 2001; Tafsir, 2000; Jamhari, 2003; Jum'ah, 2006; Mansur, 2009; Sumantri & Syaodih, 2006; Sujiono, 2012; Suyadi, 2011; Suryana, 2014; Fauzia, 2017; Siregar, 2018).

First: biological children, namely the position of children caused by birth factors; Natural children, namely children born from their own womb. In the perspective of biological child, fiqh has consequences in sharia rights and obligations, namely inheritance rights and filial obligations. Second: ideological children, namely the position of a child who is not caused by birth factors and there is no relationship between sharia rights and obligations, but those rights and obligations are built on humanitarian values, obedience, and inner ties such as students, foster children, subordinates, and so on. The term ideology in the Indonesian Language Dictionary means "a set of systemic concepts; the way someone thinks or a human group; understanding, theory, and socio-political goals that combine." Referring to the two terms above, we find several terms in the Qur'an which all-mean "children", namely: aulãd, banûn or banîn, dzurriyah, and tifl. The difference in terms used by the Qur'an does not change the basic concept of what is meant by children, both biologically and ideologically. It can be understood from various commentaries written by the mufassir (scholars who are experts in the field of interpretation of the Qur'an), including M. Quraish Shihab. In the interpretation of al-Mishbah and some of the books he wrote, interprets the semantic meanings of the terms of the Qur'an above which illustrate the concept of the child as follows (Shihab, 2001).

2.2 *The concept of Aulãd*

The word aulãd is the plural form of the word walad, which means child. The word aulãd in the interpretation of Shihab is not in the sense of a child within a certain age limit, but a child in a general sense, so the word aulãd here can be interpreted as a child in various age and sex constraints. This means that the word aulãd also includes early childhood between 0-6 years. As stated in the Surah al-Tawbah / 9: 55); aulãd as "slander" (Surah al-Anfãl / 8: 28); aulãd as one who can "neglect from remembering God" (QS al-Munãfiqûn 63: 9); aulãd as something "not the cause of getting closer to Allah" (Surah Saba '/ 34: 37).

2.3 *The concept of al-Banûn*

The word al-banûn is a plural form of ibn, which means a male child (gender: dzakar), and ibnah or bint the plural form of banãt means a daughter (gender: untsã). From the root of the word ibn, several words are found in the Qur'an such as the word (بَنِى) banî, which means derivative, class of followers, or folk, and the word (بُنَىَّ) bunayya, which means a child who is still in young age.

The word al-banûn is contextually the opposite (antonym) of the word aulãd, which tends to be pessimistic. The word al-banûn in the terminology of the Qurran has an optimistic connotation, as illustrated in several verses of the Qur'an that relate the word al-banûn to zînah, as found in

verse 46 of the surah al-Kahf and al- banîn with (زُيّن) zuyyina, as found in verse 14 of surah Ali Im-ran. Both words are interpreted as "decoration" or "made beautiful".

Therefore, the word (بنىّ) bunayya taken from the ibny word is a patron that describes delusion. The collection describes love, as Luqman calls upon his son in verse 13 of Surah Luqmn that reads: (يَابُنَىَّ لاَ تُشْرِكْ بِاللهِ) yã bunayya lã tusyrik billãh which means: "O my child, do not associate with Allah". Luqman called upon his sons by labeling them bunayya. According to Shihab, describing Luqman's affection for his small child is about loving. In terms of substance, the word al-banûn is the same as the meaning of aulād, which is a general understanding of "child", which includes children in all ages as children in the sense of the above. The difference between them lies in the context used; it is more on the things that are pessimistic while the allegiance is more on optic-mystical matters.

2.4 *The Concept of al-Zurriyyah*

The word zurriyyah, which means a child who is born of the womb of a mother (biological child) among them as mentioned in the Surah al-A'rãf / 7: 172: "(And when your Lord took the descendants of the children of Adam from their moth-er)". Also, in the QS al-Ra'd/13: 38: "And verily We have sent several Apostles be-fore you and we gave them wives and descendants".

2.5 *The Concept of Tifl*

One of the names in the Qur'an, which is closer to the understanding of early childhood in this discussion, is ṭifl. This term is referred to in the Qur'an four times, two of which are referred to in two verses in the same surah, namely QS al-Nûr / 24: 31 and 59. One of them takes the plural form aṭfãl, namely in verse 30. Another verse takes the singular form of ṭifl, namely Surah al-Hajj, 22: 5; QS Ghãfir/Mu'min, 40: 67; and QS al-Nûr/24: 59.

The word ṭifl (singular form) indicated by the verses above all points to the understanding of early childhood as found in QS al-Nûr, 24:31 (or children who do not understand the female genitals). The general theme of this verse is the boundary of adult female genitals that should not be seen in the presence of normal and adult men. If so, then what is meant by tifl in this verse is that children who are still early in age are declared Shihab as "immature" or "have not understood sex". As Shihab interprets the word ṭifl which is found in Surah Ghãfir and Mu'min / 40: 67 which sounds: "He who created you from the ground then from a drop of semen, after that from a lump of blood, then you are born as a child". According to him, the word ṭifl in the last verse is the deadline of the process of human development in the womb, which starts from the beginning of its creation to birth in the form of ṭifl (baby). The word ṭifl is used by the Qur'an to refer to children who have not grown up, or children who have just come to the age of knowing the au-rat. The aṭfãl word which takes the plural, usually refers to children who already know a little about sex / genitalia. Therefore, in QS al-Nûr / 24: 59 use the plural.

While the limitation of the age of children and children according to the scholars stopped at the age of twelve, so-called children are people who have not experienced wet dreams. Early Childhood Education (PAUD) is a basic educational level which is a training effort aimed at children from birth to the age of six years which is carried out through the provision of educational stimuli to help growth and physical and spiritual development in order to have readiness to enter further education held on formal, non-formal and informal channels. In other words, the notion of early childhood education is education that serves to assist the growth and physical development and

psychological development of students aged zero to six years, which are carried out inside and outside the family environment.

3 METHODS

This research uses qualitative research (Miles & Huberman, 1984). To consider holistically the phenomena on what is experienced by the research subjects, for example, behavior, perception, motivation, action as a whole, by means of descriptions in the form of words and language, when discussing natural special contexts (Yusmawati & Lubis, 2019). Researcher directly witnesses the facts on the ground. Therefore, the research was carried out by collecting data was in accordance with reality in the field. This study discusses the role of Muslim women in early childhood education in Gorontalo City, which is the object of research that is reviewed directly by researchers in accordance with topics related to the findings in this study.

This study focuses on the reality of early childhood education in the city of Gorontalo, the role of Muslim women in the implementation of early childhood education in Gorontalo City. In doing this study, the author analyses supporting factors and obstacles to the role of Muslim women in the implementation of early childhood education in Gorontalo City; supporting factors and hampering the role of Muslim women in the implementation of early childhood education in Gorontalo City. It also aims to provide solution to the role of women in the implementation of early childhood education in Gorontalo City. In this study, the author focused on the role of Muslim women in early childhood education in Gorontalo City. The author limits the focus of early childhood research in Gorontalo. The focus of the research is illustrated in the following matrix.

Table 1: Matrix of Focus Description

Focus	Research Description
Early Childhood Education Reality in Gorontalo City	The Gorontalo government has encouraged PAUD growth and development by providing assistance both morally and materially
The Forms of the Role of Muslim Women in the Implementation of PAUD in Gorontalo City	Muslim women as educators in schools; Muslim women as parents; Muslim women as observers of education
Supporting and Inhibiting Factors for the role of women in the implementation of PAUD in Gorontalo City	The supporting factors are: - Parents, the community, and the government. - Support for PAUD institution committee in the form of scholarship assistance, facilities and infrastructure. The constraining factors are: - Psychological factor, economic factor, socio-cultural factor, and theological factor. - Lack of parental knowledge about the important role of early childhood education. - Lack of training for educators to improve teaching competencies.
Solution to the Role of Women in the Implementation of PAUD in Gorontalo City	- The foundation seeks to provide understanding to parents of the importance of PAUD implementation - The government has provided training through tiered training programs conducted by the Directorate of Education and Education Personnel (*Direktorat Pendidikan dan Tenaga Kependidikan* - P2TK).

Source: The author, 2018.

4 RESULT AND DISCUSSION

As a woman who plays a very important and valuable creature in carrying out her du-ties in nature, that is caring for and fostering children and the duties of the community (Edy, Ch, Sumantri, & Yetti, 2018); (Islamiyati, 2018); (Megawangi, 1996); (Shihab, 2001); (Moeslichatoen, 2004); (Masnipal, 2013); (Kementrian Pendidikan dan Kebudayaan, 2013). Women are required to teach manners, moral principles, and human values to children. However, in modern times many women have been influenced by misleading views that ignore their duties and main roles as women. Many sexual deviations occur in the community that has never been witnessed in the life history of humanity.

Even though a woman works and slams, she will lose her temper and femininity, because women are created not as workers, but as wives, who are good for their hus-bands, educate, and nurture children in their homes. Although a house might be narrow and simple; for women, it is like a spacious and luxurious palace. Inside the house, women are better able to maintain and maintain their honor and glory than they have to be conductors, bus drivers and so on. If forced to help their husbands, let them carry out their duties or work that is in accordance with their mental and biological characteristics, such as nurses, caregivers and careers, educators, and participate in social activities justified by Is-lam, are far better for maintaining purity and his honor (Yamin & Sanan, 2010). Therefore, as a form of women's role in the implementation of early childhood education, among others.

4.1 *Responsibility for Children*

4.1.1 Caring for Children

Muslim women must always remember that a mother's responsibility in educating children and forming her personality is greater than that of a father, because mothers are closer to them, more socialized and more aware of their circumstances, characteristics and behavior from growth to adulthood than the father. A true Muslim woman really knows her responsibilities in educating her children. He managed to instill noble values in their souls. There is no clear evidence of these values other than the main women task, that is, those are always aware of their roles to be succeeded in caring and educating their children. There children are expected to be the greatest impostors until there is hardly a figure from these devotees who have been slapped across various events in various times but he as a result of his great mother's prints.

4.1.2 Educating Children Well

The personality of a mother is usually close to children and is liked by them. They express their feelings and complain about problems, and the mother accepts the complaint and tries to overcome and influence their feelings by paying attention to their level of thinking and their time. Every now and then, he joked with them, stating pleasantly while giving advice and direction, guidance with gentle, loving words. Therefore, their love, attention and adherence to it increases to listen to advice and direction, and they obey it with full awareness that grows out of love and respect for the mother, not because of coercion or violence, where the two types of obedience are different. The first obedience arising from consciousness is true, strong and eternal obedience and will bring good results, while the second obedience that arises be-cause of violence and compulsion is false, temporary and obedience, which then dis-appears. This was revealed by Irmawati Utia Rahman, SP. who maintains:

Educating children well must always show the personality of a mother, as a parent, show joy, so that children also feel close and can convey advice to children, direction, and guidance to children, with gentle words of affection, by getting used to - say kalimah tayyibah, like saying Subhanallah, Alhamdulillah, masya Allah, including getting used to greetings when meeting fellow Muslims. This can be done if parents take a role in this matter, starting with habituation (Irmawati Utia Rahman, a par-ent, interview, 26 May 2018).

4.1.3 Giving Love and Kindness

Muslim women whose hearts are illuminated by the sun will remember that their children need cool care, deep love, and pure tenderness, so that they grow with a healthy soul, far from various diseases and problems. His soul is full of optimism, his heart is full of confidence, and his brain is full of a myriad of hopes and ideals. For this rea-son, a mother must take her children with a cool water of love and tenderness that flows from the bottom of a big heart, to water their lives with excitement and pleasure, and fortify their souls with calm and confidence. Fonna B. Ino, expresses in this way:

As parents, and as Muslim women, they must educate children with love and tenderness. That way the child psychologically can feel closeness to the parents, so they can feel the love of their parents, someday he will pray for his parents, because he really gets love from his parents so surely he prayed for his parents as the recommended prayer means: that God forgive my parents as he loves me as a child. (Fonna B. Ino, a parent, interview, 29 May 2018)

Based on several of the interview above, it can be understood that when people educate their children with love and tenderness, one day children will also behave in a good and loving manner with their parents, as well as their children later.

4.1.4 Be Fair to Children in Affection

Wise Muslim women always do justice to their children by not prioritizing some of the others in each case because they know that unfairness is prohibited by Islamic law. Besides that attitude will have a negative impact on the soul of the child whose attention is reduced that is, that will grow in a state of inferiority, anxiety while saving envy and jealousy. While children who get fair attention by the mother, in order to make the children live healthy, clean heart from envy, resent-ment and inferiority. His soul is full of optimism, pleasure, love and grace. This is what Islam wants from parents, so he encourages them to do such attitudes.

4.1.5 Do not bully children

A Muslim woman who is aware is not permitted to curse her child in accordance with the Mes-senger of Allah's prohibition because it is feared that her oath coincides with the obligatory time. Sometimes it is found by parents who like to curse their children when they are angry, upset and so on; though it is prohibited in Islamic teachings. As a parent, he should not do such bullying. Muldiati Tone once rebuked one of the parents who became his neighbor in a polite manner he said:

“Whatever angry of a mother, as a parent, it should not be cursing her child with words like that (hopefully getting hurt if you don't want to hear Mother's words). The parental expressions are usually easy to accept. So that the Prophet forbade him to swear at children because he feared it would coincide with the time required”. (Muldiati Tone, a local educational expert in Gorontalo, interview, 23 March 2018.)

This opinion implies that the role of Muslim women in PAUD implementation in Gorontalo City, as the results of the interview above, is concerned about education of parents who educate their children who are deemed not in accordance with Islamic teachings, so that they take certain so that parents do not do so.

4.2 *Pay Attention to Things That Affect the Formation and Development of Children*

Muslim women who realize their religion without the knowledge of their children, they will monitor their activities, know their friends, their hobbies and wherever they go. When they found to be distorted, women's views, relationships, and hobbies must not be against Islamic teachings, such as, smoking and coming to a place of immoral. Furthermore, a Muslim mother who is cautious immediately negates her or warns her gently and wisely, because she is more able to do so from her husband because he is closer to them. Here, there is a great responsibility of a mother in directing her children and forming them into a pious generation whose personality is in accordance with Islamic values.

4.2.1 Infusing Morals to Children

Muslim women will earnestly instill good moral character in the souls of their children, in the form of love for others, love the weak, respect the great, love the smaller, establish friendship, love to do good, be honest, keep promises, and attitude other commendable attitudes which include noble character.

4.2.2 Provide Advise and Pray for Children

One of the tasks of educators is to advise their children so that children's behavior does not deviate. In addition, educator's advice can also build a healthy and clean child's personality. In terms of advice, the Prophet (peace and blessings of Allah be on him), always chose the right time and place to advise children, because thus, the burden of education will diminish, the results of education will be maximally achieved. In addition, the love of educators, especially parents, can be done by praying for children. Prayer is the main pillar that parents must practice for the good of children. Parents must beg sincerely and hopefully to God, because it is the traditions of the Prophets and messengers of Allah.

Just as the Prophet did in the history of Abu Musa's friend revealed by Ibn Hajar al-Asqalani and discussed specifically in a chapter on the importance of praying for the child for the blessing of the child, as the Prophet said to Abu Musa named Ibrahim. The Prophet. in praying for children, they always rub their heads and even rub the face of the child being prayed for. In addition, the role of Muslim women is quite a lot including the role of women as educators in schools, the role of women as parents, and the role of women as observers of education.

4.2.3 Women as Educators in Schools

As a person who is responsible for the development of students both in terms of affective, cognitive, and psychomotor, then an educator is required to understand their duties and responsibilities. In the implementation of the Al-Islah Islamic Integrated PAUD center in Gorontalo City, the educators have carried out their responsibilities as a manifestation of the holy intention in advancing the world of education. This was illustrated in an interview with PAUD teachers, for example Lian Muhungo who maintains:

"Since 2005, I graduated from college and immediately taught honorary teachers in PAUD. The main factor that drives me in-to the world of early childhood education is the field of sci-ence that

I have obtained in college I want to immediately practice in direct learning activities and to see what results from the field of science that I have ever received. Besides that, I am also happy and like the world of children". (Lian Mo-hungo, a teacher of Raudhatul Athfal Sabilil Ilmi Kota Gorontalo, interview, 26 May 2018)

Therefore, educating is a call of heart and academic responsibility to apply the knowledge that is owned. Women are no exception. Lian added:

The role of women in early childhood education remains progressively visible. Wom-en play an important role in children's education, for example by the presence of playgroups and learning parks that help the community in developing education in Gorontalo Province. (Lian Mohungo, a teacher of Raudhatul Athfal Sabilil Ilmi Kota Gorontalo, interview, 27 May 2018.

A similar opinion expressed by Lely Sayedi who states:

"I taught at PAUD four years ago. The underlying motivation so that joining PAUD is to develop the knowledge I have. In addition, I want to help the government edu-cate children early. It is because early age kids liked to be a home foundation. If the foundation is strong and strong, then the house will last longer and not easily collapse" (a teacher of Raudhatul Athfal al-Ma'arif Kota Gorontalo, interview, 5 March 2018.)

Teachers' of PAUD concern above shows that they have a great soul, high sincerity, patience, and consistence (istiqamah). This evidently shows that educators have spiritual potential namely:

4.3 *Clean soul, body, and mature in thinking*

An educator must have a clean mind and body in carrying out his daily activities. Without a clean body and soul, a student will have difficulty in purifying his intentions and behavior in every professional action.

4.3.1 *Sincere*

In accordance with the intrinsic value of Islamic education, a teacher must be sincere in every academic dynamic. The value of sincerity will determine whether the learn-ing process can be successful or not. A teacher who is not sincere in every academic activity will be trapped by routine activities that are always based on material and personal satisfaction but will not achieve social satisfaction and spiritual satisfaction.

4.3.2 *Fair*

Educators must be fair, in every learning process; fair treatment to all students will arouse motivation for each student, because all the work and results of student achievement will be assessed fairly to give satisfaction to all students. There should be no teacher preference for students because this will lead to student discrepancies with the teacher. As an educator, to be being fair and not choosing the love of children are ones of the attitudes that must be possessed to make children obedient to educators. Thus, the injustice and favoritism of students towards their children as students creates jealousy and envy in the soul of the child because they feel they are set aside.

4.3.3 *Patience*

A teacher is required to be patient in devoting himself to students during school, which may be at this time the values have ranged or have been abandoned so that they cannot be blamed if a student sometimes does inappropriate or is against / insolent to the teacher. The sense of 'devoting oneself

to children' is the teaching of the Father of Education, Ki Hajar Dewantara because each individual has his 'desire' by understanding children as different individuals who have different talents and interests so that in absorbing knowledge and practice it differently from one another. This is where a teacher is required to have extraordinary patience.

4.3.4 *Istiqamah (Consistence)*

Consistency of knowledge and consistency of attitude will determine whether the learning can be achieved or not. A student must be consistent in the knowledge, of what is taught, what is conveyed and what is done must have its istiqamah (consistency) value. The science taught must have a high scientific foundation and not just mere knowledge delivery. Consistency must underlie the knowledge we transfer because the values of truth are highly upheld by science. Besides that, the attitude of the attitude is also very necessary because it is very related to a good personality.

4.3.5 *'Alim (know well)*

A teacher must be pious, in the sense that because a teacher is an example for each student, then surely the teacher must have a pious character. Exemplary is something that is exemplary. Social education has a lot of influence on the behavior of others who are used as examples or examples that are imitated by children. The Gorontalo Provincial PAUD Mother, Idah Syahidah Rusli Habibi, said:

*"*Children are the owners of the present and future of the nation because in their hands the history of the lives of the next generation continues. So important they are in the chain of continuity of a nation's tradition. Age zero to six years is a golden period as well as a critical period in the stages of human life that will determine the development of children later. Ibu Idah also said that these times were the right time to lay the foundations of physical, language, social, emotional, self-concept, art, morality, and religious values*"* (Idah Syahidah Rusli Habibi, a "mother" of PAUD in Gorontalo province, interview, 10 May 2018.)

Gorontalo Provincial PAUD Mother, Idah Syahidah Rusli Habibi, said that the Muslim women are the owners of the present and future of the nation because of their hands. So important they are in the chain of continuity of a nation's tradition. From zero age to six years is a period as well as a critical period in the stages of human life. It has been also held that these times were the right time to find the foundations of physical, language, social, emotional, self-concept, art, morality, and religious values. At this stage, Ibu Idah believes that:

Teacher's profession, especially PAUD teachers, as educators must be more dominant in cultivating students' mentality as early as possible. As a noble moral responsibility holder, women are important because childhood is an important time for sensitivity in cultivating mentality for education. Therefore, PAUD teachers need to explore history, the ins and outs of learning development of students who are at an early age. PAUD teachers are expected to develop new formulations, innovate and be compatible with the times. (Idah Syahidah Rusli Habibi, a "mother" of PAUD in Gorontalo province, interview, 10 May 2018)

As a result, it can be said that PAUD teachers are expected to be able to apply every effort to serve the intellectual life of the nation. Therefore, it is not about luxurious learning facilities, because luxurious facilities do not guarantee that children will have a high work ethic, and vice versa.

4.4 *Women as Parents*

The role of parents in this case is the mother and woman greatly determine the level of success of the education of their children. For this reason, children's education is not entirely left to teachers

but also parents at home. The PAUD program needs to get support from all parties, including parents, the community and the government as observers of education. This is as illustrated in the results of interviews with parents of students which include:

4.4.1 *Parents as motivators for their children*

Children are the nation's assets that determine the future of the nation and the State so that they need to be nurtured and developed early. To realize optimal development children, need support from all parties. Fitrawati A. Husain, parents of Rifa J. Putri Husain stated:

Parents provide motivation and encouragement in the learn-ing process, interact with teachers in schools in terms of developing children's learning in school, and fulfill their basic needs. In addition, parents must pay attention to their procedures in providing education to their children, not eliminating children's enthusiasm in learning, giving support and attention so that children's confidence is not lost. (Fitrawati A. Husain, a parent, interview, 6 March 2018)

Saskia Novelia further adds:

To be a motivator for children, parents must give love and love unfortunately sincerely and always communicate and exchange ideas with children about every problem they face. (Saskia Novelia Biki, a parent, interview, 8 March 2018)

Based on the interview above, it can be understood that the importance of parents' care for children, especially in early childhood, as a form of responsibility in children's development. Because it is the role of parents that greatly influences their growth, because the amount of time for children and their parents is greater than the amount of time with the teacher.

4.4.2 *Parents as a model or role model for their children.*

For example, M. Sya'ban Karim states:

Parents are very important for children's education. Parents are the closest model and example for their children to imitate. For this reason, parents must teach their children how to behave politely, not say rude, and teach them how to respect older people (Sya'ban Karim, a parent, interview, 8 March 2018.).

4.4.3 *Parents as teachers at home. For example*

Irmawati Utiarahman, a parent state:

The role of parents at home is to guide the child and repeat what the child has gotten at school. For children, it is easy to learn but it is also easy to forget the lessons they have received if they are not repeated. For this reason, the role of parents as teachers at home is very important in maintaining the lessons that children have received at school. (Irmawati Utiarahman, a parent, interview, 8 March 2018)

Muslim women must always remember that a mother's responsibility in educating children and forming her personality is greater than that of a father, because mothers are closer to them, more socialized and more aware of their circumstances, characteristics and behavior from growth to adulthood than the father.

4.4.4 *Parents as a determinant of improving the quality of children's education*

To improve the quality of children's education, teachers and parents must work to-gether to guarantee and improve the quality of children's education. This is illustrated in the interview with students' parents. For example, Saskia Novelia Biki maintains:

Parents must teach their children to be diligent and active in learning both at school and at home. Always communicate to children by asking what lessons the teacher gives at school so that children can repeat them at home. Children must be trained independently both at school and at home. Providing writing stationery at home so that children can learn to write, draw, and color (Saskia Novelia Biki, a parent, interview, 9 March 2018).

Similarly, Saskia Novelia Biki, a parent argues in this way:

The important thing taught by a mother at home is: polite; where good things and bad things; how to write, draw and color; memorize short prayers and short verses; independent way of life (Saskia Novelia Biki, a parent, interview, 10 March 2018).

The parents realize that the environment has a great influence on the development of children's education. For this reason, it is necessary to oversee and supervise the social environment of children so that they are not trapped in negative things from their environmental influences. For example, A. Husain believes:

The child's family and social environment must be maintained from negative examples. For this it is necessary to improve a safe, orderly and peaceful household atmosphere so that children can concentrate fully on learning (Fitrawati A. Husain, a parent, interview, 10 March 2018.)

Similarly, M. Sya'ban Karim, a parent in Gorontalo expresses his opinion as:

The family environment has a big influence on the formation of children's character. By teaching children to speak politely and politely can form the character early on. In the community, with the variety of characteristics and characteristics of people met by children, parents must be selective and guide their children. This can be done by telling the child which example can be copied and which example should not be imitated Sya'ban Karim, a parent, interview, 10 March 2018.

In addition, as busy parents with various kinds of professions, they need awareness for every parent to be able to manage his time to be able to give special time to the education of their children. As for the method of education at home, between one parent and another has its own method. As Meilan Soleman, a parent says that:

"How to set the learning time of children at home is adjusted to the right time, if you are playing then do not force them to learn." Meilan Soleman, a parent, interview, 9 March 2018.

In a different view, M. Sya'ban Karim states in this way:

Education at home can be done at any time by utilizing objects that are around the house, it can even be done while playing so that the child does not get bored and does not seem impressed. For example, a child is playing cars, parents ask the child "what color is the car?", "How many wheels?", "What is this car?" M. Sya'ban Karim, a parent, interview, 10 April 2018.

Another opinion coined by Fitrawati A. Husain who sees that:

Children's education must be carried out at night after din-ner, at least repeating the material received at school in the afternoon. Fitrawati A. Husain, a parent, interview, 9 March 2018.

Similar to Fitrawati, the same thing was expressed by Irmawati Utiarahman:

Children's educational arrangements at home ie at night before bed the child must be accustomed to memorizing, learning to count, and reading. In addition, chil-dren are not allowed to play before learning. Irmawati Utiarahman, a parent, interview, 12 March 2018.

A more detailed division of time was carried out by Saskia Novelia Biki. He stated that:

How to manage children's education at home is by dividing time. There is time to study, play and rest. Consistency with a predetermined time will teach children to understand the importance of living a disciplined life Saskia Novelia Biki, a parent, interview, 14 March 2018.

The benefits felt by parents after entering their children in PAUD al-Islah as revealed by Saskia Novelia Biki:

Knowledge of children increases is able to socialize so that they have many friends, so they can adapt to the social environment, and can understand which are good and which are bad.

The benefits of PAUD education are also felt by Sri Endang Pakaya, stating that:

Before my child entered PAUD, he had not been able to distinguish colors and was unable to count. Alhamdulillah, after entering PAUD he can now distinguish colors and be able to count. Saskia Novelia Biki, a parent, interview, 15 March 2018

The same thing was expressed by Meilan Soleman, mother of Fahrul Rauf who stated that:

Before entering PAUD, my child was a spoiled and not in-dependent child, but after participating in PAUD the spoiled behavior decreased and even his independence began to appear. Meilan Soleman, a parent, interview, 16 March 2018.

According to Irmawati Utiarahman:

The difference between children before and after PAUD is quite significant, including: children have the courage to ap-pear before many people, their knowledge is broader, more creative, and can get along with many friends Irmawati Uti-arahman, a parent, interview, 16 March 2018.

From the entire interviews above, it can be understood that early childhood education is very basic education and very decisive for future child development. This is supported by the statement of Idah Syahidah Rusli Habibi that: instinctively, the family, especially parents, is the first and foremost educators when children are born. Therefore, in fact we cannot forbid parents to send their young children to early childhood education institutions as desired.

4.5 *Women as Educational Observer*

Muslim women who understand their religion will know that man was not created in the world to be unemployed, but to fulfill a duty to carry the message and bear the task of carrying the message and carrying out the mandate, carrying out obligations in the form of worship to Allah Almighty. Worship to God is reflected in every positive and constructive movement and gait to advance the world, elevate the sentences on the earth, and apply His thought and system in life. All of this is a right that every Muslim must call to all humanity. So, the true Muslim woman feels obliged to pay attention especially in the world of education.

The real work of Gorontalo Muslim women as the Mother of Gorontalo Province PAUD, BUDA PAUD program One PAUD Hamlet, by holding a Training of District and City PAUD Management in Gorontalo Province which took place in the BPKB Hall of Gorontalo Province, Wednesday 12 March 2014. In her speech Idah Syahidah Rusli Habibi (Mother of PAUD Gorontalo Province) said that Early Child-hood Education is one form of education that focuses on laying the foundation to-wards physical growth and development, intelligence, socio emotional, language and communication, in accordance with the uniqueness and stages growth and development traversed by early childhood. As PAUD management has a very important role, of course, in managing PAUD institutions, managers are more focused on how to manage these PAUD institutions properly. Because community needs for PAUD institutions are very large. Ida Syahidah Rusli Habibi, a “mother” of PAUD of Gorontalo province, interview, 14 March 2018

Furthermore, Gorontalo strived for one PAUD hamlet considering the vastness of the Regency and City area, Obviously Idah Syahidah said PAUD managers must have knowledge in planning, organizing, implementing and controlling the implementation of PAUD programs. In a sense, both in terms of institutional management and in the administration of program activities up to 5T will be achieved that is appropriate, right on target, right on time, right on budget utilization, and right on funds, accountability. PAUD managers must be active in reading opportunities and opportunities, establish partnerships with SUBDIN PNFI and BPKB in Provinces with SKB and PKBM in Regencies and Cities. Ida Syahidah Rusli Habibi, a "mother" of PAUD of Gorontalo province, interview, 14 March 2018.

In addition, it is the Real Work of Muslim Women (Idah Syahidah Rusli Habibi, Gorontalo PAUD Hospital), maintaining health, and adopting a healthy lifestyle for early childhood. Idah Syahidah explained that maintaining health is very important in life because it is a good step to go through all activities in achieving life goals, if health is disturbed it will affect all the results that will be obtained also in achieving life goals later. It is said that healthy living is very difficult now, most of it is not due to genetic factors, but many are already affected by lifestyle. Deceases certainly can come to attack anyone indiscriminately; the disease will be very detrimental to our health because it can damage the body and of course cost a lot. Ida Syahidah Rusli Habibi, a "mother" of PAUD of Gorontalo province, interview, 16 July 2018 Although there is a free health program from the government; yet, some medical needs that must be bought by patients.

Based on the description above, it can be said that the form of the real work of Gorontalo Muslim women as the mother especially in taking care of health and education activities especially early childhood in Gorontalo City. Besides health and education, there is no neglect of children's song festivals in Gorontalo Province. Idah Syahidah (the mother of PAUD in Gorontalo) said that: in the current era of globalization the existence of children's songs has begun to become extinct which is gradually replaced by adult songs that cause early maturity or adulthood not yet in time to impinge on children because of influence because they often sing or listen to these adult songs Ida Syahidah Rusli Habibi, a "mother" of PAUD of Gorontalo province, interview, 14 March 2018.

With the participation and attention of the entire community, Gorontalo children can sing children's songs well so that singers or authors and songwriters will emerge, not just a victory that must be won, but the most important thing is the writing. That experience of children will encourage them to singing and to listen to by the whole community.

Thus, the mother of PAUD in Gorontalo, Idah Syahidah Rusli Habibi expressed her gratitude and gave a high appreciation to the parents. The parents mainly participated by inviting their children to the event and advised that parents always provide good character education to their children from the age early so that it will produce children of good quality, good morals, noble character, good manners that can be useful for the nation and country in the days to come Ida Syahidah Rusli Habibi, a "mother" of PAUD of Gorontalo province, interview, 25 June 2018.

Therefore, it can be said that a Muslim woman must behave like that to her children; she will monitor their activities because the child is born in a state of holiness in accordance with nature.

As a form of the real role and work of Muslim women in Gorontalo in the commemoration of National Children's Day and the PAUD Gebyar with the theme "Create Smart, Honest, and Noble Character". The activity was held at the Mess Haji Gorontalo City, Tuesday, June 17, 2014. No

less than 1000 children of the district / city delegates participated in the celebration. In the commemoration, the mother of PAUD in Gorontalo further stated that:

With the commemoration of National Children's Day and PAUD Gebyar, children can be more diligent in worship, study hard and be devoted to parents. The big theme of the 2014 National Children's Day is "Indonesia One Stop Action on Violence against Children" is appropriate and relevant to the current situation often seen around and through print and electronic media the amount of violence against children both perpetrated by parents, families and by other people. Parents as the closest people to children must always speak soft words, give good teachings and monitor the relationships of children in the surrounding environment. Idah Syahidah Rusli Habibi, a “mother” of PAUD of Gorontalo province, interview, 17 June 2018.

Based on the above quote, it can be understood that in this way children will not feel afraid and threatened so that they can grow and develop properly and meet a bright future.

Furthermore, the mother of PAUD sometimes plays with PAUD children how it says that: I invite children to play by using educational games as a form of learning. Because the importance of the learning equation between school and at home. Excessive affection is poison to the child itself. Mother of PAUD and parents have the same responsibility to maintain and educate early childhood. He further said that: children always imitate what their parents do, so that it is important for parents to do good things in order to provide the maximum possible education for their children. On the other hand, Mother of PAUD said that this year parenting activities will be held and played together with the Mother of PAUD three times. As a result, we can obtain more even and maximum. Idah Syahidah Rusli Habibi, a “mother” of PAUD of Gorontalo province, interview, 17 June 2018.

Based on the above arguments, the pattern of child development in PAUD al-Islah was developed with several patterns. This was revealed by one of the Gorontalo PAUD al-Islah teachers that:

Guidance for children in PAUD al-Islah is carried out with several approaches in-volving various components, organizers, educators, students, and considering the available facilities and infrastructure. Kiki Rizki Rauf, a teacher at PAUD al-Islah Kota Gorontalo, interview, 25 May 2018.

In short, from the results of the fieldwork research, the pattern of PAUD al-Islah development shows that the guidance involved several components in PAUD, such as the foundation as education providers, educators or teachers, students and other existing elements.

5 CONCLUSION

Community understanding of PAUD is still low and regards PAUD or preschool as only complementary, is underestimated, and may not be so necessary. Even though the failure of education is often because of problems that are considered trivial and easy. The fact is that there are still many young children who have not received educational ser-vices, especially for the lower-class community that is the majority of the population who are in rural areas. This is due, among other things; women's awareness of the importance of education to early childhood is still very low. Awareness of the importance of PAUD is still low. This low awareness, directly or indirectly, shows the opportunity for children to grow and develop optimally because of the lack of opportunities to participate in PAUD. It is conceivable that children who do not have the opportunity to at-tend coaching through PAUD will color the life of the nation and state in the future.

The level of awareness of women towards the provision of educational services for early childhood is still low. Although so far, the government and the community have conducted various PAUD service programs. However, the reality is that until now there are still many early childhoods who have not received education services.

PAUD and various perspectives can be concluded that early childhood is the golden age of the "golden age" period of cognitive, language and social emotional development experiencing its peak point. Late stimulation at this age has a long-term effect on a human's life. In other words, the limitations of cognitive, language, social and emotional development are the implications and detrimental decisions of the State. Then, PAUD becomes a basic and based education choice to create better educational inputs for further education. Moreover, elementary school admission requires the ability to read, write and count has become a major requirement for famous schools.

Expensive costs have become one of the factors of the low level of participation in PAUD; amount of funds that need to be spent by parents who send their children to kindergarten or playgroups are not significant. In addition to the amount of money, that is quite large, plus monthly money. Not to mention there is additional expenditure on additional activities at school. Under these conditions, parents will prioritize spending on funds only for the most important and urgent needs. Therefore, if they do not fully understand the importance of PAUD, the funds for this will not be a priority. To over-come this problem, the foundation as an organizer strives to provide understanding to parents of the importance of costs in the implementation and quality of PAUD services. The lack of students who register every year is due to the large number of similar educational institutions that are opened. To increase the number of students entering each year, the school makes it wise to require every teacher to look for children who have not yet entered PAUD to be invited to PAUD.

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Using Environmentally Friendly Media (Happy Body) in Early Childhood Science: Human Body Parts Lesson

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ABSTRACT: The knowledge of the science of human body parts for early childhood is very important so that children have the ability to recognize and support the cleanliness and health of members of the body, as well as so that they recognize their identity. In addition, introducing environmentally friendly material for early childhood teachers to enrich learning media. This study aims to improve student learning outcomes in science using environmentally friendly media. The topic raised in this search was about recognizing body parts and their benefits and treatments. This type of research is action research. Respondents involved 19 early childhood students. The results showed that there was an increase in subjects' understanding of swallowing extremities and treatment 60% in the pre-cycle phase, 80% in the first cycle and 93% in the second cycle. The findings show that the use of happy body media has a positive effect on limb recognition. Further research is recommended on environmentally friendly media and ways of introducing limbs to early childhood through media or strategies suitable for the millennial era.

Keywords: Media (Happy Body), Early Childhood Science, Human Body Parts

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1 INTRODUCTION

Environmental education for early childhood is now very important. This is related to two areas, first, how teachers understand sustainable environmental education for early childhood. The second focuses on how sustainable environmental education can be implemented in educational practices ((Hedefalk, Almqvist, & Östman, 2015). Parents and preschoolers play an important role in developing children's behavior and attitudes, little is known about their influence on children's learning about the environmental, social and economic aspects of sustainability. Borg, Winberg, & Vinterek, (2017) findings show a positive relationship between children's declarative and functional knowledge about sustainability issues and the involvement of discussion teachers through sustainability-related activities. Teachers can provide environmental learning by using environmentally friendly media as a tool to convey various kinds of knowledge such as science learning. Borg, Winberg, & Vinterek, (2019) examines the sources of knowledge felt by children. The findings reveal that most children have gained some knowledge about the environmental impacts of various learning media, even though some children are not familiar with the word 'environment'. The teacher's creativity in making learning media through environmentally friendly media is very important during the current global warming.

Learning activities based on science, technology, engineering, and mathematics projects affect aspects of children's development on various sides. This has become a critical challenge to be implanted in schools. Han, Capraro, & Capraro, (2015)’s research results imply that learning science in schools is beneficial for the development of early childhood in absorbing a variety of knowledge that will support their lives in the future. science learning is important for children one of which is to teach children about their bodies, and how to respect and care for the body, should be a top priority for early childhood teachers. Take advantage of the media around the child which can occur throughout the day to help children learn more about the functions, and how to care for, body parts. For example, if a child comes to school with a bandage on his knee, talk to the children about the importance of treating wounds and scratches as a way to keep the body healthy and strong. Encourage the children to talk about how it feels to be healthy, versus the feelings that arise when even minor injuries occur. Discuss the limitations they experience when their bodies are not fully functioning as a result of illness or injury. It is very important to create a pleasant and uplifting atmosphere for life, where the members of the body are important to be cared for and cleaned on time. In this broader context, teach children specifically about their bodies, including information about their bones, muscles, and skin.

Children always want to know how things work Basically children are biologically ready to learn about the world around them, which makes young children very interested when they have the opportunity to explore (Nayfeld, I., Brenneman, K., & Gelman, 2011). Learning media that are easy to obtain, utilizing environmental waste, through the creativity of teachers involving children in it will produce deep learning for children.

Based on the background of the problem, such as environmentally friendly media, the importance of science for early childhood, as well as knowledge of body member recognition and care, this study aims to look at the effectiveness of Happy Body media in introducing limbs and ways of body care using environmentally friendly media.

2 THEORITICAL STUDY

2.1 *Science in Early Childhood*

Early childhood science education currently highlights the need for research on early science, because science is an important domain of school readiness for children. The right learning approach will help children succeed in class regardless of the academic content area. Bustamante, White, & Greenfield, (2018) research shows the unique relationship between early science and the approach to learning science readiness by examining the two-way potential between science and learning approaches. The findings indicate that the development of children's approaches to learning is related to increasing scientific knowledge, and that an increase in children's scientific knowledge is related to the positive development of approaches to learning throughout the school year. This study suggests future research examining the potential of scientific interventions to serve as a context for developing approaches to learning skills which in turn will help children engage in quality science learning.

Guo, Wang, Hall, Breit-Smith, & Busch, (2016) explained about science instruction with preschool and kindergarten children to understand the impact of science instruction on the development of children's scientific knowledge. Science instruction seems to promote a variety of early childhood knowledge. The educational implications of these findings indicate that there is support for using science instruction to improve children's science.

The Piagetian theoretical framework offers significant opportunities for the development of Natural Sciences activities in early childhood education. Given that science teaching strategies always involve handling objects by children, these objects must be able to be turned into teaching materials and must also be safe in the hands of children (Ravanis, 2017).

Science material for early childhood, for example, the introduction of Parts of the Human Body and their care (Gelman, R., & Brenneman, 2004). Introduction of body parts and their uses. Parts of the body such as the head, eyes, ears, nose, mouth, hands and feet. Usefulness of body parts for example, eyes to see, ears to hear, mouth to speak, sing, eat, nose to breathe, skin to protect the body, as a sense of touch, as a sense of taste, hands to write, catch the ball, hold, carry, carry , shaking hands, clapping, legs to walk, running, kicking, jumping, pedaling a bicycle, tongue to talk, tasting, taste salty, sweet, spicy and bitter, hair to protect the scalp, for beauty (Burdette, H. L., & Whitaker, 2005). How to treat body parts; Bathing 2 times in the morning and evening, Using clean water, Using soap ((Olgan, 2015). How to care for teeth by brushing your teeth 2 times a day ie after eating and before going to bed, using toothpaste. How to treat nails, How to care for feet How to treat hair, How to care for eyes, How to care for ears.

2.2 *Happy Body Media*

Teaching aids, pictures, graphics, movements, as well as speech and written text are all mediators through which the child can build new knowledge. Each semiotic context makes a unique contribution to the conceptualization of scientific entities (Herakleioti & Pantidos, 2016).

Happy Body Media is a media that is not projected (non-projected media). Happy Body is an imitation model of the shape of the human body made of used cardboard. The cardboard is shaped like a human body. Having limbs like humans but smaller in size. Cardboard that has shaped the human body in the image of its body parts and colored to make it more attractive.

The researcher gave the name Happy Body because it was by the learning material that is getting to know the limbs and their uses and treatments. The word Happy means happy. If early childhood can take good care of its body, the body will be clean, if the body is clean, the body will be healthy and if the body is healthy, the child will always be happy, happy. Body means body. Happy Body Media is a series of goals so that children want to take good care of their bodies so that children will be healthy and always happy.

Making happy body media is inseparable from the character of early childhood who is the subject of this study. Characteristics of children include love to play, like to move, like to group and try something directly (Colker, 2008). The characteristic of playing pleasure requires the teacher to carry out educational activities that contain games (Hayati, H. S., Myrnawati, C. H., & Asmawi, 2017). The happy body media was designed because in its application it allows the game elements to exist.

Characteristics of children are happy to move, adults can sit for hours studying at a computer, while early childhood can sit quietly for a maximum of about 30 minutes (Blok, H., Fukkink, R., Gebhardt, E., & Leseman, 2005). Therefore, happy body media designs learning models that allow children to move or move. This is because telling children to sit neatly for long periods, the child feels as a torture.

Happy body media also requires students to get along with peers. This media is taught in group concepts. Through group learning children can learn important aspects of the socialization process such as learning to meet group rules, and learning from friends (Belsky, J., Steinberg, L., & Draper, 1991). Learning science concepts with happy body media makes children learn to accept responsibility, learn to compete healthily, work in groups, learn justice and democracy through groups (Gersick, 1988). These characteristics are consistent with the use of happy body media and the implications of the teacher designing learning models that allow children to work or learn in groups.

The process of using happy body media using the teacher forming small groups with 3-4 members to study or complete an assignment to explain body parts as a group. The psychological theory of cognitive development, early childhood enters the stage of concrete operations (Kagan, J., Reznick, J. S., & Snidman, 1987). early childhood begins to learn to connect between new concepts with old concepts (Luna, B., Garver, K. E., Urban, T. A., Lazar, N. A., & Sweeney, 2004). Children learn to form concepts about bodily functions, and involving children directly gives rise to extraordinary experiences (Lebel, C., & Beaulieu, 2011). The media of a happy body is simple by utilizing used materials which of course are not only valuable in the use of waste but also indirect teaching, exactly what they have.

Children can play Happy Body media individually or with peers. Early age children at their headquarters are very comfortable when learning through play. Play has a unique role in learning and provides opportunities for children to reject predetermined goals and objectives, learn to tolerate uncertainty, and welcome diversity. Play is holistic and rewards children with freedom and creativity, often forced by alternative processes of inquiry and logic. Play is freely chosen, personally directed and intrinsically motivated. Learning at this age almost always emerges from playground. When children play, they are involved in discoveries about nature, the real world, which are the basis for learning in childhood (Nitecki & Chung, 2016). Their internal and external places must allow children to play and play imaginatively. Children develop their identities, learn social patterns, and build foundations of learning and outreach that will shape the rest of their lives. Adults

must respect both places in and around children, in terms of allowing opportunities for play, imagination and socialization.

Positive relationship between the use of good quality interactive media and fine motor development at an early age when playing using media (Hadders-Algra, 2019). Children will not understand what is conveyed in the learning process without attention. Attention from children will be obtained through interesting media. Happy body is designed as a medium that can attract the attention of children.

3 METHODS

3.1 *Participant*

The optimization of this research is also based on preliminary research on the subject. The subjects of this study were Kindergarten Class A and Kindergarten B with an average age of 4-6 years. In the initial conditions students kindergarten Al Hidayah has various characteristics such as shy, rude, lazy, do not pay attention to the teacher in delivering lessons, like to talk and like to play. Judging from the ability of Bandengan student's IQ below average (local psychological test results). The parents' background in the research subject is predominantly a livelihood for fishermen and working abroad. Economic limitations and parental support are one of the factors causing the lack of student achievement in Bandengan. These conditions make researchers feel challenged to improve student learning outcomes.

Planning the implementation of learning improvement is arranged starting from identifying the problem, analyzing the problem, and compiling the learning steps contained in the learning implementation plan, making group worksheets, formative tests, and learning criteria. The implementation of learning improvement includes initial activities, core activities, and closing activities as stated in the learning improvement plan. 25 children get complete results in learning, while only 5 children get fewer results.

3.2 *Research Design*

This type of research is action research. Research in the form of investigations that are participatory, collaborative and spiral is aimed at improving systems, methods, work, processes, content, competencies, and situations (Carr, 2006). This study aims to produce innovations to produce changes in procedures through social research methods. The process and findings of this research's results are documented in detail and meticulously. The process and findings are carried out through observation, evaluation, reflection, systematic and in-depth. The research chosen is an ongoing self-reflective inquiry. This research continuously aims to develop themselves and improve the implementation of early childhood learning.

This action research uses the Kemmis, S., & Taggart, (2002) model, which is spiral from one cycle to another. The design of this study into four stages, namely: (1). Stage see what is in the field, (2). The stage of formulating what is in the field, (3). The stage of formulating an application or an appropriate solution, (4). Stage of action By Kemmis and Taggart's theories, the flow of this research is: (1). The design, this research has been designed in 3 cycles. cycle 1 makes early children are familiar with the media. cycle 2 allows early childhood to identify and properly recognize the body. cycle 3 makes early childhood smooth despite being randomized. The media used in these 3 cycles is happy body media. (2). Activities and observations, actions that have been carried out by researchers to improve the ability of the body of young children by using the

method of playing while learning. The steps are carried out according to the draft that has been prepared. (3). Evaluation, the second and third stages of implementation need to consider the results of reflection and evaluation between researchers and families in the previous stage. (4). Reflection, researchers analyze the results of actions that have been taken based on field notes, discuss with colleagues to find out in detail the successes and deficiencies. This activity is carried out through a Focus Group Discussion. The results of this activity will be a reference for the implementation of the next cycle. (5). The revised design, based on the results of the evaluation and reflection the researcher made a new revised design to be carried out in the next cycle.

3.3 *Data Collection Techniques*

Data collection techniques through participatory observation, field notes, interviews, and documents. The focus of the observation is directed at the problem that is the center of the researcher's attention, namely the learning outcomes to know the body. Field notes become a breakdown note about what processes occur in the field by the focus of the study, written descriptively and reflectively (İlin, G., Kutlu, Ö., & Kutluay, 2013). The interview was conducted unstructured (free). Documents that are useful in collecting research data are "Subject biodata" and "daily values" collected before the study begins. This study uses a recording device, photo documentation, recording devices, and happy body media. The subject of this research, Kindergarten students in 2018 with a total of 30 students. This research model is action research (Anagnou, E., & Fragoulis, 2014). The implementation of this Learning Improvement starts from September to October 2018. Implementation of improvement in 2 cycles. Each cycle with a time of 2 x 35 minutes (3 x meetings). During the implementation of Learning Improvement for 2 cycles there is monitoring from outside researchers to see the merits and shortcomings of the process carried out.

3.4 *Procedure*

Procedure Classroom action research begins with the Pre-Cycle stage. The implementation of learning improvement includes two cycles. Each cycle consists of four stages, namely (1) making an action plan, (2) carrying out the action as planned, (3) observing the action taken, and (4) analyzing the results of the action with comparative descriptive followed by reflection (Hien, 2009). In the improvement of this learning, the first cycle aims to improve learning outcomes material to know the members of the body and its uses and treatments by using the media Happy Body in the initial action and as a reflection to do the second cycle. Cycle II is an improvement from the first cycle which aims to find out the increase in learning outcomes material to know the members of the body and its uses and treatments by using the same media after an improvement to the learning process based on the reflection cycle I.

Based on the identification of the pre-cycle learning implementation plan, student learning outcomes have not yet reached the predetermined level of completeness. In the implementation of Cycle, I the teacher intends to express the problem and look for alternative actions that are appropriate to improve learning to reach a predetermined level of completeness.

The planning phase of the first cycle, the preparation of learning that researchers planned in teaching the material to know the members of the body and its uses and treatments using the Happy Body media by preparing a learning plan in advance by the actions to be taken. In the next step, researchers prepare material for learning tools that support learning activities. After preparing a learning plan and preparing material and media to be displayed, the researcher also prepared

a formative test instrument to measure student learning outcomes. Before acting, the researcher coordinates with the supervisor who helps direct the learning activities of the material to know the members of the body and their uses and treatments by using Happy Body media.

Implementation refers to the learning plan of the material to know the members of the body and its uses and treatments using Happy Body media. The implementation consists of three stages, namely introduction, core activities, and closing. This activity consists of exploration, elaboration, and confirmation.

Observations made by researchers to find out and obtain data about everything that happens and observe or record changes in student learning outcomes during the learning process take place as a benchmark for the success of learning the material to know members of the body and its uses and treatments using Happy Body media.

At this stage, the researcher jointly conducts a discussion of the observations. Reflection is focused on the actions of researchers and teachers to improve student learning outcomes by using Happy Body media. After carrying out learning improvement activities in the first cycle and observing the actions determined supporting indicators include, (1) indicators of success, namely: a). The learning process is going well, attracting students' attention. b). The learning atmosphere is fun because it implements a demonstration method using Happy Body media. c). Student learning interest increases. The percentage of completeness also increases. d) The teacher provides guidance evenly to all students. Indicators of unsuccessful 1) Demonstration method using Happy Body which has been formulated in the learning improvement plan is still not effective because students have not demonstrated it directly. 2) Teachers have not been able to condition students in learning, so large groups must be changed into smaller groups.

The improvement of learning cycle II is a follow-up to cycle I. The improvement plan is prepared by paying attention to the results of observations and reflections of cycle I. The improvement of cycle II is focused on efforts to improve the learning outcomes of natural science subjects about getting to know limbs and their usefulness and care for students through demonstration methods using Happy Body media. In cycle II the researchers arranged activities based on deficiencies that occurred in cycle I. The stages in cycle II started from 1. Identification of problems and formulating problems.

the researchers' observations revealed several problems including, a) the implementation of the demonstration method was less than optimal, b) the courage of students in expressing opinions was still lacking, c) the teacher had not given a reward and had not celebrated the student's success. Next steps a) design learning by developing a learning improvement plan that emphasizes the application of demonstration methods using Happy Body. b) Arrange observation sheets. c) Develop formative tests. d) Prepare the media

Through Improvement of learning cycle II Researchers observe or record changes in student learning outcomes during the learning process. The recording is done to determine the success of learning the material to know the members of the body and its use and care using the media Happy Body. Observations in the second cycle are prioritized on teacher behavior that has not been done in cycle I.

In this reflection, the researcher conducted a discussion about the observations. Reflection is focused on the actions of the teacher to improve student learning outcomes by using the media Happy Body. The results of the data in the form of values and observations on the implementation

of the learning process. Value data obtained from formative tests and observations from the observation sheet.

Figure 1 Happy Body media created by researchers (Researcher's source document)

4 RESULT AND DISCUSSION

4.1 *Result*

Pre-cycle learning results obtained from formative tests of material to know the limbs and their use and treatment are used as initial conditions of this class action research with a completeness score of 70. The results of the study obtained data that as many as 19 children get incomplete in learning. Planning the implementation of improved learning about getting to know the members of the body and its uses and treatments has been designed by researchers using the Happy Body media to make it more interesting and enjoyable so that it can attract students' interest and student learning outcomes will also increase.

Observations were made by researchers, each researcher observed, recorded, and assessed learning in Cycle I. The results of the observations stated that, a) the teacher arranged the lesson plan and prepared the learning media well, b) the teacher opened the lesson by motivating students and conveying the learning objectives well, c) The teacher carries out learning activities using the Happy Body media well-making students interested in following the lessons, d) In preparing the formative test instrument the teacher lacks help drawing pictures, e) Group work arranged by the teacher has been going well .

Observations from the student's sideshow that, a) Students are already motivated and interested in participating in learning, b) Student activity is quite good, c) Student involvement in the use of learning media is quite good, d) Students are not disciplined in doing group assignments because there are some students who work individually

Improved learning cycle I on the introduction of limbs and care experienced progress seen, 1) student learning outcomes increased at an initial average of 56 increased to 80, 2) The percentage of classical completeness also increased from 37% to 83%, 3) Children are more enthusiastic in participating in learning, 4) The classroom atmosphere becomes fun, 5) the use of Happy Body media makes it easier for students to capture what the teacher has to say. The shortcomings that still exist in the implementation of the first cycle include, 1) Completed students numbered 5

people, 2) The formation of groups makes the class a bit noisy because there are no rules for group formation.

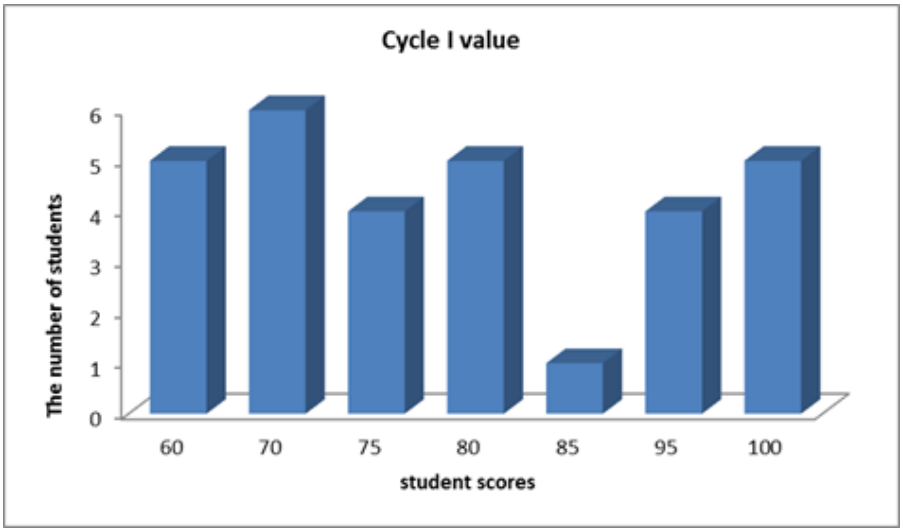

Figure 1: Results of the Science Cycle I Results

The results of the implementation of the improvement of the learning cycle I which still has shortcomings and shortcomings resulted in student learning outcomes that there are still incomplete, the researchers continued to improve learning in Cycle II. Researchers focus on improving the deficiencies that exist in Cycle I. So that student learning outcomes in Cycle II can be improved. Through the planning, implementation, observation, and reflection phases of the implementation of the second cycle carried out. Researchers jointly discuss efforts to improve. The initial stage is identifying problems, analyzing problems, and formulating problems. Next, the researchers developed a learning improvement plan, formulated test questions, group worksheets, and research criteria.

Researchers carry out the improvement of learning cycle II. The implementation of learning begins with classroom conditioning, providing motivation, communicating learning objectives, singing, and displaying Happy body as a medium. At the core activity, the teacher presents Happy Body as a tool to explain the material and make it easier for students to understand the material. The teacher invites students to play guessing the limbs through songs. Followed by students working on group worksheets and presenting the results of group discussions in front of the class. The activity ended with conducting formative tests, assessment of formative tests, a reflection of subject matter and awards.

The results of the second cycle of learning improvement research have obtained the following data, as many as 28 students or 93% have succeeded in achieving mastery scores, while 2 students or 7% have not achieved mastery of the total 30 students. The results of student achievement in cycle II. Based on the results of the study, it was found that there were 28 students or 93% succeeded in getting the value of completeness, and 2 students or 7% had not achieved the completeness value.

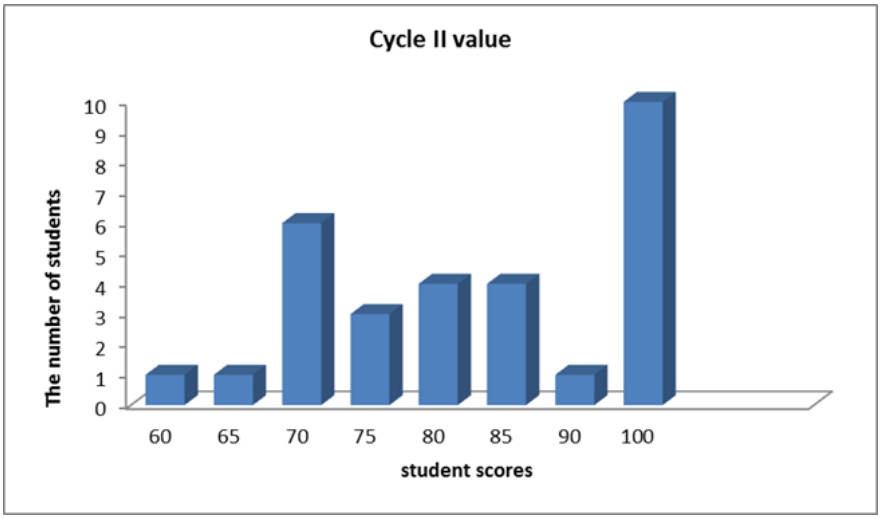

Figure 2: Results of the Science Cycle II Results

Researchers observed the process of improving the implementation of learning. Researchers observe the behavior of teachers and students during the learning process. Observations obtained results, 1) The preparation made by the teacher in the preparation of learning improvement plans and learning media is good. 2) Informative test preparation it is good, 3) The teacher opens the lesson by motivating students, and conveys the learning objectives well, 4) The teacher explains the material by using the media Happy body to facilitate student understanding, 5) The teacher conveys learning in a fun way to sing and play, 6) The teacher conducts questions and answers on the material so that students have a picture of the use of limbs, 7) The implementation of group discussions goes smoothly, 8) The implementation of formative tests runs smoothly, 9) The teacher goes to the lesson with reflection and gift giving so students are happy and enthusiastic.

The results of observations by researchers of student behavior in the implementation of the improvement cycle II obtained the following conclusions; 1) The enthusiasm and interest of students in participating in the educational process increase. 2) Students are more active in attending lessons and answering teacher questions. 3) Students more easily understand the material taught by teachers 4) Students do formative tests well.

The implementation of the improvement of learning cycle II obtained the following reflection results; 1) Student learning outcomes have increased from 80 to 84, 2) The percentage of completeness also increased from 83% to 93%, 3) Learning is more fun, 4) With the media Happy Body students are easier to understand the material so students easily understand the material and are able to work on formative test.

The teacher has done many ways so that all students can get the value of completeness but there are still 2 students who have not achieved the mastery grade. This happens because of the lack of student understanding of the material, students cannot read and write well (Bae, 2010). Follow-up from this deficiency is the teacher will provide additional lessons to the 2 students to achieve completeness.

Efforts to improve learning in the first cycle the teacher uses the media Happy Body. In the implementation of the improvement of the learning cycle, I attended by 30 students. 25 students have achieved mastery while 5 other students have not yet achieved mastery. The improvement that occurred was extraordinary because, at the beginning of the learning before the improvement,

only 11 students achieved completeness scores. It can improved learning processes (Black, M. M., & Hurley, 2016). the supervisor's observations stated that the implementation of improvements using the Happy Body media can increase motivation, interest, make it easier for students to understand the lessons and improve student learning outcomes.

The implementation of the improvement of learning cycle II also uses the media Happy body and formative tests accompanied by pictures making it easier for students to work on formative tests (Serpell, R., & Marfo, 2014). Student learning outcomes have increased. In cycle 2 the average score of students is 80 to 84 and the percentage of completeness is 83% to 93%. Improved student learning outcomes can be seen in the data values achieved by students from pre-cycle to cycle I as shown in the table and graph above.

Students before making improvements obtained an average score of 56, the highest value was 100 and the lowest value was 0. Students who achieved completeness scores were 11 students and 19 other students had not yet achieved mastery grades. The percentage obtained in the first cycle is 37%.

4.2 *Discussion*

In the first cycle, students experienced a very large increase. The average value of students is 80. The highest value is 100 and the lowest value is 60. 25 students achieve completeness and the percentage of learning outcomes achieved is 83%. While in the second cycle, student learning outcomes also increased. The average score of students becomes 84, the highest score is 100 and the lowest is 60. A total of 28 students reach the value of completeness. The percentage of student learning outcomes is 93%. Student learning outcomes that have increased are influenced by the use of the media Happy Body. The Happy Body media motivates students, attracts students' attention in the learning process and makes it easy for students to understand the material about getting to know members of the body and its uses and their care for students.

The results obtained from learning science in the material know the limbs and their use and care is not good, there are only 11 students who have achieved completeness and 19 students who have not yet reached completeness. From these results, it can be concluded that learning has not been successful. The unsuccessful learning is caused by the lack of use of instructional media making it difficult for students to understand the material.

In the implementation of the improvement of the learning cycle I there is an increase in satisfying learning outcomes. Student learning outcomes improved due to the use of Happy Body media. Students who achieved completeness were 25 students or 83% and only 5 students who had not been able to achieve completeness. In the first cycle, there were still students who had not yet reached completion due to their lack of understanding. Students do not dare to ask about material that they do not understand. The teacher has not been able to make all students active in learning. The role of the teacher in choosing and determining the right learning media is very influential on the success of early childhood. Mistakes in choosing media can make children not concentrate, not interested even feel bored with the activity of learning in choosing early childhood learning media, the main thing that needs to be studied and is known is the stages of child development because children with different stages of development must accept learning by using different media (Dewi Kurnia, 2017).

The improvement of learning cycle II is done by providing opportunities for students to be more active in learning. Formative tests are also accompanied by pictures so that students do it more easily. The efforts made by teachers have improved student learning outcomes. Students who achieved mastery increased to 28 students or 93%. There are still 2 students who have not reached completion. That is because students have not been able to write and read. Lack of student understanding due to embarrassment in asking questions and not actively participating in learning.

The selection of Happy Body media in learning for early childhood, has been adjusted to the principle of media selection, namely, (1) the selected learning media should be adapted to the needs of the users (early childhood) that are served and support learning objectives; (2) the chosen learning media needs to be based on the principle of benefits, for what and why the learning media is chosen; (3) the selection of instructional media should be in a good double position from the perspective users (teachers, children) as well as from the interests of the institution. Thus the interests of both parties will be maintained and no one will be harmed if their interests are not aligned; (4) the selection of instructional media must be based on educational studies taking into account the applicable curriculum, the scope of the development field developed, the characteristics of students and other aspects relating to the development of education in the broadest sense; (5) the selected learning media should meet the specified quality requirements, including relevance to goals, physical requirements, strong and durable, in accordance with the child's world, simple, attractive and colorful, related to children's play activities and other equipment; (6) the selection of instructional media should also pay attention to the balance of the collection (well-rounded collection) including the main learning media and supporting materials in accordance with the curriculum both for learning activities and supporting learning media for fostering related talents, interests and skills; (7) to make it easier to choose a good learning media it is necessary to include information retrieval tools such as catalogs, book studies, reviews or in collaboration with fellow functional components to exchange information discussing various matters relating to improving the learning process and about the condition of the existence of learning media that is required (Zaman & Eliyawati, 2010). So that in its implementation the use of Happy Body media can help children to understand the knowledge given by the teacher. In addition, children do it happily because it is done while playing.

5 CONCLUSION

The results of this study indicate that the use of happy body media has a positive effect on limb recognition for early childhood. Completeness of improvement in overall children's ability is better. The higher students interact with the media, the more positive the student's attitude. Also, there is a significant influence between the quality of science learning and learning outcomes from limb recognition. Qualification of learning and learning outcomes also affect the formation of attitudes. So, the higher the quality of learning, the attitude of students will be more positive and the better the results of learning, the attitude of students will be more positive too. The need to always maintain and improve the quality of early childhood learning. And the use of used goods correlates with the formation of students' attitudes to care for the environment. Because early childhood understanding of the environment can create young people who care about the environment.

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Early Childhood Learning Quality in Pandalungan Community

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ABSTRACT: The challenge for rural communities to provide quality education for early childhood in Indonesia is difficult. National politics, policies, and economic and cultural conditions affect the Early Childhood Education system, and Indonesia is a large multicultural country, so, even the quality of education is difficult. This study aims to look at the quality of children's education in Pandalungan. Using qualitative methods with ethnographic design, data collection techniques using interviews, observation, and documentation. The results showed that educational institutions for children in urban areas can be categorized quite high. However, for early childhood education services in Desa Sukorambi Pandalungan, the quality is quite poor. Research suggestions are the need for follow-up related to social, economic, cultural and environmental factors at the level of Pandalungan community awareness of early childhood education.

Keywords: Early Childhood, Learning Quality, Pandalungan Community

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1. INTRODUCTION

For decades to support early childhood development programs and policies (ECE), investment in ECE has expanded worldwide. At present, more than 70 countries have national ECD laws, the majority in the past 20 years. However, with this increase in investment there is evidence that the capacity of the policy system to support ECD - in the health, education, social protection, and other sectors - is weak, with unmet development potential, serious consequences in and throughout the country. Methodological challenges and direction inform the research agenda to support the progress of national policies in early childhood development (Yoshikawa, Wuermli, Raikes, Kim, & Kabay, 2018).

In 2010, there were 32.5 million children aged 0-6 who in 2045 reached 35-41 years. Meanwhile, children aged 0-6 years in 2016 amounted to 33.5 million people, by 2045 their ages had reached 29-35 years. This is a productive age, which if prepared properly from now on will become a development capital. Conversely, if not well prepared it will later become a burden of development. In order to realize lifelong education from birth to when leaving the world (Lifelong educations) so as to make people fond of learning that can improve the quality / quality of their lives, the need for an institution which is really quality and accountable, so it is necessary to identify learning needs. No exception is the Early Childhood Education (ECE) as a pre-level of basic education.

High quality early care and education (ECE) programs are seen as increasing opportunities for all children to succeed in school (Burchinal, 2018). (Hunkin, 2018) reports the findings of an in-depth genealogical study of quality discourse in the Early Childhood Education and Care policy. Quality reform has become the most important global policy agenda for early childhood education because of assumptions about the economic potential of quality services. Quality discourse has been applied tactically in early childhood education policies to realign educational outcomes with educational results, as a means for the government to selectively grow and regulate human capital. This positions quality as a high-stakes reform discourse for early childhood stakeholders, which is intertwined with broadening the reach and intensification of standards and incentives that are selective and performance related.

Early Childhood Development is one of the UN agenda with the Sustainable Development Goals (SDG). In 2030, ensuring that all girls and boys have access to quality early childhood development, care, pre-primary education, so that they are ready for basic education (Perpres, 2017). Early Childhood Education (ECE) Institutions Towards Quality ECE is a reference to ensure the implementation of quality ECE education activities which in turn are expected to contribute to the quality assurance of quality Early Childhood Education (ECE) services. Improved measurements in early childhood development (ECD) are a strategic focus of WHO, UNICEF and the World Bank Care Care Framework. However, evidence-based approaches to PAUD project monitoring and evaluation (M&E) in low- and middle-income countries (LMIC) are still lacking. Findings related to measurement of quality, scope and results for scaling of ECD are considered (Milner et al., 2019).

Pendalungan Community is a community that is quite unique because it represents the Javanese and Madurese (Satrio Roefandi, 2019). Communities in the Tapal Kuda (Jember, Banyuwangi, Bondowoso, Situbondo) region in the eastern part of the island of Java are often known as Pendalungan communities, with characteristics that are imaged as mixing Javanese culture with Madura culture. This mixture can occur, first, because of marriage between someone with a Javanese

family background and a couple with a Madurese family background. Second, the inclusion of a community in a society with a particular culture so as to bring out characteristics that are specific to that society. In this case, there is a tendency of opinion that migrants are Madurese who enter and interact with the local people who are Javanese.

In Pandalungan society, educational institutions especially for Early Childhood Education (ECE) institutions are still diverse, so there is a need for a very complex and comprehensive identification so that it is easy to map one region to another, because if the institution is not qualified, then to realize an education at the level preschool in this case is ECE Institution, it will also be impossible to be realized maximally and with quality, because the area around urban areas and also in rural areas with the level of community awareness of education, life style and diverse cultural life in each region also will directly affect the condition of educational institutions, especially in this case, which is no exception.

ECE Institute Based on the description above, it can be seen that the relationship between the search proposal with the road map or research plan of the "Melaud" Research Group (Management of the ECE Institute) in accordance with its vision of developing ECE education programs and Learning to realize quality education with science, environment and technology education that looks. And in this case the researchers to realize this vision, the first thing to do is to identify the management of the ECE community's views on the socio-cultural conditions of urban and rural areas. Therefore, researchers are interested in taking the title "Identification of Early Childhood Learning Needs Based on Socio-Economic Conditions of Culture and Culture in the Pandalungan Community.

Research on identifying learning needs in educational institutions for early childhood communication blocks is carried out on the basis of various levels of community concern for Early Childhood Education (PAUD), looking at the conditions of community relations that have a high enough awareness of the importance of education, the condition of educational institutions is also the same or different, or even lower quality than educational institutions in rural or urban areas where the community also has a low level of awareness when compared to urban communities. Based on the fact of the problems in the quality of early childhood education, this study aims to look at the level of quality of children's education at an early age in the Pandalungan community, Jember.

2. THEORITICAL STUDY

1.1. Analysis of Learning

Permanent tendencies in a person that gives rise to encouragement or activities to achieve certain goals are called needs. Needs arise as a result of changes (internal change) in the organization or due to the influence of events - events in the organizational environment. (Hamlik, 1978) understanding of needs is the gap between the present situation and what should be in a different but the same editor. According to Suparman, needs are also interpreted as a gap between what is expected with the actual conditions, desires are future expectations or ideals associated with solving a problem (M. Atwi Suparman, 2012). Meanwhile according to Morrison that learning needs can be interpreted as a distance between the level of knowledge, skills, and / or attitudes possessed at a time with the level of knowledge, skills, and / or attitudes that a person, group, institution, and / or community wishes to obtain achieved through learning activities (Morrison, 2012). While

the needs analysis is a tool to identify the problem that will be used to determine the appropriate action. According to Morrison, that needs is a gap (discrepancy) between existing conditions and conditions that should exist (Morrison, 2012). Learning needs (learning needs) or educational needs (education need) is a gap that can be measured between learning outcomes or abilities that exist now and desired learning outcomes or abilities.

From the explanation above it can be concluded that the learning needs are something that occurs because of the gap or gap between what is expected with reality, between what should be there with what is happening about the level of knowledge, skills, attitudes owned by the level of knowledge, skills, and attitudes obtained by a person, group, institution and community that can be achieved through learning activities. Learning analysis is the process of elaborating general behaviors towards specific behaviors that are arranged logically and systematically. With the compilation of specific behavioral images from the very beginning to the end. Learning analysis is a set of procedures that can be applied in a learning goal resulting in the identification of steps that are relevant to the organizer of a goal and subordinate abilities needed by students to achieve the objectives (Dick, 2009).

2.1. Learning Quality

Measuring Quality & Outcomes Early Learning was started to address the needs for child development and the quality of early childhood education data (ECE), especially for low- and middle-income countries conducted by MELCO. Taking from existing tools, MELQO held a consortium to make open source tools adapted to the national context, simultaneously informing monitoring of global and national population levels. While psychological analysis from MELQO shows that scores should not be used to compare the quality of child development between countries, country experience shows that data from MELQO tools in countries identify priorities for improvement in preprimary classrooms. MELQO also highlights the importance of local leadership to produce data with high leverage on ECE (Raikes et al., 2019).

Play as the most ideal conditions for quality early childhood education. But often playing in the learning process is just forgotten, because it is replaced by don't formalism in the setting of educational institutions. Among the main principles of proper early childhood education are: (1) Recognize each child as a unique personality; (2) Respect the characteristics of natural development; (3) Individualization of educational activities; (4) organizing the educational environment in the field of stimulation; (5) play as the focus of main / basic activities; (6) Reconsider the relationship between children, adults and early education institutions.

Planning and providing high quality early childhood education means answering various children needs, regarding various aspects of the development process: health, nutrition, psycho-social development, emotional well-being, and contact with the external environment (Ciolan, 2013). The success of early childhood education programs also involves, along with the factors already mentioned, several other elements, such as: (1) Collaboration with parents to increase their capacity to grow, care for and educate children; (2) Cooperation with various institutions in the community, having an interest in the lives of children and / or families; (3)Integrating in the development of early education programs the latest scientific research results on the development and education of children, as well as in the evolution of human behavior and actions in Indonesia of different ages and in different social and cultural contexts; (4) Promoting social and individual equality,

contributing to reducing inequalities and offering equal opportunities for all; (5) Receive and consider generation changes and new ways to downplay the special reality for new generations of children, already labeled as digital, original digital, millennial generation.

In the last decade, there are still challenging tasks for early childhood educators and for teachers in general to understand that learners' lives have changed very much and the way they understand reality has greatly changed organizing relevant and engaging learning for them never to be a problem (Ciolan, 2013). There is a very significant difference between the way of thinking of today's generation of children and the way of teaching teachers who were educated in earlier times (Tapscott, 2011). Playing in childhood is a very complex phenomenon. These are activities that combine into one whole, a very different line of thought and experience. Lots of play experience when children persist into adulthood (Nutbrown, 2011, p. 114).

Integrated center-based child education services are services that simultaneously offer the various actions needed to promote holistic early childhood development; in particular, nutrition, health, care and early education, in a way that is well articulated, free and timely given the age of the child. This integrated service requires intervention from many sectors that demand good coordination (Bernal & Ramírez, 2019). The quality of educational institutions is determined by various components. Components that directly affect the quality of learning design, learning design, facility support, and teachers as knowledge transfer. The focus of successful education quality is on increasing the provision of educational activities, learning facilities, and is needed to provide stimulation (Biersteker, Dawes, Hendricks, & Tredoux, 2016).

2.2. Early Childhood Education (ECE)

2.2.1. Objectives and Functions of Early Childhood Education

The goals of early childhood education are as follows: (1) Forming quality Indonesian children, namely children who grow and develop according to their level of development so as to have optimal readiness in entering basic education and wading through life in adulthood; (2) Help prepare children to achieve learning readiness (academic) at school. (3) Early intervention by providing stimulation so that it can grow hidden potentials, namely the dimensions of child development (language, intellectual, emotional, social, motor, self-concept, interests, and talents). (4) Conduct early detection of the possibility of disturbances in the growth and development of the potential of a child.

The function of Early Childhood Education consists of an adaptation function, a socialization function, a development function, a play function and an economic function (Wijana, 2014). The explanation is as follows: (1) The function of adaptation, plays a role in helping children make adjustments to various environmental conditions and adjust to conditions in themselves. (2) The function of socialization plays a role in helping children to have social skills that are useful in relationships and daily life where children are located. (3) The function of development is related to the development of various potentials that children have. Each element of the potential possessed by the child requires a situation or environment that can grow and develop that potential towards optimal development so that it becomes a potential that is beneficial to the child itself and the environment. (4) The function of play is related to providing opportunities for children to play, because in essence play itself is the right of children throughout their life span. Through play activities children will explore their world and build their own knowledge. (5) Economic function planned education in children is a long-term investment that can be profitable in any

subsequent developmental range. Moreover, the investment made is in the golden age (the golden age) which will provide multiple benefits. Kindergarten education is one of the foundations for further development.

2.2.2. Early Childhood Education Components

Early childhood competency standards consist of developing moral aspects and values of religion, social emotional and independence, language, cognitive, physical-motor, and art. Components of Early Childhood Education are as follows (Suyadi, 2010): (1) Students: targets of Early Childhood Education services are children who are in the age range of 0-6 years. Grouping children based on age, i.e. 0-1 years, 1-2 years, 2-3 years, 3-4 years, 4-5 years and 5-6 years. (2) Educators, competence of educators in ECE has academic qualifications of at least Bachelor (S-1) in ECE (S-1 / D-IVPG-ECE), other education or psychology and has an ECE teacher professional certification or at least has received ECE training. (3) Learning, early childhood learning is carried out through play activities prepared by educators by preparing material (content) and the learning process.

Early childhood learning materials are divided into 2 age groups, namely: (1) Material age of birth to 3 years, including: self-introduction (self-concept development) recognition of feelings (emotional development), recognition of other people (social development), introduction of various movements (physical development), developing communication (language development), and skills thinking (physical development). (2) Material age children 3-6 years, including: literacy, mathematical concepts, natural knowledge, social knowledge, art, technology, and process skills. Teacher can promoted communication, collaboration, and creativity in the classroom setting (Bers, González-González, & Armas-Torres, 2019).

2.3. Pandalungan Society

In English, society is referred to as society, is the origin of the word socius which means friend. Understanding society in general refers to the meaning of association between one individual with another individual in a group, where they live together in the form of friendship. Understanding the community is a group of people who intensely interact and settle together for quite a long time.

Institutions that play a strategic role in cultural inculcation are early childhood education institutions. Children entering early childhood education programs are not like blank paper that does not understand the appraisal of its crocodile. But on the contrary, children bring their own data banks which contain observations about people's characteristics, experiences with adult responses to their questions that can reflect varying degrees of discomfort on this issue, exposure to general prejudices about certain groups and theories compiled by themselves about the causes and effects of diversity (Johson, J. E, & Roopnarine, 2011). This different pattern of care will affect the growth and development of children, so it needs to be understood in full by the educator. Parenting patterns in social communities that have special characteristics will also affect children's development.

Thus, educators and children can co-exist productively in a particular community. Educators are strongly associated with different social communities and interactions between these social communities. This is evident in a society that emphasizes individualism, which of course is different

from a society that prioritizes collectivism. Individualism gives priority to personal goals, emphasizing values that meet one's own needs (Puspita, 2013). Social communities can influence early childhood through a pool of interactions that take place in society. The element of mutual need is interpreted as a feeling of dependence on the community both physical and psychological

The community is a group of people or groups of people who have goals and are usually formed because there is one thing in common for their members. The community of Social and Culture has a contribution to the socialization in early childhood. The socio-culture in question arises because of the interaction between early childhood and their peers, with data parents and the community. In the process of efforts to develop early childhood, the contributing factors are ecological and sociocultural (Cycyk & Hammer, 2018). It is intended that the existence of children is always in a society that consists of different social communities. each community has sociocultural norms that have been agreed with the community.

Whereas the term Pandalungan means 'to speak / say with no certainty / manners' (Sutarto, 2006). In the context of community and cultural realities in the horseshoe area, that definition could mean that the everyday language used by the community concerned is abusive language (ngoko) or language whose grammatical structure is not yet well established, as indicated by the intensity of lexical and grammatical interference. This lack of grammatical aspects occurs because social interaction in community life is carried out by each language owner (Javanese and Madurese) whose position is equally strong or equally dominant. Culturally, the so-called pandalungan community is a hybrid society, which is a new civilized society due to the mixing of two dominant cultures. In the context of the East Java "horseshoe" region, pandalungan culture is a mixture of two dominant cultures, namely Javanese culture and Madura culture (Sutarto, 2006).

Based on the explanation above, it can be concluded that the pandalungan community is a society that is in a transitional position in the socio-cultural pattern. Transitional society is a society that has a mix of two dominant cultures, namely Javanese and Madura. Administratively, the Pandalungan cultural area includes Pasuruan, Probolinggo, Situbondo, Bondowoso, Jember, and Lumajang Regencies. In Jember, many Pandalungan communities occupy urban and suburban areas.

In a social environment, children can grow and develop according to the social characteristics of the local community. children indirectly make observations and imitate all forms of social behavior that appears in the community. one of the easiest aspects for children to imitate in a social environment is the language aspect. Children can easily follow the language used in a community environment. so that the community or social environment can be more effective in teaching language to young children. Children's participation in the community environment will develop the sociocognitive aspects of the child (Correia, Camilo, Aguiar, & Amaro, 2019).

In the smallest social environment, the family has a role in childcare education, including providing language communication patterns. in the family, parents can provide space for children to enter the social environment outside the family environment. The social environment of the community that can be followed by early childhood is the institution of early childhood education. Early childhood education institutions that exist within a particular community's social community can provide by preschool programs that schools with a local community social approach to the development of children's cognitive and pre-academic skills. Early childhood education services carried out in schools and parenting support in preschool programs as a whole and involving the social environment of the community will help optimize the development of this age child to achieve aspects of development (Grindal et al., 2016). Parenting education conducted by parents

in a social environment can provide examples or opportunities to practice positive interactions with children that will have a stronger additional impact than parental education programs that don't care.

The community environment has a very vital role in providing a counter to the risks that might interfere with children's development. The social environment with the values adopted can influence the pattern of thinking and behavior of a child in the process of growth and development. In this case the family as the smallest social environment with all its resources and strengths can allow it to act as a protective factor in the lives of children enabling them to succeed despite the challenges associated with discrimination (Herbers, Cutuli, Jacobs, Tabachnick, & Kichline, 2019). The condition of the family environment including the language can protect language that is not properly spoken by early childhood.

Children learn by playing. In the social environment, play is very possible to do children in the social environment where he lives. The game can be done by involving the rules. Therefore, it is necessary to have all the material resources that contribute to their training at the physical, social and emotional level (Lucas, 2017). A good game if done by considering aspects of development. So that children's games are done not just playing, but games that are full of meaning and are useful for early childhood. The place that is most likely to be done naturally in early childhood is that it occurs in the social environment of the community around where the child lives.

Conversations within the community occur because of a mechanism through a local social organization. Early childhood can never be separated from the social community where he lives. Wherever the social environment of early childhood, children will use language according to their environment. The use of the language in question yes occurs during the conversation in interaction in the community. Parents and teachers can see and evaluate different responses, identify effective practices based on what happens in real interactions' (Stokoe, 2014). As happened in Pandalungan communities. Early childhood has the characteristics of a master copycat, who is able to imitate what he sees, or hears. The children followed as the Pandalungun community. In an effort to optimize the development of early childhood, the community can play an active role for identify responsiveness (responsiveness) in the practice of responsive engagement. The conversation can directly inform professional development in early childhood education. Through speaking you can identify responsiveness in responsive engagement practices (Church & Bateman, 2019).

3. METHODS

3.1. Participant

This research was conducted in Jember Regency, and the object of the research was ECE institutions which were divided into 3 clusters namely cluster 1 (in urban areas), cluster 2 (in the suburbs), and cluster 3 (rural). This study uses a qualitative approach, because researchers want to identify the learning needs that exist in each ECE institution. This research can be classified as a descriptive / interpretative design because it refers to the description (description) of the data to be interpreted (Mapiare, 2013).

3.2. Research Desain

This research design uses ethnographic research design. The ethnographic research design was chosen because the researcher wanted to identify the learning needs of ECE institutions in the community which are part of the Pandalungan culture. Ethnographic research broad field of study of various social settings that allows direct observation and observation of activities and communication and interaction with institutions / people, both on formal and informal occasions (Mapiare, 2013).

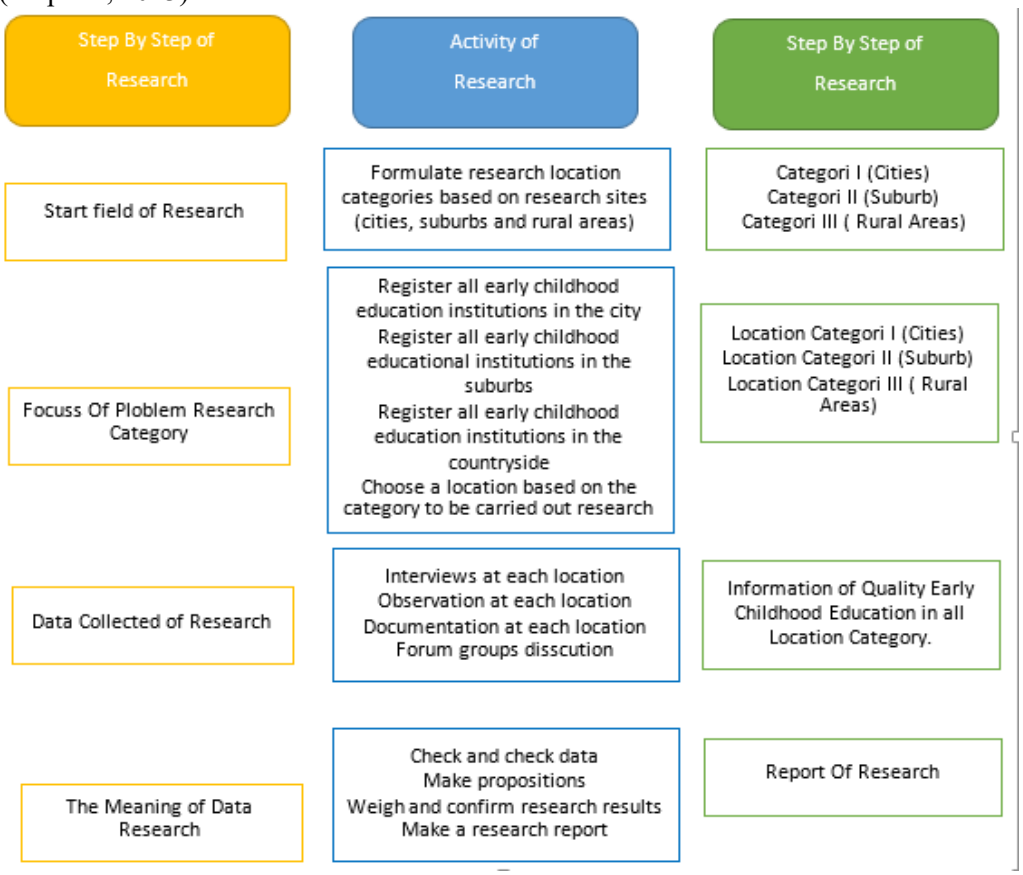

Figure 1. Reseach Design

3.3. Procedure

This research was conducted in 4 stages, namely field assessment, problem category determination, data collection, and data interpretation. Field assessment is carried out by formulating and determining the location of research categories. Field assessment is carried out by analyzing the characteristics of locations in Jember Regency. The characteristics that are used as a reference for analysis are the characteristics of ECE institutions in urban and suburban areas. After determining these characteristics, the selection of locations will then be subjected to research in each category (urban and suburban).

Determination of the problem category is done by weighing the conditions of the research location based on the categories that have been determined. The weighing process is carried out through the List of Early Childhood Education (Schools) in Accordance with Reference Data from the Ministry of Education and Culture in Jember Regency. The data is further grouped based on the urban and suburban categories. The results of the grouping are then analyzed to determine which

ECE institutions will be the target of research. After determining the location further communication with the Institution related to the aims and objectives of the study conducted to ensure willingness as a research target. Data collection is done by observation, interview and documentation. This data collection was carried out at each research target location.

The meaning of the data is done by analyzing the data that has been collected through checks and re-examinations and then conclusions are made by making propositions related to the logic principle, then weighing and elevating it into research findings and then making a complete research report. This process was carried out during the research.

4. RESULT AND DISCUSSION

4.1. Identification of the learning needs of Early Childhood Education (ECE) in Pandalungan Community in the Urban District of Jember.

The learning needs of early childhood education (ECE) in the Sumbersari area, which is an urban Pandalungan community, if viewed from the condition of community awareness about early childhood education (ECE), most are already aware of the importance of their role. Early childhood education is education prepared for preparation to the next level of school is elementary school. Children who have attended early childhood have an advantage when they go to primary school compared to not attending ECE education, both in terms of the developmental achievements of children who have been educated early on through quality ECE institutions and those who do not have many very visible differences. Whereas early childhood education institutions (ECE) in urban areas are already quite good from the quality level. In other words, most have implemented at least 8 early childhood education standards in accordance with national education standards (SNP) in terms of quality and quantity, it can be concluded that early childhood education institutions starting from standard achievement levels, content standards, processes, educators and personnel education, facilities and infrastructure, its management, funding and standard assessment have been applied so well that many in quality and quantity most of early childhood education (ECE) have been accredited both state and private status with a total of 57 early childhood education institutions (ECE). So the urban Pandalungan community already has a level of awareness and is supported by many early childhood education institutions (ECE) that have quality or quality that is in accordance with accreditation by the government, so that the learning needs of early childhood education (ECE) in Sumbersari already have the qualities that are high enough.

4.2. Identification of Early Childhood Education Learning Needs (ECE) in Pandalungan Communities in the Suburbs of Jember Regency.

The urban outskirts of the Pandalungan community in this case are in the Sukorambi area if the results of data mining by the research team can be drawn as a result of research based on data that has been excavated namely the condition of community awareness in Sukorambi is still lacking in terms of Early Childhood Education (ECE). It is proven that many ECE children are left to play all day without participating in ECE activities. The community has the opinion that playing is the same and the education is known as direct primary school. Besides because of economic factors that make the reason they lack awareness of Early Childhood Education (ECE). While the Condition of Early Childhood Education Institutions (ECE) in the Sukorambi area is still very low in terms of the amount, it is still half as compared to urban areas, there are 28 ECE institutions, and if viewed from the National Education Quality Standards instrument (SNP) through 8 standards

it can be categorized sufficiently quality, there are some ECE institutions that do not yet have accreditation so that the quality is still lacking.

4.3. Identification of the learning needs of Early Childhood Education (ECE) in Pandalungan Community in the Urban District of Jember.

Based on research findings that the learning needs of the Sumbersari community as a pandalungan community in urban areas of Jember Regency, if viewed from the condition of the level of awareness about early childhood education (ECE) which is quite high and the quality of ECE institutions in Sumbersari can already be said to be of sufficient quality. Because early childhood education is very important to do, several theories about brain development show that brain development in young children develops very quickly. Even if we want to invest in a country, the most profitable investment is through early childhood education. And early childhood education that will influence is early childhood education that can stimulate children appropriately according to their age stages. For this reason, a quality ECE is needed to be able to realize optimal stimulation. the ideals of ECE certainly hope to become a Quality ECE institution. At present, there are even many institutions that have certain labels, which sometimes make people believe that the institution is of good quality, without seeing the legitimacy of the government anymore. In Indonesia, all ECE institutions must obey and obey the Indonesian government regulations in carrying out its institution. In ECE, some regulations must be fulfilled as minimum service standards set by the government. To assess the feasibility, an accreditation instrument was drawn up which refers to the National Education Standards (SNP) as stipulated through the Government Regulation of the Republic of Indonesia Number 32 of 2013 concerning Amendment to the Government Regulation of the Republic of Indonesia Number 19 of 2005, which covers 8 (eight) standards.

To form a quality institution, we must take a variety of related parties, starting from the inspector and supervisor as technical advisors in the field, need to understand also the criteria of a quality institution in order to be able to actively participate in coaching. In addition, PKG as a forum for improving the quality of ECE institutions needs to be involved in preparing quality ECE institutions. ECE Education Institution in Sukorambi has implemented 8 quality standards as well as involving various stakeholders in its development so that it can be categorized that in terms of quantity and quality it already has a sufficiently high quality category, supported by awareness of urban Pandalungan people who are aware of early childhood education is education for the period the golden age of the child (Golden Age) if the students are erroneous then the character of the child will be inherent and difficult to change again, therefore it is in accordance with the guidelines that quality early childhood education must be at least based on national education standards especially those called institutional accreditation by the government.

4.4. Identification of Early Childhood Education Learning Needs (ECE) in Pandalungan Communities in the Suburbs of Jember Regency.

Each program is always carried out through a planning process, both structured planning and self-taught planning. Identification of learning needs is one part of program planning in organizing educational programs. The results of this study indicate that there is a lack of level of public awareness of the world of education, especially in this case is early childhood education (ECE). One of the factors that can influence the level of community awareness of the world of education is one of the economic factors, based on findings in the Sukorambi area as a high level of community awareness about the importance of ECE in preparing primary school education, one of the

causes is the fear of parents issuing additional funding for their children's education in early childhood education, so children are allowed to play randomly even though their age is actually included in the ECE school age category. In accordance with the Target of Early Childhood Education services are children who are in the age range of 0-6 years. Grouping children based on age, i.e. 0-1 years, 1-2 years, 2-3 years, 3-4 years, 4-5 years and 5-6 years.

Early Childhood Education Institutions (ECE) in Sukorambi are considered to be of poor quality, because the ECE institution is no exception assessing the feasibility of preparing accreditation instruments that refer to the National Education Standards (SNP) as stipulated through Government Regulation of the Republic of Indonesia Number 32 of 2013 concerning Amendments to Government Regulations Republic of Indonesia Number 19 of 2005, which includes 8 (eight) standards. There are various standards ranging from developmental achievements, content standards, processes, educators and teaching staff, facilities and infrastructure, management, financing and assessment. In Sukorambi the results are still partly accredited so that the quality and quality is very less compared to urban areas in Pandalungan which in this case are in Sumbersari, this also has to do with the lack of awareness and participation of the community around education. Besides the geographical conditions that affect it.

Sukorambi area has many areas that are in the highland category, access makes it one of the problems that must be faced by these urban suburbs, therefore a precise solution is needed to overcome this problem. Early childhood education institutions (ECE) must continue to prioritize quality so that people increasingly trust these educational institutions. Mayoriytas residents also have less economic levels, so this is also one of the causes of the community's unconsciousness in the world of education, especially ECE education

5. CONCLUSION

That identification of the learning needs of Early Childhood Education (ECE) in the Pandalungan community in urban areas of Jember, namely precisely in Sumbersari Kelurahan has a fairly high awareness of early childhood education (ECE) as an education prepared for further education, namely elementary schools, it is evident that in Kelurahan sumbersari there are early childhood education institutions in terms of quantity and quality, meaning that there are many Early Childhood education institutions (ECE) in this region and have sufficient quality, this is evident in complying with and obeying the Indonesian government regulations in carrying out its institutions. In ECE institutions, there are regulations that must be fulfilled as minimum service standards set by the government. Most ECE institutions in the Sumbersari Kelurahan are quite appropriate according to the instrument that refers to the SNP that covers 8 (eight) standards. Identification of Early Childhood Education Learning needs in the Pandalungan community in the urban outskirts of Jember Regency, namely Sukorambi Village, most if judged the feasibility of an Early Childhood Education Institution (ECE) is still inadequate if based on an instrument clause that refers to the SNP that covers 8 (eight) standards compared to urban areas. In this case the level of public awareness affects the results of identification of learning needs.

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How to use Loose-Parts in STEAM? Early Childhood Educators Focus Group discussion in Indonesia

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In recent years, STEAM (Science, Technology, Engineering, Art, and Mathematics) has received wide attention. STEAM complements early childhood learning needs in honing 2nd century skills. This study aims to introduce a loose section in early childhood learning to pre-service teachers and then to explore their perceptions of how to use loose parts in supporting STEAM. The study design uses qualitative phenomenological methods. FGDs (Focus Group Discussions) are used as data collection instruments. The findings point to two main themes that emerged from the discussion: a loose section that supports freedom of creation and problem solving. Freedom clearly supports science, mathematics and arts education while problem solving significantly supports engineering and technology education.

Keywords: Early Childhood Educators, Loose-part, STEAM

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1 INTRODUCTION

In recent years, STEM (Science, Technology, Engineering, Mathematics) has received extensive attention all around the world (Dejarnette, 2018; C. D. Tippett & Milford, 2017). However, research related to science education in early childhood is still limited (Moomaw, 2012), whereas science education is closely related to STEM. Science education and STEM are often neglected before elementary school. Similarly, research on STEM in Indonesia, especially in early childhood setting, is very sparse even though STEM has become a popular object of discussions.

Previous studies reported that STEM is highly beneficial for the students. Furthermore, different from the common belief that STEM is too challenging for young learners, previous studies indicate that STEM is a valuable element for early childhood education (Clements & Sarama, 2016; Moomaw, 2016; Moomaw & Davis, 2010; C. Tippett & Milford, 2017). Early childhood education, STEM is commonly integrated with arts (Dejarnette, 2018; Sharapan, 2012) and thus it is called STEAM (science, technology, engineering, arts, and mathematics).

The misconception that STEAM requires expensive materials might derive from the belief about science and technology. People tend to link technology with electronic equipment. Several researches aimed to seed students' conception about technology resulted in similar findings. Students commonly associate technology with artefacts, especially modern electronic equipment (DiGironimo, 2011; Lachapelle, Cunningham, & Oh, 2019; Rocha Fernandes, Rodrigues, & Ferreira, 2018). Moreover, people also often associate science with laboratory activities. Research investigating students conception about science found that laboratory activities and tools are often used to symbolize science and scientist (Rocha Fernandes et al., 2018).

Despite of the common misconceptions, science and technology are closely related to children's daily life. We may find children building towers from blocks or observing when the towers collapse. These are science and engineering. STEAM education does not always require sophisticated materials. Things such as blocks, twigs, stones, seeds, paper rolls, milk cartoons, buttons, and other every day materials are perfect for the STEAM learning (Casey et al., 2016). Those everyday materials which can be found almost in any environment are potentially supporting STEAM learning if the children are allowed to play and explore them. Those kinds of materials are called "loose-parts". Loose-parts spark exploration, inventiveness and creativity. (Nicholson, 1972). Based on that statement, we can conclude that loose parts can potentially support STEAM education as they support invention and creativity. Both invention and creativity are closely linked to science, engineering, technology, and arts.

Currently, there are not many studies that investigate loose-parts, STEAM, or the relationship between loose-parts and STEAM, especially in early childhood education settings in Indonesia. There is only one research conducted to investigate STEAM learning in early childhood setting (Munawar, Roshayanti, & Sugiyanti, 2019) which can be found in google scholar. There is a big gap between the practices and the research in the field of loose-parts and STEAM in Indonesia. Therefore, this study addresses the gap by exploring the use of loose parts in children's learning, specifically in relation to the STEAM learning. The research question for this study is "how the use of loose-parts supports science, technology, engineering, arts, and mathematics in children's learning?"

Based on the research questions, the variable that will be investigate in the research are loose-parts and STEAM. STEAM is an abbreviation from "Science, Technology, Engineering, Arts,

and Mathematics". Each of them has their own construct and concept. Loose-parts is the independent variable, which might affect science, technology, engineering, arts, and mathematics happening in children's learning. Therefore, science learning, technology learning, engineering learning, arts learning, and mathematics learning are the dependent variables in this study. This study will investigate how the use of loose-parts might affect those five areas of learning and in what way loose-parts supports those five areas of learning.

2 THEOTRITICAL STUDY

2.1 *Loose Parts*

Loose parts are materials that can be moved throughout the room and used in an endless way. The use of loose part materials gives children the opportunity to make endless ways to make creations. Loose parts can improve problem-solving skills, creativity, concentration, hand, and eye coordination, fine motor development, gross motor development, help with language and vocabulary mastery, mathematical thinking, scientific thinking, emotional literacy, and social development. Loose parts are available in nature so there is no need to buy them at stores. Loose parts are mostly located in the environment around us.

Loose Parts creates unlimited creative possibilities in learning activities and invites children's creativity. Loose Parts are materials that can be moved, carried, combined, redesigned, separated and put back together in various ways. Through direct experience, teachers can explore a variety of materials that can be incorporated into learning in the classroom (indoor) and in the outdoor play area. Teacher friends can also carry out activities through the seven components of Loose parts by fiddling with, communicating between different loose parts, collaborating with other loose parts components, and using critical thinking skills, and the teacher's imagination in developing learning that uses loose teaching materials Parts.

The natural outdoor environment is an environment for finding loose parts and is an important part of providing play spaces directed at children (Flannigan & Dietze, 2018). Incorporating loose parts teaching materials in early childhood classes provides exceptional opportunities for children to explore the world around them using natural, synthetic, and recyclable materials. Loose-Parts can be an incentive to have meaningful conversations and encourage interaction between students. Through loose-parts, children don't take long to appreciate each other's conversations in their groups. The discussion of loose parts will further foster mutual respect in a multicultural class (Smith-gilman, 2018). Students will express their own experiences in schools, some of which come from members of different cultural environments in multi-ethnic schools. The exchange of students' ideas reflects an awareness of their future role in helping children become good multicultural community members.

2.2 *STEAM in Early Childhood Education*

STEAM approach is considered to benefit the future workforce. The United States of America is one of countries which gives a great emphasis to the need of STEAM-related jobs (Allen, 2016; Dejarnette, 2018). However, STEAM-related jobs are basically relevant to the global context as there is a changing landscape for jobs all around the world. Currently, there are more jobs that require more than reading and counting skills. In addition, STEAM is not merely a matter of workforce or economic issues.

Despite the growing popularity of STEAM, previous studies have disclosed various challenges related to the STEAM practices (Allen, 2016; Moomaw, 2016). There are at least three factors, which might hinder a high-quality STEAM implementation in the classroom. The first factor is the teacher readiness. As most of the studies reported, teachers often stated that teaching STEAM requires more knowledge and support (Allen, 2016; E. McClure et al., 2017; Moomaw, 2012). Secondly, most of the teachers argued that they did not have enough time to integrate STEAM in their lesson plan because they already had too many subject contents to be covered throughout the study year (Allen, 2016). Thirdly, there was a common misconception that STEAM requires expensive and high-tech materials (Ansberry & Morgan, 2019). In response to the challenges, there have been fairly amount of literatures discussing the first and the second challenges. However, study and literatures focusing on the materials used to support STEAM are rarely to be found.

2.3 *The Role of Early Childhood Educators*

In addition, teachers can identify how children's experiences using loose parts will be one of the valuable experiences that children want to re-create their future. The teacher will easily design learning processes and stimulate student involvement to manipulate loose parts. Through the use of loose parts can bring critical thinking, problem-solving and newfound relationships. Material through loose-parts is open-minded not only to encourage conversation about the ideas they have and the identity of loose-parts but also teaches children about the values that make a process of discovery possible (Smith-gilman, 2018). This form of involvement is deep involvement in learning. The use of loose parts can bring out the creativity of children who are more complex than just completing worksheet assignments. Loose parts can provide good support for learning. The use of loose parts can build knowledge by actively involving students in each child and children's interactions with their friends in the learning process. Another benefit of loose parts is that they help express students' ideas, values, emotions, and self-reflection.

The implication of loose parts in learning is to provide justice to all students or provide equal opportunities for all students to engage actively and express their ideas. Loose-parts can provide effective involvement and are a powerful step to help teachers see, listen, think and feel what is experienced by students (Smith-gilman, 2018). Teachers need to develop professional knowledge and observation skills through the selection of appropriate methods and tools that will foster meaningful learning. Loose parts can encourage students to think openly. Loose parts allow for direct use that helps to learn to be seen and felt directly by students. Loose-parts can provoke new discoveries, and conversations about meetings, which can increase students' curiosity, creativity and good attitude towards students (Smith-gilman, 2018).

Many examples of loose parts have been manufactured, for example equipment of various building materials, teaching aids to play dramatically, and simple or structured toys. Maxwell et al. (2008) noted that children's play activities were more varied by using loose parts that were already produced rather than using loose parts (Maxwell, L., Mitchell, M., and Evans, 2008). Kiewra, C., & Veselack, (2016) emphasize the idea that natural ingredients can be anything. Some natural objects require specific treatment however, children are encouraged to be innovative and use them in unique ways, according to their individual needs and interests.

Cloward Drown asserts that loose parts are more dynamic and allow for natural changes in the playing process. Traditional play which initially only uses natural materials for play equipment, over time children will use natural materials that allow children to stimulate creativity (Cloward

Drown, 2014). The importance of natural loose-parts for infants and toddlers that children continue to choose their own activities and natural elements explored showing the ability to focus and attend and show curiosity that attracts their attention and supports their involvement (Veselack, E., Miller, D., & Cain-Chang, 2015, p. 35). In using loose-parts materials with an outside playing background, Sutton, (2011) broadens his initial definition by noting that the more involvement of children using loose-parts, the broader their thinking will be.

Loose parts are preferred by children and teachers in learning, because they are easily available in the surrounding environment. The value of toys and props in the game, children prefer loose-parts such as sticks, blocks, snow, and sand that can be reused to whatever they want (Kiewra, C., & Veselack, 2016). In addition to natural loose-parts, there are also artificial loose-parts such as artificial metals, plastics, and loose parts made of wood, and so on. The closeness of the playroom near nature is very important, and deliberately organizing natural environment items allows children to form stronger bonds and connections with these materials during play (Kuh, L., Ponte, I., & Chau, 2013). Natural goods can be many things as natural items such as leaves, stones, sticks, and berries into paint and paint brushes (Monsalvatge, L., Long, K., & DiBello, 2013). The same material can turn into collages or props for dramatic play with children's books (Gull, Bogunovich, Goldstein, & Rosengarten, 2019).

3 METHODS

2.1 Research Method

This research employs a qualitative method, as the aim is to gain preliminary understanding about STEAM in early childhood context (Silverman in Eeuwijk & Zuzana, 2017). The phenomenology research design was followed in this study because the research question needs a profound understanding from the group of pre-service teacher students who hold common experiences in using loose-parts (Creswell in Padilla-Diaz, 2015). Phenomenology commonly used in various research in education field to hear students or teachers voice (Robison, 2016; Sohn, Thomas, Greenberg, & Pollio, 2017; Yuksel-Arslan, Yildirim, & Robin, 2016). Because the nature of phenomenology design is to see underlying essences and common meanings attributed to the phenomenon, the participants in this study was chosen purposively based on some common criteria.

3.1 *Data collection*

For collecting research data, the Focus Group Discussion (FGD) method was used. This data collection method is appropriate as the aim of this study is to explore participants' ideas, understandings, perceptions, knowledge, and experiences regarding loose-parts and STEAM (Eeuwijk & Zuzana, 2017; Freitas, Oliveira, Jenkins, & Popjoy, 1998; Liamputtong, 2010; O.Nyumba, Wilson, Derrick, & Mukherjee, 2018). FGD was chosen because it is said that FGD is an excellent tool for gaining depth and insight about the subject matter. It aligns with the research design which tries to seek the common meaning from the group of pre-service teacher students who underwent the same experiences in using loose parts for their lessons. FGD is a powerful tool for explaining, clarifying, and providing a better understanding about the subject explored (Mishra, 2016).

3.2 *Procedure*

The research stages consist of four steps which are research design, data collection, analysis, and reporting the results. The research design stage involves the development of key questions, deciding the number of participants, deciding the number of focus groups, finalizing the ethic clearance, selecting a venue, and arranging materials.

The researcher developed eight key questions to answer the research questions. Here are several examples of the questions: "*Do you think the children learn differently when you use loose-parts? Do you think loose-parts can support children's learning in mathematics? If it's so, in what ways? What are the drawbacks of using loose-parts in your lesson plan?*" The key questions intend to answer the research question. However, the FGD questions are different from the research question. It is the researcher's responsibility to formulate appropriate questions in order to answer the research question (Eeuwijk & Zuzana, 2017). After developing the key questions, the researcher recruited eight participants.

The second stage is data collection. In this study, there were three FGD sessions conducted and each session lasted between 45 and 60 minutes. The first FGD was an exploration stage to gain preliminary understandings from the participants regarding loose-parts and STEAM. The second FGD was conducted midway through the research to monitor the process. Finally, the third FGD was done at the end of the project implementation and was meant as an evaluation process (Eeuwijk & Zuzana, 2017).

The FGD results where was audio recorded and transcribed in detail. In the beginning of the analysis process, the transcripts were coded and labelled without limiting the number of codes. In the second step, the researcher conducted a focused coding to eliminate and combine the codes. The researcher used both content and ethnographic analyses to generate main themes without losing the contexts (Freitas et al., 1998; O.Nyumba et al., 2018).

3.3 *Participant*

The participants of this research were eight pre-service teachers who took a course called "Early Childhood Learning Approach". This number of participants was considered adequate as FGD usually involves 6 to 8 people in each group (Liamputtong, 2010). All the pre-service teachers agreed to participate in this study and submitted an agreement form. Even though they were divided into three groups during the loose-parts project implementation, they were involved in the FGD as one group.

During the course, all the participants learnt about various approaches, methods, and models in early childhood learning. One of the focuses is Reggio Emilia approach. This approach is rarely known in Indonesia. However, there is one preschool near Salatiga which has implemented this approach. The researchers shared a story about their practices, which successfully sparked STEAM learning in their students (Siantayani, 2018). The pre-service teachers then learnt to assess students' learning based on the STEAM framework.

After a month exposure to the STEAM course, the pre-service teachers did a loose-parts project. The eight participants were divided into three groups. Two groups consisted of three persons and one group consisted of two persons. During the project, each group got involved in one preschool setting, specifically in three to four-year-old class. There were 3 preschools which took part in this project.

At the beginning of the project, the pre-service teachers observed and were involved in the daily leaning of the three to four-year-old classes for about four weeks. This would give them chances to gain understandings about learning practices in the classroom. In the fifth and the sixth week, the group presented two lesson plans that integrated loose parts and STEAM approach.

Each lesson plan incorporated three main components which were children's literature, invitation, and provocation. At the beginning of each lesson plan, the pre-service teachers would read a children picture book. This book was used to give a context to the next provocation and activities (Monhardt & Monhardt, 2006). There were six children books used for the loose-parts project which were "How to Catch a Star", "Lost and Found", "The Way Back Home", "Giraffe Can't Dance", "The Koala Who Could", and "The Squirrels Who Squabbled".

After the book reading, the loose parts were presented to the children. The pre-service teachers arranged the loose-parts and other materials aesthetically to invite the children to participate. They adopted this practice from the Reggio Emilia approach which perceived the environment as the third teacher (Strong-wilson & Ellis, 2002). In the invitation arrangement, they also posed a provocation for the children related to the picture book. For example, one group read a story about a boy who loved stars and tried to captured them (Jeffers, 2004). The group arranged various seeds, pop sticks, and bottle caps to invite children engagement with the materials and also posed a provocation statements "*Can you make your own star friend*?"

The FGD was conducted before the group delivered the loose-parts project, midway through the project, and after the project was finished. The course content (Reggio Emilia approach and STEAM materials) and the loose-parts project implementation were provided to the participants with similar knowledge and experiences related to the research focus.

4 RESULT AND DISCUSSION

After the pre-service teachers implemented the project, they discussed how loose-parts support the STEAM-based learning. The data analysis revealed two major themes from the discussion: (a) freedom and (b) problem solving.

4.1 *Freedom*

Loose parts gave much of freedom to the students during the learning. The freedom covers three different categories which are freedom in the material selection, freedom during the building up process, and freedom of the product result.

4.1.1 *Freedom in the Material Selection*

One of the most intense topics which came up during the discussion was that loose parts provided ample choices of materials for the children (code T1.6, code T1.9). Prior to the loose-parts project, the typical utilized media in the classroom activities were papers, glue, scissors, and colour pencils. With those kinds of materials, the common learning activities for the children are counting, learning alphabet, and art making the worksheets. Moreover, the art was also limited to cutting and gluing, drawing, or colouring (code T1.6).

The arts education in the classroom context often limited on the visual arts. In Indonesia, other arts areas such as music, drama, and dance are often taught separately as extracurricular activities. However, the FGD revealed that the quality of the visual arts education in the classroom might be low. According to the principles of arts, high quality arts can be obtained if the child have access to a wide variety of art media,

thus the children can have meaningful interaction, discovery, inquiry, and exploration (McClure et al., 2017). Based on that principles, merely provided papers cannot be counted as providing material-rich environment thus endanger the quality of the arts education.

During the loose-parts projects, the pre-service teachers provided more than five materials for one activity challenge. The material variation gave children a chance to interact with the materials freely. For example, one pre-service teacher shared her experience during the lesson period. At the beginning of the lesson, she read aloud a story about a boy who explores the moon with his rockets. Later, she invited the children to the loose-parts play. She challenged the children to build their own plane. However, there was a child who was not ready to build the plane. Fortunately, the range of materials provided gave the child a chance to play according to her developmental level. The child did not build a plane, she just played with the big buttons and sorted the big buttons in a very engaging manner (code T1.160). That authenticity of learning might not happen when the teacher just provides one kind of material and then focuses on the end product.

A similar event happened in another setting (code T2.49). The pre-service teachers provoked the children to make a garden. However, the task might be too hard for one young girl. She did not make any garden, but she played with the materials and created her own counting ritual. First, she put mini styrofoam balls inside the straw. Then, she poured the mini balls to the bottle cap while she murmured the number. She repeated the counting pattern for a long time period (put the balls inside the straw – poured the balls to the bottle cap – murmured the number). The pre-service teachers recognized the event as "meaningful mathematics learning". The child practiced her counting skills and create a pattern of a counting ritual (algebra).

If we compare between the typical classroom activities provided by the teacher and the loose-parts play provided by the pre-service teachers, it is clear that the use of loose-parts more likely supports a high-quality arts education. A high quality arts education can provoke creativity (Hui, He, & Ye, 2015). Different kind of materials present a lot of sensorial experiences. The experiences develop artistic and perceptual capacities. Furthermore, the experiences allow children to construct knowledge about their world (Piaget in Berk, 2009). The construction of knowledge through active explorations can be regarded as science education. In Indonesia, especially in early childhood education, the emphasis of the science education is on the science process skills. The science process skills underlines the Indonesia early childhood curriculum and it is called as 'scientific approach' (Rahardjo, 2019). In addition to arts and science, the wide variety of materials presented mathematics learning. The pre-service teachers noticed that even though both of the children did not respond to the activity, they experienced a meaningful mathematics learning. She learned about pattern, number, and geometry. Loose parts supported their authentic learning in mathematics.

4.1.2 *Freedom during the Build Up Process*

Another prominent topic repeatedly said was that loose-parts project freed the children during the process of product creation. The pre-service teachers provided various provocations such as "*Can you build your own plane*" or "*Let's make our flower garden*" but they did not exemplify the making steps to the children. This was contrary to the common classroom practices. One of the pre-service teachers stated that "*The teacher always, always models the steps before they begin the lesson activities*" (code T3. 226). The statement was supported by various evidence gathered from the FGD session.

Firstly, two pre-service teachers observed the classroom teacher prior to their project implementation. The theme was cassava rolls (Indonesian traditional fried food made from cassava leaves). with the students. After the explanation about cassava at the beginning of the lesson, the teacher asked the students to colour a cassava leaf picture using grated coconut that has been coloured

using green dye. The teacher modelled how to put the glue on the paper and how to sprinkle the grated coconut on top of the glue (code T1.30).

Secondly, other pre-service teachers encountered similar situation. The teacher asked the children to make rocket from papers. Each child got a set of rocket fin and rocket body. The teacher had cut the pattern for the children. Before the children started, the teacher modelled step by step of the rocket making process. According to one pre-service teacher, there was one child who stuck the fin differently from the model. The teacher pulled out that fin and corrected the position. The teacher controlled the process making as well as the end product. It seemed that the teacher valued uniformity (code T1. 40). Furthermore, in another day, the teacher provided circle-shape papers for making a clown face. Each child got a big circle-shape paper, a small round paper for the nose, clown hat, mouth, and eyes. The teacher modelled the making process and then the children just needed to glue each part of the clown face.

From the excerpt, we can see that the typical classroom activities limited children skills: gluing and colouring (code T1.21). In contrast, the STEAM project presented a degree of freedom during the activities. Thus, it allowed children to practice their diverse skills (code T1.59). Even though the children made the same objects, the process varied from one child to another. For example, after the pre-service teachers read-aloud a story about a boy who brought the lost penguin back to its home, they challenged the children to make their own boat. Most of the boat did have similar features such as mast and sail. However, the different selection of materials resulted in different process. One child chose a big straw as the mast. When he stuck it to the styrofoam board, the mast swayed. He then tested another material: skewer. The skewer was sturdier than the straw.

Why the skewer was sturdier than the big straw? The pre-service teacher did not provoke deeper. However, the child action swapping the straw to the skewer showed that the children observed the objects, tested the properties, and took action. It was possible that he did not understand the scientific concept yet, but the play experience potentially contribute to his science understanding later (Gomes & Fleer, 2019; Sikder & Fleer, 2015).

The freedom of the process making also contributed to the mathematics skills development. It is retold that there was a child who wanted to add a ladder to his boat. He chose pop sticks to make his ladder. Originally, the pop sticks were a way too long. He cut the pop sticks in the same length, then arranged the sticks to make a ladder. The pre-service teachers identified engineering process and mathematics skills such as measurement, algebra, and geometry there. They argued that the child had a vivid picture about what a ladder looks like (understand pattern: algebra and geometry). The child also modified the sticks to meet his need. He did an engineering process and he occupied a simple technology tool (scissors). Apparently, freedom during the process making allows the children to encounter various problems. In other words, the freedom of the process creation is closely related to the problem discovery as well as the problem solving which will be discussed more extensively in the next theme. The problem discovery required the children to use their technological knowledge, engineering, and mathematics skills.

4.1.3 *Freedom of the Product Result*

Finally, loose parts allow variation of the product results made by the children. Loose parts gave children freedom to make their own artefacts. One common practice in most of the classrooms is that the teachers have the end product as an exact model not as an inspiration. It means that most of the art activity will end up with the same product for all the children in the classroom (code T1.40). The previous example revealed how the teacher fixed a rocket fin. It was a class of 4-

year-old children. They were developing their fine motor skills, so that their rocket might not seemed as perfect as the model. However, the teacher made a correction for the child. Even though the rocket looked perfect at the end of the day, there was a remaining question: Did the result show an authentic learning of the children?

Other examples were told by the pre-service teachers. They observed that the theme of the day was about family, particularly 'mother'. The teacher and the children discussed about the role of the mother in the family and asked what their mother look like. After the circle time, the children were directed to do three activities. One of the activities was making a necklace for their mother. The teacher prepared strings, a lot of straw pieces, and different colours of bottle cap. However, she directed how the children should make the necklace in a strict way. The teacher instructed the children to take 5 straw pieces and 5 bottle caps, each of them should had a different colour: orange, green, yellow, dark blue, and light blue. Then, she instructed that the children should put 1 straw to the string, followed by the dark blue bottle cap, followed by another straw pieces, followed by the yellow bottle cap, and so on. There were several children who did not follow the instruction precisely. The teacher scolded them and asked them to rearrange the necklace so that the necklace would have the same patterns as the model.

The pre-service teachers did not really understand why the teacher do that, nor the reason behind her decision. The pre-service teachers reflected that the teacher hindered a great opportunity of mathematics learning. The necklace was a good opportunity for creating pattern. The teacher was also hindered children's creativity. Most of the time, the common art lesson plan was "making something" but the teacher brings a model. The teachers demand the same end product. They often corrected the students throughout the process because they are obsessed with the beauty of the end product based on their standard. The arts and the mathematics learning opportunity reduced to become merely a fine motor skill learning. A high quality arts education leads to creativity (Hui et al., 2015). Creativity is one among the four twenty-first century skill that the children should have (Lindeman & Anderson, 2015). However, there are at least eight underlying principles which are essential for the arts education (McClure et al., 2017). Five out of the eight principles are related to the teacher. A teacher is an important key factor which determines the quality in arts education.

From the result, it was clear that loose parts allow freedom from the beginning up to the end design process. Research in Western countries shows that freedom flourishes creativity (Cheung, 2017). Before the loose-parts project, most of the teachers tend to control children's activities. The classroom practices resemble Chinese preschool classroom, described by Cheung (2017) as 'highly structured'. In a highly structured classroom, teachers usually prepare closed activities and limit the materials. As a result, the art product will be the same for all the students in that classroom.

Meanwhile, the loose-parts project conducted by the pre-service teachers provided freedom. Even though the pre-service teachers brought pictures or sample of the artefacts, the pictures and the artefacts were meant to support children's observation. The pre-service teachers tried not to force the children to follow their ideas and standards. The pre-service teachers demonstrated a good balance between structure and freedom, which is a crucial point in the creative practice (Sawyer, 2006). The balance between structure and freedom will prevent aimlessness activity as feared by Cheung (2017). From the discussion, we can conclude that the highly structured classroom hinders creativity while loose-parts project potentially sparks freedom, a main element of creativity and arts (Liao, 2016).

From the result, it was also obvious that the freedom generated science education. Without forcing the children to imitate the models, the children had to examine carefully the leaning object so that they can produce their own artefacts. For example, when the pre-service teachers provoked them to make their own plane, one child said, "*I can't make a plane*". But then the teacher brought the picture close to him and scaffold his observation. Finally, the child begun to build the plane (code T1.168). The same experience happened when the pre-service teacher provoked the children to make their own garden. In the absence of a garden model, one of the children wandered around and observed a flower before she made the flower artefact for her garden (code T2.17). The degree of freedom presented by the loose-parts gave many opportunities for enhancing children's science process skills such as observation, inferring, and communication (Can, Yildiz-Demirtas, & Altun, 2017; Monhardt & Monhardt, 2006; Padilla, 1990). Furthermore, the degree of freedom also supports technology and engineering learning. Different kinds of materials lead to different process making. The children need to observe, try, test, and adjust the process based on different material property.

The initial question which tried to be answered in this study is "how the use of loose-parts supports science, technology, engineering, arts, and mathematics in children's learning?" Based on the discussion, the first theme emerged was that loose-parts support freedom during the learning activities. The freedom ignited authentic mathematics, science, technology, engineering, and art learning.

4.2 *Problem solving*

Another prominent theme that came up from the FGD was that loose parts allowed the children to face various problems, especially during the making process (code T1.44). The pre-service teachers felt a big difference before and after the STEAM project. Before the STEAM project, the children typically learn to count, write alphabet, cut and glue pattern. Most of the activities were using papers as the main media. There media was so poor, and it made the learning so boring. However, the loose parts presented rich opportunities of exploration, imagination, and discoveries in children's learning.

One pre-service teacher shared her experience with the children during the learning. She challenged the children to make their own plane. One child said that he could not make it. At her first attempt to persuade the child, the pre-service teacher said, "you can do it". However, the child still could not do it just because he was encouraged. The pre-service teacher changed her strategy. She realized that the difficulties of making a plane might be due to child's weak concept of the plane. She brought the plane miniature closely to the child and scaffolded the child. She asked the child to observe the miniature, asked the child what he knew about plane's feature, what shape was that, what kind of materials that he might use to make that part of the plane, and how he could attach one material to another. After that, the child was eager to make his own plane. At first, he chose big buttons as the plane's wheel, but he had difficulties to attach the button to the plane's body (a paper coffee cup). After several attempt, he took a rectangle paper box, attached the button to the paper box, then attached the paper box to the paper coffee cup.

The pre-service teacher reflected on that experience and said that science underlies engineering and technological learning. She realized that engineering process of making a plane would not be possible if the child did not have a clear concept about what plane is. Furthermore, different kinds of materials posed various problems during the making process. If the child chose a bottle cap as the plane wheel, he might need to use another strategy to attach it to the plane body. Loose-parts

gave children a lot of opportunities to encounter problems, thus loose-parts also presented a wide opportunity to do problem solving.

Other preservice teachers also highlighted many episodes when the children confronted with problems during the learning activities. One pre-service teacher told that there was a child who wanted to attach the bottle to the wooden stick. She failed many times. At the end, she changed the glue with the white tape and wrapped it around the bottle and the stick. "*The mast is firm now*", she said.

Another pre-service teacher revealed story about a child who want to use straw as his boat mast. However, the straw collapsed many times. He learnt and observed his friend who encounter the same problem. He noticed that his friend changes the straw to skewer. Based on his observation, he took a skewer, stuck it to the styrofoam, and then covered the skewer with the straw (code T1. 94).

The problem with the mast and the straw was also experienced by another child. The child uses a thin styrofoam as his main boat body. When he stuck the mast to it, the mast swayed all the time. However, instead of swapping the straw to the skewer, he modified the Styrofoam. He took another styrofoam, cut it smaller than his prior Styrofoam, and put it on top of the previous styrofoam. As a result, he got a thick main body boat. Thus, when he stuck the mast again, the styrofoam held it firmly (code T1.96).

Before the loose-parts project, the teachers tend to limit the materials. It made the children less exposed to problems. As it was clear from the FGD excerpt, different kind of materials presented more challenge during the making process. Therefore, the engineering was initiated. One of the dimension of engineering process is about how to make a thing (Bagiati & Evangelou, 2015; Becker & Park, 2011; Goris & Dyrenfurth, n.d.). Children engineered materials into some products using simple technology tools such as glue or cutter. They also embedded technology into their products: a plane that has wheels, a ladder to climb a tree, or a fence around their flower garden.

Engineering and technology is closely related (Becker & Park, 2011; Lachapelle et al., 2019). For example, if the teacher provides materials other than the grated coconut and one kind of glue, there might be one or two materials that are hard to be attached to the paper. Children may try different glue and chose which glues is strong enough to attach the materials to the paper. The teacher can intently provoke children to explore the glue. Glue as well as scissors are most commonly used technological tools in the preschool classroom. Students and teachers often take them for granted. In fact, exploration of different kinds of glues and scissors might expose students to different kinds of technology. Teachers can tell a story about the history of glue or scissors. Who knows, someday one of the students may create another kind of scissor to cut some materials that currently cannot be cut yet.

However, teacher's misconception about technology often hinders technology education in the classroom. Technology is often associated with modern electronic devices (Fleer, 1998; Jarvis & Rennie, 1996; Lachapelle et al., 2019; Rocha Fernandes et al., 2018). Another common misconception about technology is that people often mix up the term 'educational technology' and 'technology education'. Educational technology focus on the use of technology in education. In this context, technology act as a tool to support and enhance students' learning process. On the other hand, 'technology education' means the students have a change to learn about technology. Technology education deliberately involve students to learn about processes and knowledge about

technology. Technology education aim to make the students gaining a technological literacy (Dugger & Naik, 2001)

Furthermore, the pre-service teachers identified teachers' habit to solve the problem for the children. In the usual classroom practices, children are rarely allowed to do a problem solving. One of the pre-service teachers said that most of the time, the teacher would come and helped the children when the children having difficulties doing the instruction (code, T2. 198). "The teachers tend to solve the problem for the children" (code T1.125, code T1.143, code T2.131). Some of the reasons might be because they want the students succeed in finishing the tasks on time. One of the participants mentioned that "*I think the teacher wanted to stick to the daily schedule such as lunch time*" (Dian, T2.202). The pre-service teachers predicted one of the reasons why teachers tend to solve the problem for the children is because they want to stick to the schedule.

Another excerpt came from one pre-service teachers who valued loose-parts in supporting problem solving skills. In one lesson, she observed that the teacher asked the children to paint a tree using two fingers. Some of the children could not do it but the teacher forced them. She grabbed the student's fingers and moved the fingers. The pre-service teacher stated that "*It's different with our loose-part project. We did not solve the problem for the children. We just provoked them until they could solve their problems*" (code T1. 143).

There was another story told. The pre-service teacher observed that the classroom teacher and the children were going to make snow. During the process, a child poured too much water on the dough. After that, the teacher came and add more baking powder then asked the child to knead it again. The pre-service teacher said that actually that accident (too much water) was a good problem to be solved by the children. She said "*I think the teacher should prompt with questions first, not just solved the problem for the child*" (code, T2. 131).

The excerpts present a vivid illustration of how the use of loose parts supports STEAM education, especially the engineering and technology education. Loose parts provide children opportunities to deal with many problems, especially in the making process. When children tried to solve the problems, they were exposed to the engineering as the process of problem solving is the heart of the engineering practices (Park, Park, & Bates, 2018).

The use of loose parts facilitates children with various engineering processes. The vignettes showed various engineering processes. Emergent engineering is defined as children solving problems through multiple trial-errors because they might not have correct concepts yet (Park et al., 2018). For example, Arty solved the swayed mast problem by trial-error process. First, he used the thin styrofoam but soon realized that thicker styrofoam held the mast better. According to NGSS in Park, Park, and Bates (2018), there are three phases of engineering design practices which are 'defining and delimiting engineering problems', 'designing solutions to engineering problems', and 'optimizing the design solution'. Most of the children in the project were in the phase 1 and 2. The pre-service teachers did not have the opportunities to scaffold children into the third phase as they just had one day to do their loose-parts project. The teachers are the important and significance factor for the success of the third phase (Bagiati & Evangelou, 2015).

Furthermore, the children were also exposed to technology as technology and engineering are closely related. In the activities, simple technology tools are used to manipulate the materials to meet the design objectives. In this case, children had demonstrated the goal of technology stated in the National Science Education Standards – NSES (National Research Council, 1996) which are modifying to meet human needs.

The second theme: "problem solving" also gives a quite clear answer to the initial question: "how the use of loose-parts supports science, technology, engineering, arts, and mathematics in children's learning?" Based on the discussion, loose parts presented many problems to the children. To solve the problems, children need to observe carefully things, events, or processes. Observation is one of the science process skills. After careful observation, they might predict, do something, and infer their action. The problem-solving process relates closely to engineering and technology. At some point, they might use their mathematics skills as well. Therefore, we can conclude that loose-parts creates problems, thus loose-parts supports science, mathematics, engineering, and technology learning.

5 CONCLUSION

Loose-parts are potential media to support STEAM learning in children as the use of loose-parts generates freedom and various problems to be solved. A diverse range of loose-part materials allow children to examine the materials properties carefully. The use of loose parts ignites their observation skills. Besides, the children had a chance to play with the materials. The use of loose-parts assist mathematics learning. The FGD excerpts indicate that various mathematics skills demonstrated during the learning process where the children responded to the teachers' provocation or played the materials their way. Some of the evident mathematics skills incorporated in their learning process are measurement, patterns (algebra), geometry, and number operation.

Furthermore, the freedom of the material selection allowed the children to choose the most proper materials to meet their design objectives. The freedom of the product design gave the children an opportunity to communicate their authentic learning. They experience a meaningful arts education. Arts became their communication of learning. The use of loose parts allow creativity which serves as a main component in arts education.

At the same time, the freedom provides many problems to be solved. Different materials present different problems. Children were encouraged to observe, try, and then decide which kind of materials to be chosen. That decision was a result of the children's inference process. It can be concluded that the freedom supports arts education and science process skill development such as observation, inference, and communication. The freedom and the problems also support engineering and technology integration into children's learning.

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Teacher Knowledge in Early Childhood Gender Education

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ABSTRACT: The industrial development era 4.0, many threats lurk children in the form of bad influence through books, videos, or other media and become a challenge for parents and teachers. Gender education and the introduction of personal identity are important given early on. This study aims to determine the effect of teacher knowledge on the implementation of gender education in early childhood. This research uses quantitative survey research methods with a simple linear regression design for data analysis. The respondents were 34 early childhood education teachers. The results show the data with the conclusion that the calculated value> t table and p-value (sig) of 0.001 (<0.05) which means that there is a significant influence on teacher knowledge about early childhood gender education. Research suggests about how to improve gender education in early childhood education and create learning modules for early childhood teacher guidance.

Keywords: Early gender education, Teacher knowledge about gender education

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1 INTRODUCTION

Early childhood education can be a space to provide 'gender flexible pedagogy', a concept that combines ideas about staff modeling of alternative forms of masculinity and femininity, the value of mixed gender labor, and explicit gender teaching in the curriculum. Warin & Adriany, (2017)'s findings indicate that gender practices in ECE are rooted in the implicit gender beliefs of teachers who are influenced by greater socio-political discourse. Early childhood educators must develop explicit gender awareness before they can provide gender conscious pedagogy.

Lynch, (2015) shows that these teachers strengthen gender attitudes by encouraging children, especially boys, to play only with toys and in activities traditionally linked to their gender and suggest that further research examine gender games in kindergarten, and that kindergarten teachers can benefit from awareness of their unintentional teachings and in learning how it is better to encourage gender equality in play-based classroom activities.

Gender is a complex field, with various opinions on how gender is formed in individuals and their role in society. this study that the gender perception of early childhood educators does indeed influence children's play. The social and individual environment in it is important for children's development and understanding of gender roles. According to Chapman, (2016), it is important to design children's schedules and activities as well as how teachers facilitate and support children's participation.

Early childhood or preschool education teachers still have limited knowledge and experience about gender education (Muasya & Kazungu, 2018). The limited experience of educators in recognizing gender patterns and the accuracy of their attitudes and beliefs is one of the keys to why gender education has not been optimal so that it influences interaction with children (Filipović, 2018). Based on the background of these problems, it is very necessary for gender education for children. The teacher as someone who is trusted in educating children in schools is also obliged to provide and implement gender education that is appropriate for children with good knowledge about gender education. This study aims to look at the effect of teacher knowledge on the implementation of gender education in early childhood.

2 THEORITICAL STUDY

2.1 *Teacher Knowledge about Early Childhood Gender Education*

Educators have full responsibility in developing the abilities of their students or students with a neutral attitude without differentiating gender, religion, ethnicity, social class so that they are able to assist children in understanding relationships with friends or others (Fortunato & Iorio Dias, 2018). Early childhood teacher education becomes an obligation in conducting the same or similar care as the care done by their parents (Wu et al., 2015).

The wealth of teacher knowledge and skills possessed by early childhood teachers with higher education will have a very positive and effective influence on the future development of children (La Paro, Van Schagen, King, & Lippard, 2018). The teacher's knowledge framework includes three ways namely by "knowing why", "knowing how", and "knowing what" that aims to find out and incorporate in an effort to build deep understanding so that teacher knowledge can be optimal (Adoniou, 2015). Based on existing theories, teacher knowledge is the result of sensing obtained from the experience of teachers as educator who must provide and have the knowledge to be able to provide appropriate education for children.

Gender can cause children to obtain different social expectations and attitudes to learning for both sexes. The dimorphic treatment often done by boys and girls is often based on the assumption of biological differences. This can result in approaches to the care and education of children that are assigned to their gender categories rather than their individual needs. Wingrave, (2018) findings indicate that there is a belief among groups of educators that gender is innate or learned and that teachers do not play a role in gender education in children. This needs to be straightened out and training for teachers related to gender education in early childhood is needed.

2.2 *Early Childhood Gender Education*

The Gender Equality Law applies to women and men, and it is seen as an instrument to improve the situation of women in particular. Gender stereotypical perceptions in kindergartens and schools contribute to limiting the freedom of children to make their own educational choices according to their interests and strengths (Meland & Kaltvedt, 2019). Early childhood education has a goal that is to provide stimulus as an encouragement to develop all the potential of children who have faith and believe in God, knowledgeable, healthy, critical, capable, independent, and innovative (Suyadi, 2014).

Huggins, (2014) was able to show changes in children's behavior for 2 years by observing activities that the children themselves defined as toys that suited girls or boys and learned to adapt to them. The choice of activities and behaviors is done to match the expectations of other children. Data shows boys often play battles and superhero games and girls play scenarios around home life and fairy tales. The research also notes how young children are involved in heterosexual games, such as boyfriend / girlfriend scenarios, with children who carry out their gender identity and use fantasy to position and position themselves as they try various ways to be boys and become girls.

The preference of toys to be very gender, with toys and boys' resources concentrated on technology and action, and girls on caring and feminine stereotyping interests. All toys and resources are involved in 'gender': various gender discourses, and other discourses around aspects of social identity that are reflected in toys. It is important to pay close attention to children's toys in gender roles and the production of social identity (Francis, 2010). Intergroup developmental theory predicts that children develop fewer or weaker stereotypes about toys that have gender attributes. Color is the reason most often used for gender assignment of toys. Cherney & Dempsey, (2010) highlights the role of perception salience in the preferences and behavior of toy selection and its application to educational problems.

Gender type is the implementation of gender roles, starting from early childhood, but it will vary greatly at the level in which they become gender type. Gender stereotyping is a generalization of prejudices about male or female behavior through an understanding that all women are dependent and passive, while all men are independent and active, which begin to emerge at the age of children 2-3 years and will peak at the age of 5 years (Papalia & Duskin, 2015). One theory says that gender education is the process of finding the nature of life until a person has a better understanding his gender identity, both their role in society and gender stereotypes, so that there is no issue about gender-confusion.

Gender education is not only the obligation of teachers but also the overall needs of schools so that they are able to provide gender space to develop the potential of children who are adapted to their gender (Frödén, 2019). Gender education becomes a place in developing personalities that

might exchange roles so that it will be easier in a career in the next child's life (Zhukovskyi & Kostiuk, 2015). Gender education is very important to be implemented well in schools because all threats can occur anywhere. The following is a way to maintain personal safety related to the gender education in schools, which are as follows: to avoid all forms of violence both sexual, physical, emotional, and psychological, gender equality must be prioritized in academic and non-academic or extra-curricular activities, and against there is discrimination against gender both men and women (Vanner, 2019). Gender education in children aims to be more empathetic to other people who have the same or different gender, respect each other, be active in social activities, have critical thinking skills (Zhukovskyi & Kostiuk, 2015). The importance of gender education in children should motivate teachers and parents to be able to implement appropriate gender education to the children with sufficient knowledge.

3 METHODS

3.1 *Participant*

This study used a quantitative research method with survey research type because This study was used to determine the relationship and influence of the two variables with the source of the data obtained from the questionnaire. This study used a sample of 34 teachers aged 22-45 years in a cluster in Surabaya with educational backgrounds ranging from high school to master's degree. All respondents stated that they have known, and applied gender education sourced from their experiences, books, internet and others.

The results of filling out the questionnaire by respondents obtained 34 data, sourced from Early Childhood Education Teachers (PAUD) in a cluster in Surabaya that was chosen by a random system. These teachers aged around 22 to 45 years with a teaching experience of 1 to 7 years and all were female. Based on the results of the questionnaire in the private column, all of the respondents have known and implemented gender education in the learning process at school. As many as 20 teachers understand gender material from experiences either based on their personal experiences or others' experiences, while the rest understand the material from books, television and the internet. Teachers' understanding of gender education from various sources will be the basis in determining the extent to which gender education material is known by the teacher and the extent of its application to children.

Table 1. Respondent Data

No	Respondent Data	Number of Respondents
1	Age	
	22	2
	23	3
	24	4
	25	13
	26	6
	27	2
	28	1
	36	1
	37	1
	45	1
	Amount	34
3	Sex	
	Man	0
	Woman	34

	Amount	34
4	Last education	
	SMA	2
	Diploma	1
	Bachelor (S1)	30
	Master(S2)	1
	Amount	34
5	Sources of Information About Gender Education	
	5 Sources	2
	4Sources	3
	3 Sources	2
	2 Sources	7
	1 Sources	20
	Amount	34

3.2 *Instrument*

This study used 12 items in the same instrument, but only the variable of teacher's knowledge was more emphasized on the question of whether teachers know about gender education material for their students. The application variable was accentuated on existing gender education material, such as whether gender education has been carried out or how often gender education has been applied to children. The teacher will fill the questionnaire with questions that state knowledge-yes by choosing answers from not knowing, doubting, knowing, and knowing very well while in practice, the teacher can answer from the existing questionnaire by choosing one of the never, sometimes often and always.

The items in the instrument were made into a questionnaire filled out by the respondents by selecting one of the choices based on the knowledge they have and the application of gender education to the children they have done. Data analysis in this study used simple linear regression analysis which was calculated using SPSS 21. Normality and homogeneity tests were also performed as additional requirements because in analyzing data using simple linear regression the data must be normal and homogeneous. Normality test was used to minimize errors, whereas homogeneity of variance test was needed to ensure that differences were not caused by the differences in database.

Table 2. Gender Education Research Instruments

No.	**Aspects**	**Sub Aspects**
1	Gender roles in the environment (the desire, skills, behaviors, and attitudes)	1. The desires that are compatible with gender
		2. The attitudes of masculinity and femininity
		3. Hobby or desires according to gender
		4. The behavior that is gender-specific
2	Gender stereotypes	5. Work according to gender
		6. The choices of games or toys according to gender
		7. Idol who is admired corresponding to gender
3	Stages of the development of gender	8. Stability (no changes)
		9. Consistency (attributes used will not alter the gender
		10. Gender identity (understanding about gender)

4	Factors that influence gender development	11. Biological 12. Social

3.3 *Data Validity*

The existing instrument must be validated to the expert (lecturer) for validation related to the content. The results of the instrument validation were then tested on 12 teachers in Surabaya who had an age between 22-45 years. The following are the results of validity in this study:

Table 3. The Validity of Teacher Knowledge

Validity	**Corrected item-total correlation**	
Item1	.915**	Valid
Item2	.843**	Valid
Item3	.622*	Valid
Item4	.747**	Valid
Item5	.754**	Valid
Item6	.740**	Valid
Item7	.890**	Valid
Item8	.574	Valid
Item9	.804**	Valid
Item10	.747**	Valid
Item11	.890**	Valid
Item12	.924**	Valid
Total	1	

Based on the results of the validity calculation it is known that the r count for all items is greater than 0.3 so that it can be stated that the teacher's instrument knowledge of the variable is declared valid.

Table 4. Validity of The Opplication of Gender Education

Validity	**Corrected item-total correlation**	
Item1	.880**	Valid
Item2	.569	Valid
Item3	.500	Valid
Item4	.880**	Valid
Item5	.458	Valid
Item6	.722**	Valid
Item7	.601*	Valid
Item8	.751**	Valid
Item9	.880**	Valid
Item10	.726**	Valid
Item11	.591*	Valid
Item12	.690*	Valid

Total	1

Based on the results of the validity calculation it is known that the r count for all items is greater than 0.3 so that it can be stated that the teacher's instrument knowledge of the variable is declared valid.

3.4 *Reliability*

Following this the reliability was carried out for 12 teachers in Surabaya who had ages between 22 and 45 years. The following reliability results in this study:

Table 5. Reliability Statistics Teacher Khowledge

Cronbach's Alpha	N of Items
.941	12

Based on the results of the reliability calculation, it is known that the Cronbach's Alpha value is greater than 0.6, which is 0.941 so it can be stated that the teacher's variable knowledge variables are reliable.

Table 6. Reliability Statistics the Application of Gender Education

Cronbach's Alpha	N of Items
.894	12

Based on the results of the reliability calculation, it is known that the Cronbach's Alpha value is greater than 0.6, which is 0.894 so it can be stated that the teacher's variable knowledge variables are reliable.

The hypotheses in this study are as follows:

Ha: there is a significant influence on teachers' knowledge about early childhood gender education.

Ho: There is no significant effect on teacher knowledge about gender education in early childhood.

4 RESULT AND DISCUSSION

4.1 *Results*

The collected data then were examined the requirement tests which were normality and homogeneity test using SPSS 21 to determine the data were normally distributed and homogeneous. The result of the normality test can be seen from the following table:

Table 7. Tests of Normality

	Gender Education	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Skor	Knowledge	.193	34	.103	.921	34	.067
	Application	.098	34	.200*	.959	34	.228

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the normality test results table, it can be concluded that the probability or significance level in the column kolmogorov-smirnov and shapiro-wilk is more than <0.05 so it shows that the data obtained in this study are normal and normality tests have been met.

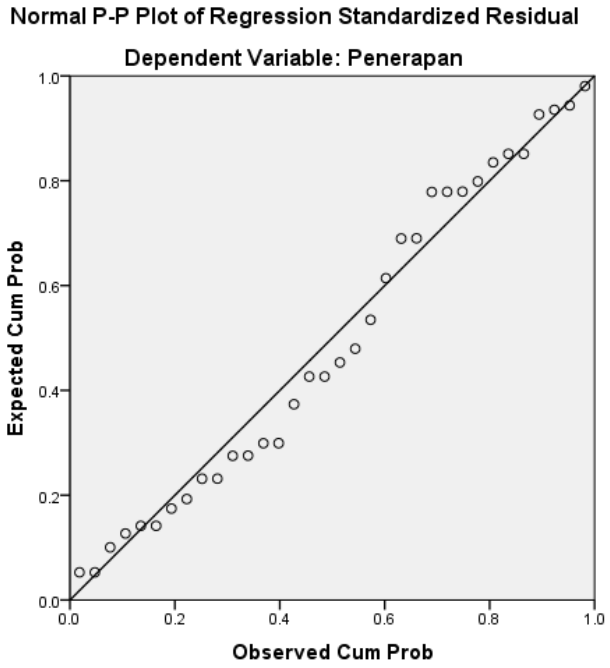

Figure 1. Plot of normality

In addition, the normality test can be seen from the normality plot. Guidelines for making decisions on the normality test using a plot that is by looking at the existing points, if the points are close to the line then declared normal distribution and vice versa if the points away from the line means the data is not normal (Ghozali, 2011). The homogeneity test is used to see whether the data is homogeneous or not.

Table 8. Test of homogeneity of variance

		Levene Statistic	DF1	DF2	Sig.
Score	Based on Mean	1.003	1	66	.320
	Based on Median	.326	1	66	.570
	Based on the median and with adjusted df	.326	1	58.551	.570
	Based on the trimmed mean	.903	1	66	.346

Based on the result table of the test of homogeneity of variance, it can be concluded that the probability value or significance level based on mean above 0.05 indicates that the data obtained in this study are homogeneous and homogeneity tests have been fulfilled. After obtaining the results of normality and homogeneity tests that have stated fulfilling the requirements, then the data were analyzed using SPSS 21 with a simple linear regression analysis.

The results of a simple linear regression analysis using SPSS 21 are presented in table 3 in the descriptive statistics.

Table 9. Descriptive Statistics

	Mean	Std. deviation	N
Implementation (y)	32.79	8731	34
Knowledge (x)	32.85	9835	34

The descriptive statistics table explains that the knowledge variable (x) which becomes the independent variable has an average of 32.79 with a standard deviation of 8.73 and the application variable (y) which becomes the dependent variable has an average of 32.85 with the standard 9.84 deviation.

Table 10. Correlations

		Application	Knowledge
Pearson Correlation	Application	1,000	.562
	Knowledge	.562	1,000
Sig. (One-tailed)	Application	,	.000
	Knowledge	.000	,
N	Application	34	34
	Knowledge	34	34

The correlation between knowledge and application variables can be seen in table 4. As stated on the table, the significance of the knowledge variable (x) with the implementation variable (y) gets a result of 0,000 which means less than 0.05. It can be concluded that the teacher's knowledge has significant correlation with the application of gender education in early childhood.

Table 11. Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	DF 1	DF 2	Sig. F Change	
1	.562a	.316	.295	7.331	.316	14 811	1	32	.001	1,539

The summary table presented can clarify the extent of the correlation between the two variables, namely the variable of knowledge and application. The level of correlation (R) between the two variables obtained a strong result that is 0.562 or 56.2%. Adjusted R square (r2) is a coefficient that showed a result of 0.316, which means that the teacher's knowledge as a variable x contributed 31.6% to the variable y, while the remaining 68.4% (100% -31.6%) was influenced by other factors. Std. Error of the estimate obtained a result of 7,331 which reflected the standard error of the assessment. The smaller of the standard error is produced, compared to the standard deviation of the dependent variable (dependent / y), the more appropriate the regression model is in predicting the dependent variable (y) (7,331 <8,731).

Table 12. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	795 906	1	795 906	14 811	.001[b]

	Residual	1719.653	32	53 739
	Total	2515.559	33	

From the ANOVA test, the result of the F ratio test was 14.811 and the p value (sig) was 0.001 (<0.05), which means the regression model can be used to predict the application of gender education for early childhood.

Table 13. Coefficients

Model		Coefficients Unstandardized		Standardized Coefficients	T	Sig.
		B	**Std. Error**	**beta**		
1	(Constant)	16 390	4,444		3.688	.001
	Knowledge	.499	.130	.562	3,848	.001

The coefficients table explains that there was one independent variable (x) included in the regression model. The parental knowledge variable has a statistical t-value (t_{count}) of 3.848 and t_{table} 32 was 1.69389 (N = 34-2 (degrees of freedom) = 32), so $t_{count} > t_{table}$ and p-value (sig.) equal to 0.001 (<0.05) which means that teacher knowledge has a significant influence on the application of gender education to early childhood. Here is the result of the regression equation obtained.

$$y = 16{,}390 + 0{,}499x \quad (1)$$

Beta coefficient of 0427 states that each additional 1 value on the application of gender education will increase of the value of the suitability 0,427 educational materials gender in the media, if the value of x = 1 then $\hat{y} = 34$.

$$y = 16{,}390 + 0{,}499\,(1) \quad (1)$$

4.2 *Discussion*

This study aims to determine the effect of teacher knowledge about the implementation of gender education in early childhood by using questionnaires that have been filled by 34 teachers. The results of this study are expected to be able to provide views to teachers and the community about the relationship or influence of gender education knowledge on the application of gender education to early childhood.

Gender education is an undoubtedly pivotal matter when the concept of gender which is naturally owned by human being conflicts with their sexes. LGBT (Lesbian, Gay, Bisexual, and Transgender) is an issue that needs more attention nowadays in which this phenomenon can make early childhood children as a target that can be recruited into LGBT people. This should be a precaution for teachers as educators who share responsibility for the survival of the nation through its successor generation. The formation of a person's attitude can be influenced by others such as family, teachers, peers and the community, as expected or in the opinion of others including in the education process (Azwar, 2010). The teacher becomes the most ideal space in giving a straight view related to gender education to children beside parents' obligation.

Education is a process of changing behavior and attitudes of a child in an effort to mature humans through the process of training, educating, and teaching (Nursalam, 2014). Educational process is expected to be able to provide an understanding of gender education that is appropriate for early childhood in accordance with the direction of the teacher as a source of teaching for children. The

process of providing and applying gender education is unlikely to run well when teachers do not have the proper understanding and knowledge to provide to early childhood.

The teachers who became respondents were aged 22 to 45 years. Age is very important in measuring parental knowledge and the extent of the application of gender education to early childhood. A person's age greatly influences the maturity of thinking and ability to capture information well so that it can increase one's knowledge (Awaji M, 2016). Maturity intervenes in a person's ability to obtain more diverse information and gives awareness in the importance of having the knowledge to prepare to implement good education for children including gender education.

Educational background of respondents ranging from high school to master's degree also greatly influences the process of implementing gender education for early childhood. Level of education has an influence in obtaining information, the higher a person's education, the more information will be obtained so that it is likely that the knowledge obtained will be more adequate (Solehudin, 2018). Parent or teacher mindset can be seen from the higher education they have because the higher the teacher's education will further complement and expand the mindset in educating children (Sulastri & Ahmad Tarmizi, 2017). The minimum requirement to become PAUD teachers in Indonesia is bachelor graduate so that they are expected to have good knowledge and be able to apply education, including appropriate gender education.

Correlation between two variables which showed a result of 0.316 figures the teacher's knowledge as a means to Contribute 31.6% of the variable x to the variable y is the application of gender education, while the remaining 68.4% (100%-31.6%) influenced by other factors. Relationship or correlation between teachers' knowledge and application of the calculation analysis of gender education was 0,000 roommates is less than 0:05, it can be concluded that the knowledge teachers have a significant relationship with the implementation of gender education in early childhood.

The correlation between education teacher knowledge with the application of a significant gender Showed 31.6% of teachers Affect the application of knowledge of gender education and the remaining 68.4% influenced by other factors oleg and will affect a person's behavior. The behavior will form more lasting or last a long time if it is based on good knowledge so that they can apply the information obtained based on the knowledge they have (Notoatmodjo, 2014).

The result of simple linear regression analysis was $t_{count} > t_{table}$ and p-value (sig.) of 0.001 (<0.05) which means that teacher knowledge has an influence on the application of gender education in early childhood because the observation hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was not rejected (accepted) so it can be concluded that there is a significant influence of teacher knowledge on the application of gender education in early childhood.

The results of these conclusions are in line with the theories of Salawati et al. which states that the application occurs through a process of practice that is influenced by internal factors derived from one's own experience and external factors that are influenced by the knowledge of other (Salawati, Herry, & Putra, 2014). The application of gender education which is influenced by the teacher's knowledge makes the learning process in line with the educational objectives, namely, to educate the nation's children as the next generation who must be protected from all forms of threats and doubts in their gender.

Gender education for early childhood will be able to make children easily accept the existence of his body as a whole and accept the developmental phases in a reasonable manner, help children know biological topics such as growth, puberty, and pregnancy, and the child's gender role will

understand and feel satisfied with their roles in society according to their sex or help young people ask questions about the roles of men and women in the community with the help of parents and teachers.

Once the importance of gender education in children makes giving gender education to children must also be very considered. The teacher as a source of information for children should have good knowledge about gender education and how to apply it to children. Very influential knowledge with absorption makes these two things must be in harmony and in line so that children have a good provision of gender education from teachers who have the knowledge and are able to apply it.

5 CONCLUSION

5.1 *Conclusion*

This study aims to determine the effect of parental knowledge on the application of gender education to early childhood. Teachers become a very influential source of information after parents for children because in addition to parents, teachers must also be able to provide appropriate education for children, one of which is gender education with good knowledge.

The correlation between the knowledge of education teachers and the application of gender is significant. Shows 31.6% of teachers influence the implementation of gender education and the remaining 68.4% is influenced by other factors and will influence one's behavior.

The results of simple linear regression analysis based on available data gain the conclusion that t count > t table and p-value (sig.) of 0.001 (<0.05) means that teacher knowledge has an influence on the application of gender education in early childhood because the observation hypothesis (Ho) was rejected and alternative hypothesis (Ha) was not rejected (accepted) so it can be concluded that there is a significant influence between teacher knowledge and the application of gender education in early childhood.

Significant influence on teacher knowledge about gender education that affects its application to children, makes a reference that teachers must enrich their knowledge in order to be able to apply gender education well to children. The application based on knowledge will last longer so the teacher must have good knowledge in order to be able to apply the right and good gender education to children. The teacher becomes the center in all forms of learning including learning about gender. The success of a child in his life to avoid all threats of bad influences including LGBT will be largely determined by how the teacher or parent provides gender education that is appropriate for the child. Applying appropriate gender education will be able to provide understanding to children to protect themselves from all the bad influences that exist.

5.2 *Suggestion*

Teachers as an educator should always be open to receive information and enrich their knowledge so that all information and knowledge they acquire can be applied appropriately. In addition, through this research, it is hoped that other researchers will be able to develop further this study with different perspectives so that the future of the children will always be well guaranteed through the many studies with various points of view.

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Teacher Knowledge in Early Childhood Gender Education

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ABSTRACT: The industrial development era 4.0, many threats lurk children in the form of bad influence through books, videos, or other media and become a challenge for parents and teachers. Gender education and the introduction of personal identity are important given early on. This study aims to determine the effect of teacher knowledge on the implementation of gender education in early childhood. This research uses quantitative survey research methods with a simple linear regression design for data analysis. The respondents were 34 early childhood education teachers. The results show the data with the conclusion that the calculated value> t table and p-value (sig) of 0.001 (<0.05) which means that there is a significant influence on teacher knowledge about early childhood gender education. Research suggests about how to improve gender education in early childhood education and create learning modules for early childhood teacher guidance.

Keywords: Early gender education, Teacher knowledge about gender education

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1 INTRODUCTION

Early childhood education can be a space to provide 'gender flexible pedagogy', a concept that combines ideas about staff modeling of alternative forms of masculinity and femininity, the value of mixed gender labor, and explicit gender teaching in the curriculum. Warin & Adriany, (2017)'s findings indicate that gender practices in ECE are rooted in the implicit gender beliefs of teachers who are influenced by greater socio-political discourse. Early childhood educators must develop explicit gender awareness before they can provide gender conscious pedagogy.

Lynch, (2015) shows that these teachers strengthen gender attitudes by encouraging children, especially boys, to play only with toys and in activities traditionally linked to their gender and suggest that further research examine gender games in kindergarten, and that kindergarten teachers can benefit from awareness of their unintentional teachings and in learning how it is better to encourage gender equality in play-based classroom activities.

Gender is a complex field, with various opinions on how gender is formed in individuals and their role in society. this study that the gender perception of early childhood educators does indeed influence children's play. The social and individual environment in it is important for children's development and understanding of gender roles. According to Chapman, (2016), it is important to design children's schedules and activities as well as how teachers facilitate and support children's participation.

Early childhood or preschool education teachers still have limited knowledge and experience about gender education (Muasya & Kazungu, 2018). The limited experience of educators in recognizing gender patterns and the accuracy of their attitudes and beliefs is one of the keys to why gender education has not been optimal so that it influences interaction with children (Filipović, 2018). Based on the background of these problems, it is very necessary for gender education for children. The teacher as someone who is trusted in educating children in schools is also obliged to provide and implement gender education that is appropriate for children with good knowledge about gender education. This study aims to look at the effect of teacher knowledge on the implementation of gender education in early childhood.

2 THEORITICAL STUDY

2.1 *Teacher Knowledge about Early Childhood Gender Education*

Educators have full responsibility in developing the abilities of their students or students with a neutral attitude without differentiating gender, religion, ethnicity, social class so that they are able to assist children in understanding relationships with friends or others (Fortunato & Iorio Dias, 2018). Early childhood teacher education becomes an obligation in conducting the same or similar care as the care done by their parents (Wu et al., 2015).

The wealth of teacher knowledge and skills possessed by early childhood teachers with higher education will have a very positive and effective influence on the future development of children (La Paro, Van Schagen, King, & Lippard, 2018). The teacher's knowledge framework includes three ways namely by "knowing why", "knowing how", and "knowing what" that aims to find out and incorporate in an effort to build deep understanding so that teacher knowledge can be optimal (Adoniou, 2015). Based on existing theories, teacher knowledge is the result of sensing obtained from the experience of teachers as educator who must provide and have the knowledge to be able to provide appropriate education for children.

Gender can cause children to obtain different social expectations and attitudes to learning for both sexes. The dimorphic treatment often done by boys and girls is often based on the assumption of biological differences. This can result in approaches to the care and education of children that are assigned to their gender categories rather than their individual needs. Wingrave, (2018) findings indicate that there is a belief among groups of educators that gender is innate or learned and that teachers do not play a role in gender education in children. This needs to be straightened out and training for teachers related to gender education in early childhood is needed.

2.2 *Early Childhood Gender Education*

The Gender Equality Law applies to women and men, and it is seen as an instrument to improve the situation of women in particular. Gender stereotypical perceptions in kindergartens and schools contribute to limiting the freedom of children to make their own educational choices according to their interests and strengths (Meland & Kaltvedt, 2019). Early childhood education has a goal that is to provide stimulus as an encouragement to develop all the potential of children who have faith and believe in God, knowledgeable, healthy, critical, capable, independent, and innovative (Suyadi, 2014).

Huggins, (2014) was able to show changes in children's behavior for 2 years by observing activities that the children themselves defined as toys that suited girls or boys and learned to adapt to them. The choice of activities and behaviors is done to match the expectations of other children. Data shows boys often play battles and superhero games and girls play scenarios around home life and fairy tales. The research also notes how young children are involved in heterosexual games, such as boyfriend / girlfriend scenarios, with children who carry out their gender identity and use fantasy to position and position themselves as they try various ways to be boys and become girls.

The preference of toys to be very gender, with toys and boys' resources concentrated on technology and action, and girls on caring and feminine stereotyping interests. All toys and resources are involved in 'gender': various gender discourses, and other discourses around aspects of social identity that are reflected in toys. It is important to pay close attention to children's toys in gender roles and the production of social identity (Francis, 2010). Intergroup developmental theory predicts that children develop fewer or weaker stereotypes about toys that have gender attributes. Color is the reason most often used for gender assignment of toys. Cherney & Dempsey, (2010) highlights the role of perception salience in the preferences and behavior of toy selection and its application to educational problems.

Gender type is the implementation of gender roles, starting from early childhood, but it will vary greatly at the level in which they become gender type. Gender stereotyping is a generalization of prejudices about male or female behavior through an understanding that all women are dependent and passive, while all men are independent and active, which begin to emerge at the age of children 2-3 years and will peak at the age of 5 years (Papalia & Duskin, 2015). One theory says that gender education is the process of finding the nature of life until a person has a better understanding his gender identity, both their role in society and gender stereotypes, so that there is no issue about gender-confusion.

Gender education is not only the obligation of teachers but also the overall needs of schools so that they are able to provide gender space to develop the potential of children who are adapted to their gender (Frödén, 2019). Gender education becomes a place in developing personalities that

might exchange roles so that it will be easier in a career in the next child's life (Zhukovskyi & Kostiuk, 2015). Gender education is very important to be implemented well in schools because all threats can occur anywhere. The following is a way to maintain personal safety related to the gender education in schools, which are as follows: to avoid all forms of violence both sexual, physical, emotional, and psychological, gender equality must be prioritized in academic and non-academic or extra-curricular activities, and against there is discrimination against gender both men and women (Vanner, 2019). Gender education in children aims to be more empathetic to other people who have the same or different gender, respect each other, be active in social activities, have critical thinking skills (Zhukovskyi & Kostiuk, 2015). The importance of gender education in children should motivate teachers and parents to be able to implement appropriate gender education to the children with sufficient knowledge.

3 METHODS

3.1 *Participant*

This study used a quantitative research method with survey research type because This study was used to determine the relationship and influence of the two variables with the source of the data obtained from the questionnaire. This study used a sample of 34 teachers aged 22-45 years in a cluster in Surabaya with educational backgrounds ranging from high school to master's degree. All respondents stated that they have known, and applied gender education sourced from their experiences, books, internet and others.

The results of filling out the questionnaire by respondents obtained 34 data, sourced from Early Childhood Education Teachers (PAUD) in a cluster in Surabaya that was chosen by a random system. These teachers aged around 22 to 45 years with a teaching experience of 1 to 7 years and all were female. Based on the results of the questionnaire in the private column, all of the respondents have known and implemented gender education in the learning process at school. As many as 20 teachers understand gender material from experiences either based on their personal experiences or others' experiences, while the rest understand the material from books, television and the internet. Teachers' understanding of gender education from various sources will be the basis in determining the extent to which gender education material is known by the teacher and the extent of its application to children.

Table 1. Respondent Data

No	Respondent Data	Number of Respondents
1	Age	
	22	2
	23	3
	24	4
	25	13
	26	6
	27	2
	28	1
	36	1
	37	1
	45	1
	Amount	34
3	Sex	
	Man	0
	Woman	34

	Amount	34
4	Last education	
	SMA	2
	Diploma	1
	Bachelor (S1)	30
	Master(S2)	1
	Amount	34
5	Sources of Information About Gender Education	
	5 Sources	2
	4Sources	3
	3 Sources	2
	2 Sources	7
	1 Sources	20
	Amount	34

3.2 *Instrument*

This study used 12 items in the same instrument, but only the variable of teacher's knowledge was more emphasized on the question of whether teachers know about gender education material for their students. The application variable was accentuated on existing gender education material, such as whether gender education has been carried out or how often gender education has been applied to children. The teacher will fill the questionnaire with questions that state knowledge-yes by choosing answers from not knowing, doubting, knowing, and knowing very well while in practice, the teacher can answer from the existing questionnaire by choosing one of the never, sometimes often and always.

The items in the instrument were made into a questionnaire filled out by the respondents by selecting one of the choices based on the knowledge they have and the application of gender education to the children they have done. Data analysis in this study used simple linear regression analysis which was calculated using SPSS 21. Normality and homogeneity tests were also performed as additional requirements because in analyzing data using simple linear regression the data must be normal and homogeneous. Normality test was used to minimize errors, whereas homogeneity of variance test was needed to ensure that differences were not caused by the differences in database.

Table 2. Gender Education Research Instruments

No.	**Aspects**	**Sub Aspects**
1	Gender roles in the environment (the desire, skills, behaviors, and attitudes)	1. The desires that are compatible with gender
		2. The attitudes of masculinity and femininity
		3. Hobby or desires according to gender
		4. The behavior that is gender-specific
2	Gender stereotypes	5. Work according to gender
		6. The choices of games or toys according to gender
		7. Idol who is admired corresponding to gender
3	Stages of the development of gender	8. Stability (no changes)
		9. Consistency (attributes used will not alter the gender
		10. Gender identity (understanding about gender)

4	Factors that influence gender development	11. Biological 12. Social

3.3 *Data Validity*

The existing instrument must be validated to the expert (lecturer) for validation related to the content. The results of the instrument validation were then tested on 12 teachers in Surabaya who had an age between 22-45 years. The following are the results of validity in this study:

Table 3. The Validity of Teacher Knowledge

Validity	**Corrected item-total correlation**	
Item1	.915**	Valid
Item2	.843**	Valid
Item3	.622*	Valid
Item4	.747**	Valid
Item5	.754**	Valid
Item6	.740**	Valid
Item7	.890**	Valid
Item8	.574	Valid
Item9	.804**	Valid
Item10	.747**	Valid
Item11	.890**	Valid
Item12	.924**	Valid
Total	1	

Based on the results of the validity calculation it is known that the r count for all items is greater than 0.3 so that it can be stated that the teacher's instrument knowledge of the variable is declared valid.

Table 4. Validity of The Opplication of Gender Education

Validity	**Corrected item-total correlation**	
Item1	.880**	Valid
Item2	.569	Valid
Item3	.500	Valid
Item4	.880**	Valid
Item5	.458	Valid
Item6	.722**	Valid
Item7	.601*	Valid
Item8	.751**	Valid
Item9	.880**	Valid
Item10	.726**	Valid
Item11	.591*	Valid
Item12	.690*	Valid

Total	1

Based on the results of the validity calculation it is known that the r count for all items is greater than 0.3 so that it can be stated that the teacher's instrument knowledge of the variable is declared valid.

3.4 *Reliability*

Following this the reliability was carried out for 12 teachers in Surabaya who had ages between 22 and 45 years. The following reliability results in this study:

Table 5. Reliability Statistics Teacher Khowledge

Cronbach's Alpha	N of Items
.941	12

Based on the results of the reliability calculation, it is known that the Cronbach's Alpha value is greater than 0.6, which is 0.941 so it can be stated that the teacher's variable knowledge variables are reliable.

Table 6. Reliability Statistics the Application of Gender Education

Cronbach's Alpha	N of Items
.894	12

Based on the results of the reliability calculation, it is known that the Cronbach's Alpha value is greater than 0.6, which is 0.894 so it can be stated that the teacher's variable knowledge variables are reliable.

The hypotheses in this study are as follows:

Ha: there is a significant influence on teachers' knowledge about early childhood gender education.

Ho: There is no significant effect on teacher knowledge about gender education in early childhood.

4 RESULT AND DISCUSSION

4.1 *Results*

The collected data then were examined the requirement tests which were normality and homogeneity test using SPSS 21 to determine the data were normally distributed and homogeneous. The result of the normality test can be seen from the following table:

Table 7. Tests of Normality

	Gender Education	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Skor	Knowledge	.193	34	.103	.921	34	.067
	Application	.098	34	.200*	.959	34	.228

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the normality test results table, it can be concluded that the probability or significance level in the column kolmogorov-smirnov and shapiro-wilk is more than <0.05 so it shows that the data obtained in this study are normal and normality tests have been met.

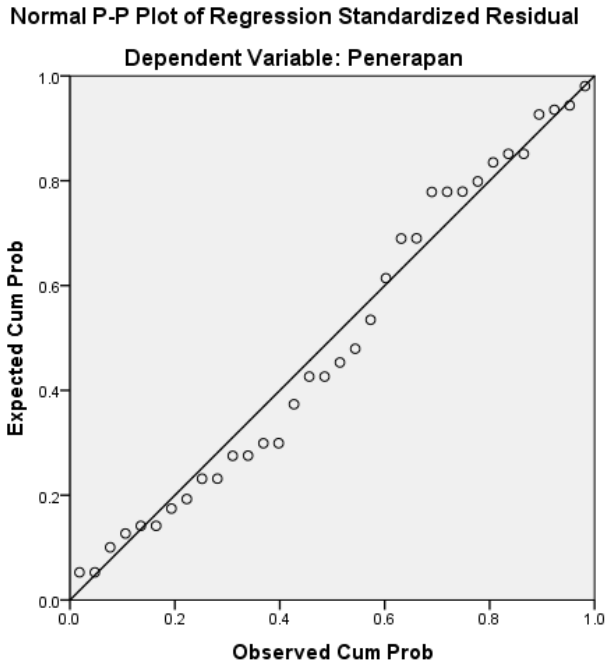

Figure 1. Plot of normality

In addition, the normality test can be seen from the normality plot. Guidelines for making decisions on the normality test using a plot that is by looking at the existing points, if the points are close to the line then declared normal distribution and vice versa if the points away from the line means the data is not normal (Ghozali, 2011). The homogeneity test is used to see whether the data is homogeneous or not.

Table 8. Test of homogeneity of variance

		Levene Statistic	DF1	DF2	Sig.
Score	Based on Mean	1.003	1	66	.320
	Based on Median	.326	1	66	.570
	Based on the median and with adjusted df	.326	1	58.551	.570
	Based on the trimmed mean	.903	1	66	.346

Based on the result table of the test of homogeneity of variance, it can be concluded that the probability value or significance level based on mean above 0.05 indicates that the data obtained in this study are homogeneous and homogeneity tests have been fulfilled. After obtaining the results of normality and homogeneity tests that have stated fulfilling the requirements, then the data were analyzed using SPSS 21 with a simple linear regression analysis.

The results of a simple linear regression analysis using SPSS 21 are presented in table 3 in the descriptive statistics.

Table 9. Descriptive Statistics

	Mean	Std. deviation	N
Implementation (y)	32.79	8731	34
Knowledge (x)	32.85	9835	34

The descriptive statistics table explains that the knowledge variable (x) which becomes the independent variable has an average of 32.79 with a standard deviation of 8.73 and the application variable (y) which becomes the dependent variable has an average of 32.85 with the standard 9.84 deviation.

Table 10. Correlations

		Application	Knowledge
Pearson Correlation	Application	1,000	.562
	Knowledge	.562	1,000
Sig. (One-tailed)	Application	,	.000
	Knowledge	.000	,
N	Application	34	34
	Knowledge	34	34

The correlation between knowledge and application variables can be seen in table 4. As stated on the table, the significance of the knowledge variable (x) with the implementation variable (y) gets a result of 0,000 which means less than 0.05. It can be concluded that the teacher's knowledge has significant correlation with the application of gender education in early childhood.

Table 11. Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	DF 1	DF 2	Sig. F Change	
1	.562a	.316	.295	7.331	.316	14 811	1	32	.001	1,539

The summary table presented can clarify the extent of the correlation between the two variables, namely the variable of knowledge and application. The level of correlation (R) between the two variables obtained a strong result that is 0.562 or 56.2%. Adjusted R square (r2) is a coefficient that showed a result of 0.316, which means that the teacher's knowledge as a variable x contributed 31.6% to the variable y, while the remaining 68.4% (100% -31.6%) was influenced by other factors. Std. Error of the estimate obtained a result of 7,331 which reflected the standard error of the assessment. The smaller of the standard error is produced, compared to the standard deviation of the dependent variable (dependent / y), the more appropriate the regression model is in predicting the dependent variable (y) (7,331 <8,731).

Table 12. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	795 906	1	795 906	14 811	.001[b]

	Residual	1719.653	32	53 739
	Total	2515.559	33	

From the ANOVA test, the result of the F ratio test was 14.811 and the p value (sig) was 0.001 (<0.05), which means the regression model can be used to predict the application of gender education for early childhood.

Table 13. Coefficients

Model		Coefficients Unstandardized		Standardized Coefficients	T	Sig.
		B	**Std. Error**	**beta**		
1	(Constant)	16 390	4,444		3.688	.001
	Knowledge	.499	.130	.562	3,848	.001

The coefficients table explains that there was one independent variable (x) included in the regression model. The parental knowledge variable has a statistical t-value (t_{count}) of 3.848 and t_{table} 32 was 1.69389 (N = 34-2 (degrees of freedom) = 32), so $t_{count} > t_{table}$ and p-value (sig.) equal to 0.001 (<0.05) which means that teacher knowledge has a significant influence on the application of gender education to early childhood. Here is the result of the regression equation obtained.

$$y = 16{,}390 + 0{,}499x \quad (1)$$

Beta coefficient of 0427 states that each additional 1 value on the application of gender education will increase of the value of the suitability 0,427 educational materials gender in the media, if the value of x = 1 then $\hat{y} = 34$.

$$y = 16{,}390 + 0{,}499\,(1) \quad (1)$$

4.2 *Discussion*

This study aims to determine the effect of teacher knowledge about the implementation of gender education in early childhood by using questionnaires that have been filled by 34 teachers. The results of this study are expected to be able to provide views to teachers and the community about the relationship or influence of gender education knowledge on the application of gender education to early childhood.

Gender education is an undoubtedly pivotal matter when the concept of gender which is naturally owned by human being conflicts with their sexes. LGBT (Lesbian, Gay, Bisexual, and Transgender) is an issue that needs more attention nowadays in which this phenomenon can make early childhood children as a target that can be recruited into LGBT people. This should be a precaution for teachers as educators who share responsibility for the survival of the nation through its successor generation. The formation of a person's attitude can be influenced by others such as family, teachers, peers and the community, as expected or in the opinion of others including in the education process (Azwar, 2010). The teacher becomes the most ideal space in giving a straight view related to gender education to children beside parents' obligation.

Education is a process of changing behavior and attitudes of a child in an effort to mature humans through the process of training, educating, and teaching (Nursalam, 2014). Educational process is expected to be able to provide an understanding of gender education that is appropriate for early childhood in accordance with the direction of the teacher as a source of teaching for children. The

process of providing and applying gender education is unlikely to run well when teachers do not have the proper understanding and knowledge to provide to early childhood.

The teachers who became respondents were aged 22 to 45 years. Age is very important in measuring parental knowledge and the extent of the application of gender education to early childhood. A person's age greatly influences the maturity of thinking and ability to capture information well so that it can increase one's knowledge (Awaji M, 2016). Maturity intervenes in a person's ability to obtain more diverse information and gives awareness in the importance of having the knowledge to prepare to implement good education for children including gender education.

Educational background of respondents ranging from high school to master's degree also greatly influences the process of implementing gender education for early childhood. Level of education has an influence in obtaining information, the higher a person's education, the more information will be obtained so that it is likely that the knowledge obtained will be more adequate (Solehudin, 2018). Parent or teacher mindset can be seen from the higher education they have because the higher the teacher's education will further complement and expand the mindset in educating children (Sulastri & Ahmad Tarmizi, 2017). The minimum requirement to become PAUD teachers in Indonesia is bachelor graduate so that they are expected to have good knowledge and be able to apply education, including appropriate gender education.

Correlation between two variables which showed a result of 0.316 figures the teacher's knowledge as a means to Contribute 31.6% of the variable x to the variable y is the application of gender education, while the remaining 68.4% (100%-31.6%) influenced by other factors. Relationship or correlation between teachers' knowledge and application of the calculation analysis of gender education was 0,000 roommates is less than 0:05, it can be concluded that the knowledge teachers have a significant relationship with the implementation of gender education in early childhood.

The correlation between education teacher knowledge with the application of a significant gender Showed 31.6% of teachers Affect the application of knowledge of gender education and the remaining 68.4% influenced by other factors oleg and will affect a person's behavior. The behavior will form more lasting or last a long time if it is based on good knowledge so that they can apply the information obtained based on the knowledge they have (Notoatmodjo, 2014).

The result of simple linear regression analysis was $t_{count} > t_{table}$ and p-value (sig.) of 0.001 (<0.05) which means that teacher knowledge has an influence on the application of gender education in early childhood because the observation hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was not rejected (accepted) so it can be concluded that there is a significant influence of teacher knowledge on the application of gender education in early childhood.

The results of these conclusions are in line with the theories of Salawati et al. which states that the application occurs through a process of practice that is influenced by internal factors derived from one's own experience and external factors that are influenced by the knowledge of other (Salawati, Herry, & Putra, 2014). The application of gender education which is influenced by the teacher's knowledge makes the learning process in line with the educational objectives, namely, to educate the nation's children as the next generation who must be protected from all forms of threats and doubts in their gender.

Gender education for early childhood will be able to make children easily accept the existence of his body as a whole and accept the developmental phases in a reasonable manner, help children know biological topics such as growth, puberty, and pregnancy, and the child's gender role will

understand and feel satisfied with their roles in society according to their sex or help young people ask questions about the roles of men and women in the community with the help of parents and teachers.

Once the importance of gender education in children makes giving gender education to children must also be very considered. The teacher as a source of information for children should have good knowledge about gender education and how to apply it to children. Very influential knowledge with absorption makes these two things must be in harmony and in line so that children have a good provision of gender education from teachers who have the knowledge and are able to apply it.

5 CONCLUSION

5.1 *Conclusion*

This study aims to determine the effect of parental knowledge on the application of gender education to early childhood. Teachers become a very influential source of information after parents for children because in addition to parents, teachers must also be able to provide appropriate education for children, one of which is gender education with good knowledge.

The correlation between the knowledge of education teachers and the application of gender is significant. Shows 31.6% of teachers influence the implementation of gender education and the remaining 68.4% is influenced by other factors and will influence one's behavior.

The results of simple linear regression analysis based on available data gain the conclusion that t count > t table and p-value (sig.) of 0.001 (<0.05) means that teacher knowledge has an influence on the application of gender education in early childhood because the observation hypothesis (Ho) was rejected and alternative hypothesis (Ha) was not rejected (accepted) so it can be concluded that there is a significant influence between teacher knowledge and the application of gender education in early childhood.

Significant influence on teacher knowledge about gender education that affects its application to children, makes a reference that teachers must enrich their knowledge in order to be able to apply gender education well to children. The application based on knowledge will last longer so the teacher must have good knowledge in order to be able to apply the right and good gender education to children. The teacher becomes the center in all forms of learning including learning about gender. The success of a child in his life to avoid all threats of bad influences including LGBT will be largely determined by how the teacher or parent provides gender education that is appropriate for the child. Applying appropriate gender education will be able to provide understanding to children to protect themselves from all the bad influences that exist.

5.2 *Suggestion*

Teachers as an educator should always be open to receive information and enrich their knowledge so that all information and knowledge they acquire can be applied appropriately. In addition, through this research, it is hoped that other researchers will be able to develop further this study with different perspectives so that the future of the children will always be well guaranteed through the many studies with various points of view.

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Health Promotion Program (JUMSIH); To Enhance Children's Clean and Healthy Living Knowledge

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ABSTRACT: Knowledge about clean and healthy life in children needs to be given early to shape behavior in everyday life. Knowledge about healthy living can be provided at school through various learning programs. This study aims to find the effectiveness of health promotion programs (JUMSIH) to increase children's knowledge about clean and healthy living. The research method is a pre-experimental one-shot case study design. The respondents of this study were 68 students aged 7-8 years. The results showed that the JUMSIH program can help children have knowledge about healthy living. Based on data analysis, n = 15 generally obtained scores above 2.6. It was concluded that healthy living skills are often performed by students such as hand washing, bathing, and toothbrush behavior which are basic skills for children to be able to live healthy lives. Suggestions for further research which is the development of various programs to increase awareness of clean and healthy living from an early age.

Keywords: Clean and healthy life Knowledge, Early Childhood, Health Promotion Program (JUMSIH)

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1 INTRODUCTION

Education and care services have an obligation to ensure that everyone is provided with a healthy and safe environment for playing and working. All educators / staff are given full information about their responsibilities to implement and comply with health service policies and procedures. All children have the right to develop their full potential in an environment that provides their health, safety and well-being. Effective hygiene strategies and practices help services to protect everyone from and minimize the potential risk of communicable diseases. Experiences that promote awareness of basic hygiene help children become competent and independent and develop valuable life skills (Considerations & Framework, 2010).

To be clean and healthy, ECE needs to identify what makes their services safe and sound. Educators must think about the environmental safety provided by the service, along with group and individual health and the wider environment outside (children, staff, parents, caregivers, and families) All ECEs must respond to health or safety problems or problems when they arise. Children's educational institutions can improve and protect health and safety by identifying, and placing protective measures around, problems that might or might cause problems before they occur (Midcentraldhb, 2014).

Several studies were conducted to look at intervention programs in early childhood regarding hygiene and health. Conti, Heckman, & Pinto, (2016) research discusses the long-term impact on health and healthy behavior of two early childhood interventions (1) Perry's Preschool Project (PPP) and (2) Carolina Abecedarian Project (ABC). These results indicate the potential for early life interventions to improve health. Duxbury, Bradshaw, Khamanga, Tandlich, & Srinivas, (2019) conducts research to increase individual environmental health awareness through computer-based training; education poster; interactive board game; and the take-out information leaflet is used for student-centered health improvement accumulation.

Most health behaviors developed during child health promotion must begin early. Kindergarten has proven ideal for such interventions. Interventions and materials were developed using the Bartholomew Intervention Mapping approach considering Bandura's social-cognitive theory and Bronfenbrenner's ecological framework for human development. The results from the Kobel et al., (2017) study provide a better understanding of health behavior in early childhood and to identify strategies for effective health promotion.

In the process of internalizing awareness to maintain personal and environmental health, there needs to be an effort to get used to maintaining health. Habitual activities safeguarding health will emerge when knowledge about clean and healthy life is already possessed by individuals and the community. So, with the knowledge possessed, it is expected that individuals and the community will gradually free up Clean and Healthy Behavior. Clean and Healthy Life Behavior is a reflection of family life patterns that always pay attention and maintain the health of all family members (Proverawati, 2012). Every family member and community consciously behaves in a way that reflects a clean and healthy life so that they can help themselves in their activities (Julianti, Nasirun, & Wembrayarli, 2018). Therefore, real efforts from various parties are needed for the realization of clean and healthy living habits that are entrenched in all elements, including the family, school and community environment. covering the family, school and community environment.

Additional factors can influence the success of health promotion interventions in children. Adverse socioeconomic status can be associated with family tensions and emotional problems in

children, which can lead to unhealthy habits. Consequently, underserved children tend to be very worried about high disease rates. Furthermore, children from low socioeconomic status are generally less affordable through lifestyle interventions, and socioeconomic status can influence the efficacy of health improvement programs. Nevertheless, some intervention studies target both lower income and richer populations to examine the feasibility of reducing or eliminating disparity.

Schools become an important place in instilling clean and healthy behavior from an early age. Healthy behavior is associated with efforts to preserve, maintain and improve their health. For example, This behavior can be improved through the role playing method of children who can practice healthy behavior directly, so that it will impress deeply for children (WIjayanti, 2017). Based on the importance of knowledge in early childhood to maintain hygiene and health, this study aims to find the effectiveness of health promotion programs (JUMSIH) to improve children's knowledge about clean and healthy living.

2 THEORITICAL STUDY

2.1 *Health Promotion Program (JUMSIH)*

Humans as whole beings consist of physical and spiritual elements. In carrying out daily activities, humans must be healthy, physically healthy and spiritually healthy. Spiritual health alone is not enough, and vice versa. Therefore, human health is needed in life. Humans should be grateful for the healthy favors that God has given. With health, human productivity can increase along with the physical strength it has. With health, humans can work and do activities to support their lives. Maintaining health is an individual task and a joint task. Health is an individual duty if health is related to personal health. In addition, health will be a joint task of all members of the community when it relates to environmental health. Therefore, each person, family member, community and all parties need to take care of their health, both personal health and environmental health (Proverawati, 2012).

Historically, health education in schools has been discussed in class using a topic approach (i.e. physical activity, healthy eating and mental health) while HPS offers a more holistic 'whole school' approach that complements the class curriculum. For example, teaching and involving students in gardening schools, building inclusive school food programs or incorporating physical activity into the classroom curriculum (Mcisaac, Sim, Penney, & Kirk, 2012). This approach shifts the focus from individual student behavior to building a school environment that improves. As a result of shifting in emphasis, HPS requires new ways of thinking about health and the role of schools (WHO, 2016)

Teachers are usually asked to provide data on early childhood education experiences in the year before starting school, as well as five important domains of child development upon entering school: physical health and well-being, social competence, emotional maturity, language and cognitive skills, and communication skills and general knowledge. Goldfeld et al., (2016)’s research results show that engagement with preschool programs in Australia can present a reasonable, fair and modifiable approach to improve children's health knowledge.

The school-promoting health aims to make schools a healthy place through a holistic approach that promotes a 'school ethos' that supports and emphasizes physical, social, and emotional improvements in welfare and educational outcomes. The development of a healthy child in turn is

associated with better health outcomes later in life (Mikkonen, J., Raphael, 2010). Schools offer the ideal set of health promotion interventions because most children spend a large part of their day there. Many school-based health promotion interventions have traditionally focused on changing individual behavior.

The School of Health Promotion (school-promoting health, also known as the Coordinated School of Health or Comprehensive School of Health) is a multicomponent intervention that emphasizes improving educational and physical, social, and emotional outcomes. Internationally, school-promoting health has been found to have a small, but positive effect on health behavior and several aspects of social welfare (Langford, R., Bonell, C.P., Jones, 2014). However, several studies have shown the effectiveness of school-promoting health in improving children's health behaviors (Fung, C., Kuhle, S., Lu, C., 2012).

This framework was adapted from recommendations by the World Health Organization and focused on health coaching and learning, involving all school partners (staff, students, parents, and the community), providing an environment that supports health, and implementing healthy policies and practices (WHO, 2016). School-promoting health adaptation is an important feature because it ensures flexibility for a variety of school contexts across the country (Keshavarz, N., Nutbeam, D., Rowling, L., Khavarpour, 2010; Veugelers & Schwartz, 2010).

School ethos reflects a variety of physical and psychosocial structures that can shape the school environment and, in changing, affect the health and well-being of students. Although school ethos is understood as an important component of school-promoting health (Samdal, O., Rowling, 2011). The school-promoting health initiative is based on the needs and assets of each school community. The school board adopted the school-promoting health, setting the stage for natural population health experiments (Hawe, P., Potvin, 2009).

The school has a mandate to provide education. This may include health education delivered through fields of study, such as science, or through special health courses and physical education. Students can learn effectively and can demonstrate learning facts obtained. However, encouragement for students to change their behavior requires a more comprehensive approach that involves parents, the community and stakeholders, and includes supporting policies, programs and environments.

This article provides a review of school-promoting health specifically for the promotion of healthy eating and active living. It further provides some general understanding of the wider implementation and benefits of school-promoting health for students and schools, as well as suggestions for future research to increase the evidence base for public health benefits from school-promoting health (Veugelers & Schwartz, 2010). Diversity within the school environment can play a relevant role in the successful implementation of school and policy-based interventions. Schools vary greatly in terms of content, community involvement, financial support, and delivery of interventions, which can influence the efficacy of childhood education programs. In addition, the characteristics of teachers may be important considering that they are one of the pillars in the development of children and play an important role for the successful implementation of school-based health promotion programs (Fernandez-Jimenez, Al-Kazaz, Jaslow, Carvajal, & Fuster, 2018).

Through education, school may play a major role in promoting long-lasting healthy habits in children, because these people spend most of their day there. Evidence shows that when healthy habits are adopted early in life, they are more likely to be maintained in adulthood; therefore, school-

based interventions are considered a promising approach to shape healthy behavior from an early age.

In addition, this intervention can benefit executive functioning and achievement of public schools in children. Many school-based interventions studies have been carried out in preschool settings; However, little has been tested in randomized trials. Most studies are focused primarily on preventing weight gain by only discussing 1 lifestyle component, such as diet or physical activity, with small interventions as a whole effect size. Similar problems and overall modest effect sizes have been reported in a meta-analysis conducted in older children.

2.2 *Children's Clean and Healthy Living*

Clean and healthy living behavior influenced by many factors such as habits at home, community environment, and in the school environment. There needs to be a continuous habituation effort so that clean and healthy living behavior in children can be done consciously without the need to be repressive to sensitize the community, such as fines when littering and so on. The habit that is done every day has not been able to increase children's awareness (Julianti et al., 2018). To raise awareness, efforts should also be made to provide knowledge about clean and healthy living. Habituation is one of the ways that can be carried out to carry out clean and healthy living behaviors.

The habit of maintaining personal hygiene can be done with activities such as washing hands before eating, brushing teeth, cleansing after urinating, bathing and so on. The habit of maintaining environmental cleanliness can be done through activities such as throwing trash in its place, limiting the use of plastic, using clean water, and so on. The habit of clean life behavior in children, especially in early childhood can be assisted with visual aids such as pictures and infrastructure. Props in the form of pictures such as sticking pictures of how to wash hands properly and properly in the place of washing hands, sticking pictures throwing trash in their place in a place that is easily visible to children when children eat lunch, and so on.

Facilities and infrastructure that can help children get into the habit of living a clean lifestyle such as a place to wash hands that are about the size of a child's body, provide a trash bin that is easily accessible to children when going to throw out trash and so on. Efforts to facilitate clean and healthy living habits in schools can be planned by the school and parents. Can also do cooperation and involves parents who provide healthy food every month. The teacher can design a variety of other creative activities to familiarize clean and healthy behavior in children. Also, efforts that can be made by teachers in schools that have a significant effect on children are exemplary. The teacher can give for example, throwing trash in its place, washing hands before eating, and so on.

Children's behavior can be shaped through experience and interaction with their environment. The behavior is manifested from the results of the knowledge gained, the experiences carried out and interactions with the environment, both the family environment, the school environment, and the community environment. Behavior cannot just appear without a prior knowledge base. Therefore, providing knowledge about the concept of a clean and healthy life is very important to do.

Various factors can affect changes in a child's attitude, namely internal factors and external factors. Internal factors are innate in the form of a child's ability to respond to external stimuli. Besides the internal factors that influence behavior are perception, motivation, and emotion. Perception is observation which is a combination of vision, hearing, smell, and experience. A similar object can be perceived differently by several people. Motivation is the drive to act to fulfill a

need while emotions are related to an individual's personality. The external factors are factors that exist outside of a child, for example, examples of clean and healthy living behavior that is seen every day in the form of throwing garbage in its place.

Clean and healthy life behavior closely related to individual behavior in the community. Often encountered, the cleanliness behavior of individuals is already good, but because the community environment does not support so slowly the behavior that has been formed gradually eroded. Community behavior has not yet led to healthy behavior, especially in relation to environmental health and personal hygiene (Kasnodihardjo, 2010). Community behavior is less positive because it has not been motivated based on awareness of the importance of healthy values. The results of this study indicate that socialization and exemplary about PHBS still need to be carried out, for this reason a change agent is needed. The school environment as an educational environment is expected to be an agent of change in the community. So that the school environment can prepare students to have adequate character to conduct clean and healthy life behaviors for themselves and the community.

Changes in clean and healthy living behavior can be made by referring to the assumption that the individual as part of the community is the subject of health services. In this case, each individual in the community needs to be invited to participate in identifying and discussing health problems as well as actively seeking alternative solutions to problems. However, with a diverse educational and socio-economic background, this understanding effort is less effective. Efforts to instill awareness of clean and healthy living behaviors in the community are effectively carried out among highly educated people and upper-middle economic levels.

Health is not only the absence of disease, but also the conditions that function mentally, socially, physically, and spiritually. Health is an ever evolving and complex continuum which is significantly influenced by an individual's lifestyle habits. Adopt health behavior style promotion life, is defined as 'all the actions and beliefs of individuals which are upheld to stay healthy and prevent themselves from illness', can bring about long-desired advertisements and changes in one's life. Healthy behavior covers a variety of domains, such as physical practice, health responsibilities, spiritual growth, nutrition, stress management, and interpersonal relationships.

Health is the right of every person, not just the dominance of individuals or certain communities. Clean and healthy life behavior is a step that must be done to achieve optimal health for everyone. Healthy conditions do not necessarily occur but must always be sought from the unhealthy to a healthy life and create a healthy environment. This effort must start from instilling a healthy mindset to the community that must be started and cultivated by yourself. Efforts to optimize public health aim to realize the degree of public health as well as possible so that it can become the main capital for the development of productive and superior human resources. To familiarize clean and healthy living behaviors, a shared commitment is needed to support one another in improving the health status of the community, especially families, so that healthy development can be achieved optimally.

WHO states health is one of the rights of individuals to be able to carry out all forms of activities or daily routines. In order to live a healthy life, everyone must be able to have good behavior, which is a Clean and Healthy Lifestyle. Clean and Healthy Lifestyle is a strategy used to create independence in creating and achieving health and is a behavior that is implemented based on awareness that is the result of learning that can make individuals or family members can improve their health in the field of public health.

Clean and Healthy Lifestyle one of the essences and human rights to maintain its survival. This is consistent with what is covered by the WHO constitution which states that a high degree of health is a fundamental right for individuals. This right applies to all people regardless of origin, religion, race, politics and economic level. This high degree of health can be obtained if everyone has behaviors that pay attention to health.

The concept of behavior developed by Becker based on the concept of healthy behavior Bloom. Becker explained that healthy behavior is divided into three domains, namely health knowledge, attitude to respond to health actions (health attitude) and practice or health action (health practice). This domain is useful to find out how much the level of healthy behavior of each individual. Healthy behavior divides into the first three parts, knowledge about health, that is, what is known by individuals about how to improve and maintain health. Second, the attitude to respond to health actions, namely the individual's assessment of matters relating to how to maintain health. Third, practice or health action which is a direct action consisting of all activities to obtain a healthy life.

This healthy behavior is a behavior that is used to maintain, improve health, avoid or prevent disease, protect themselves from various diseases, and participate in improving the quality of health. The improvement program is not only limited to a healthy environment and health services, but also pay attention to behavioral factors, this is because behavioral factors can be a factor in the occurrence of various diseases, both infectious and non-communicable diseases (Marlina, 2011).

The quality of each human resource is determined by two interrelated and related factors. These factors consist of education and health. Health is the main requirement in obtaining the success of educational efforts, while education is one of the factors for achieving high health status of each individual (Maryunani, 2013). Clean and Healthy Lifestyle in the school environment has eight indicators, namely washing hands with running water and using soap, consuming healthy snacks in the school canteen, using clean and healthy toilet facilities, carrying out regular exercise, eradicating mosquito larvae at school, not smoking in the school environment, curating weight and height, as well as throwing away trash in the space provided. These eight indicators must be done well to create healthy behavior in the school environment.

Schools are educational institutions that are targeted by PHBS, so that the application of these behaviors is better. This is because there is a lot of data that shows that most of the diseases that are often suffered by school-age children (ages 6-10) are in fact related to PHBS. In addition, the lack of implementation of Clean and Healthy Lifestyle in the school environment can cause other impacts, namely the lack of comfortable learning atmosphere due to dirty classroom environment, decreased student achievement and enthusiasm for learning, and can make the school's image worse. Therefore, it is very necessary to provide an understanding of PHBS values early on in school (Proverawati, 2012).

The promotion of clean and healthy life behavior in schools can be given to three PHBS target groups, the primary target, secondary target, and tertiary target. The primary target in the development of clean and healthy life behavior in schools is elementary students, where they are expected to be able to know and implement clean and healthy life behavior. Secondary targets are people who influence the primary goal in deciding to implement clean and healthy life behavior. At clean and healthy life behavior in schools, the secondary target is the teacher, where a teacher is a role model of the students. Tertiary targets are people who function to make formal decisions, such as school committees, village heads, education offices, and so on. They can provide support

in determining policies, funding in the process of Guiding clean and healthy life behavior to be given to school students.

RI Law No.36 year 2009 chapter VI article 79 Paragraph, on Health Efforts explains that efforts to foster health in the school environment are held with the aim of improving and developing healthier life skills by students. This ability must be applied in a healthy living environment, so that school-age children can learn, grow, develop and obtain the highest health status in order to become a qualified human resource. According to WHO, as many as 100,000 Indonesian children die from diarrheal disease each year, while data from the Ministry of Health show that of 1,000 residents, there are 300 people who suffer from diarrhea throughout the year.

Indonesia's Health Profile for 2009 presents data that, there are as many as 64.41% of the facilities that have been fostered by the environment to implement a clean and healthy life. The facilities consist of educational institutions as much as 67.52%, workplaces as much as 59.15%, and other environments as much as 62.26%. Clean and healthy life in the education setting, workplace environment, and health facility environment has not run as desired, therefore a comprehensive, cross-program and cross-sector approach is needed, and extraordinary resource mobilization at all levels government administration (Syukriyah, 2011).

The National Basic Health Research report states that health is influenced by behaviors that uphold hygiene conditions. Due to the lack of attention to cleanliness, there are still many diseases that arise such as diarrhea, helminthiasis, filariasis, dengue fever, and vomiting. Hygiene problems that are still mostly experienced by elementary school students, namely problems with teeth as much as 86%, can't cut nails as much as 53%, can't brush teeth as much as 42% and don't wash their hands before eating as much as 8%. While the diseases that are mostly suffered by elementary school students are intestinal worms of 60-80%, and dental caries as much as 74.4%. Therefore, to overcome this problem, it is necessary to have comprehensive efforts from various sectors.

The school environment as an educational environment is a very strategic environment to provide knowledge and instill habituation about clean and healthy living. Learners will more easily follow the rules that apply in schools. So that schools can make various activities that are integrated with learning activities programs. The activity program can be a general program that is applied to all students in the school or a class program specifically created by the class teacher together with his students. General programs that can be carried out in schools can be in the form of health promotion programs and carried out simultaneously by all students. Health promotion activities have been carried out by SD Lab school, Jakarta State University, in the form of Clean Friday activities, commonly abbreviated as JUMSIH.

JUMSIH activities are carried out every Friday and involve all students in the school. The children are divided into groups and given tasks by the division of labor, the division of labor includes sweeping and mopping the class floor, cleaning the classroom glass, sweeping the yard, cleaning the fishpond, cleaning the bathroom, and so on. The division of work takes turns divided into different groups so that each child can feel the different tasks in each JUMSIH activity.

In the JUMSIH activity, the children are actively involved and work together in groups. JUMSIH is a health promotion activity designed by the school and involves all school residents. The objective of JUMSIH is to familiarize clean and healthy living behavior in the school environment and is expected to form a clean and healthy character of each student.

3 METHODS

3.1 *Partisipant*

This research was conducted in elementary schools in Jakarta. The sampling technique uses purposive sampling technique that is the sampling technique with specific considerations and objectives (Creswell, 2012). In this study aims to determine the clean and healthy life promotion program conducted at school. Schools that fulfill this research objective are SD LabSchool, Jakarta State University. The sample of this study were 68 students including all grade 3 students at SD Labschool, Universitas Negeri Jakarta.

3.2 *Research Design*

This study uses a pre-experimental design with one-shot case study. In research that uses this design, it is only done in one group. After treatment, post-test is immediately carried out on the sample (Gall, Gall, & Borg, 2007). The design of this study uses a treatment in the form of a Jumsih program which is a clean and healthy life promotion program implemented at SD LabSchool. The research design is illustrated in the following table 1 below:

Table 1. Research Design Experiment

X	**O**
Treatment of JUMSIH	Posttest of healthy and Clean Knowledge

3.3 *Instrument*

This research instrument has passed the instrument validity test and expert test related to knowledge about clean and healthy life for early childhood. This instrument is used to be an indicator of test questions given to respondents (see table 2).

Table 2. Clean and Healthy Living Knowledge

NO	**PERTANYAAN**
1	Benefits of washing hands
2	Diseases arising from not washing hands
3	When to wash your hands
5	Dangerous snack at random
6	What you need to keep in mind when buying food
7	Why urinate and defecate must be in the toilet
8	Here are the main objectives of sport
9	Mosquito bites can cause diseases, among others
10	How to eradicate mosquito larvae
11	Weighing your weight and measuring height is done regularly every time
12	The benefits of weighing and measuring height are carried out regularly, among others
13	Weight and height results
14	Garbage is a nest
15	Types of waste
16	The following is an example of dry waste
17	B3 waste is what garbage
18	How to manage rubbish bins, among others
19	How to maintain environmental health from rubbish

3.4 *Procedures*

The research was carried out during August 2019. Research procedures include the preparation, implementation and evaluation stages. In the preparation phase, the researcher visits the school where the research is carried out. This preparation stage includes, (1) determining the research sample; (2) observation of research sites; (3) initial observation of the research sample; (4) Teacher interviews about the JUMSIH program; and (5) Designing a post-test schedule.

At the research implementation stage, they included (1) observations of the implementation of the JUMSIH program 3 times Friday; (2) Interview of respondents during the implementation of JUMSIH; and (3) Post-test implementation to find out students' knowledge about clean and healthy living knowledge. At the evaluation stage, the researcher conducts a final review of the activities of the sample and a final interview with the teacher about student knowledge.

Implementation refers to material learning plans to find out students' knowledge about clean and healthy living. The implementation consists of three stages, namely introduction, core activities, and closing. This activity consists of exploration, elaboration, and confirmation. Observations made by researchers to find and obtain data about everything that happens and observe or record changes in student learning outcomes during the learning process takes place as a benchmark for the success of the JUMSIH program towards students' knowledge about clean and healthy living. In this research procedure, the researcher collaborates with the classroom teacher.

2.1. Data Analysis

Data analysis in the study used score measurements obtained by the sample at the time of the post-test. The sample conducts tests to measure knowledge about clean and healthy living. The questions given contained material that was diseased with knowledge of clean and healthy living. The value obtained by students is calculated based on the provisions, if correct get a score of 1, and if one gets a value of 0. The score is added up and becomes the final score obtained by students.

4 RESULTS AND DISCUSSION

The results of this study indicate the results of tests on clean and healthy living knowledge, the following data are obtained: as many as 5 students (7.4%) who answered correctly one clean living knowledge problem, 8 students (11.8)% who answered two to three questions, 16 students (23.5%) who answered correctly 4 to 5 questions, as many as 8 students (11.8)% who answered correctly 6 to 7 questions, as many as 13 students (19)% who answered correctly 8 to 9 questions, there are 7 students (10.3)% who answered correctly 10 to 11 questions, and 11 students (16.2)% who answered correctly 12 to 13 questions. Briefly can be seen in the table and histogram below.

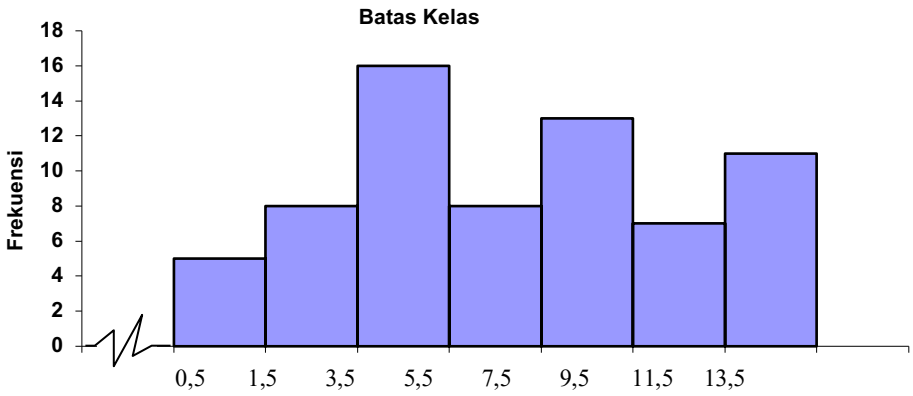

Figure 1. The Results of Tests on Clean and Healthy Living Knowledge

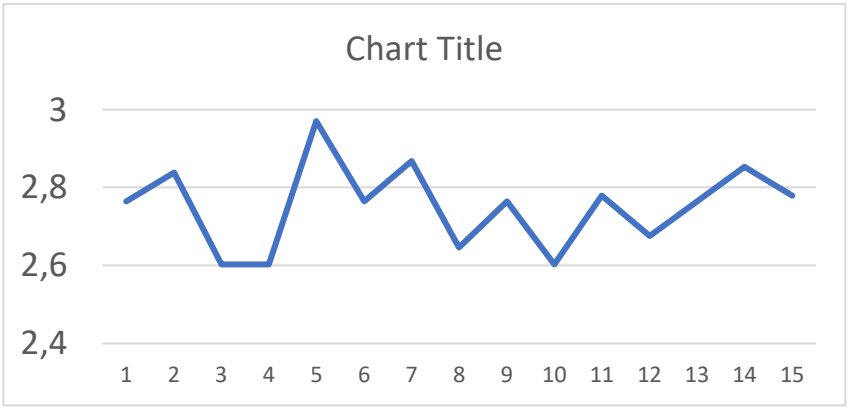

Figure 2. The Histogram Results of Tests on Clean and Healthy Living Knowledge

Based on the histogram above, it can be concluded that students' healthy living skills can be categorized as good. Based on statements which amounted to 15 generally obtained a score of 2.6 and above. It is concluded that healthy living skills are carried out frequently by students. The behavior of washing hands, bathing, toothbrushes which are basic skills for children to be able to live a healthy life have been done by students.

The JUMSIH program as a clean and healthy life promotion program carried out at Lab-School, Jakarta State University, influences students' knowledge about clean and healthy living. The JUMSIH program has proven effective in helping students understand the concepts of clean and healthy living. Like previous research, there is effectiveness through the intervention of health promotion programs in schools in fostering healthy behavior in terms of improvement in healthy eating and active living (McIsaac et al., 2017). School can change the environment and students present reported an increase in fruit and vegetable consumption along with a decrease in energy intake, were more physically active, and showed less obesity compared to students elsewhere.

Schools that have a clean and healthy life promotion program will greatly assist students in gaining knowledge specifically about understanding and behavior about clean and healthy living. The school provides an excellent opportunity to enable students to acquire knowledge and skills and increase the level of activity there is early childhood because children and adolescents should ideally spend significant time in their young lives there and educational efforts can be carried out regularly and continuously. There is plenty of evidence to support the effectiveness of school-based health care which is done with good promotional interventions to increase physical activity

among students. The school environment has a significant impact on sustainable healthy behavior, a key factor in the success of the School of Health Promotion.

The multidimensional approach does not only focus on curriculum-based interventions but also includes policy-based strategies, environmental change, community and parent participation, supplementary school food programs etc. in order to provide opportunities to increase physical activity in a structured and unstructured way (WHO, 2016). Schools can change students' lifestyles that are continually conveying knowledge and skills, as well as influencing values and attitudes.

From this research, it was found that the JUMSIH program could encourage students to cooperate. Because in the implementation of JUMSIH, students collaborate. For example, some children are in charge of sweeping the floor, some sweep the yard, clean the bathroom, clean the pool, and so on. In cooperative learning, the teacher is considered to only create a teaching and learning environment and process. Thus, the teacher must design activities that create learning environments that facilitate students to work together (Akçay, 2016; Manning, M. L., & Lucking, 1991).

Also, the JUMSIH program can train children to be responsible for their work. Children who have the task of sweeping the floor must be responsible for sweeping and making the classroom clean. Through the JUMSIH program, students enjoy and feel happy because students assume that the implementation of JUMSIH is like refreshing from daily routine activities in class. This is very good for the development and learning process of children and will provide space for children to express themselves through fun activities. JUMSIH program is also an activity that can train children to move their bodies through movement activities such as sweeping, mopping, and so on.

Children's knowledge about clean living can be obtained through family education at home. Parental involvement in providing knowledge about clean and healthy living can make children understand about the concept. The involvement of fathers is very influential to increase children's understanding of the concept of healthy living (Allport et al., 2018). However, schools also have a very important role to provide students with a habit of living a clean life through health promotion programs, for example the JUMSIH program implemented at SD Lab-School, State University of Jakarta.

Health programs in schools that need to be introduced include a variety of things, one of which is about children's sleeping knowledge as a part that is inseparable from clean and healthy living behavior. One of the materials for a good sleeping health program and other intervention for children is the responsibility of parents and teachers (Bonuck, Schwartz, & Schechter, 2016; McClure, Tarr, Thompson, & Eckhoff, 2017). The JUMSIH program only focuses on self-promotion programs and the school environment in the form of carrying out activities to clean up the school environment so as to create a clean school environment and children in the school grow healthy.

5 CONCLUSION

The results of the study concluded that the JUMSIH program as a school health promotion program which is routinely carried out every Friday effectively to increase students' knowledge about healthy living. This was known from the results of tests conducted in this study. JUMSIH activities that are carried out through hands-on practice make students know about healthy living. Also, students can apply hygiene activities in their daily lives. So hopefully the JUMSIH program can make students have a clean and healthy life behavior. The implication of this research is to

provide direction for schools to make various health promotion programs for children. With variations in health programs, children are expected to understand more about personal hygiene and health and their environment.

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Parental Perspectives on the Excellence of Computer Learning Media in Early Childhood Education

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ABSTRACT: The introduction of basic computer media for early childhood is very important because it is one of the skills that children need in this century. Need to support parents and teachers in developing the implementation of the use of computer technology at home or at school. This study aims to determine and understand the state of learning conducted based on technology. This research uses a qualitative approach with a case study model. This study involved 15 children and 5 parents. Data obtained through interviews (children and parents) and questionnaires for parents. The results showed that children who were introduced to and taught basic computers earlier became more skilled in learning activities. Suggestions for further research to be more in-depth both qualitatively and quantitatively explore the use of the latest technology to prepare future generations who have 21st century skills.

Keywords: Parental Perspective; Computer Learning; Early childhood education

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1 INTRODUCTION

The purpose of preschool education now is to maintain high expectations for all children (Vartuli, Bolz, & Wilson, 2014). Early childhood is a golden period for children in shaping character and talent. Character education for early childhood is important for their future because human quality is determined by his personality. The curriculum is the most important part of the continuity of the education process. Education and current curriculum cannot be separated from the success of learning, because it is interrelated (Yusmawati & Lubis, 2019). Best curriculum is always must updated such as in the pre-school curriculum can be adopted and updated by including basic computer media for learning.

The role of technology in the early language of preschoolers and discussion of literacy and then discussing what we believe is very important to be addressed by any preschool or educational institution of young children today (Paciga, Lisy, & Teale, 2013). Wolfe & Flewitt, (2010) also provide a more complete understanding of the literacy learning process through detailed analysis of how children use various communicative modes when they use literacy in different media. These experiences support metacognitive development and are essential for children's needs for future strategic needs. By using the concept of literacy as a social practice, this study discusses new technologies that have been translated into literacy learning of young children, the implications of which are not yet understood in guidance, training, or early-year work practices.

The process of education and learning of early childhood must be carried out to provide meaning, concepts through real experience (Dhieni, Hartati, & Wulan, 2019). Real experiences allow children to perform activities optimally, curiosity and position educators as facilitators. Teacher's position in early childhood schooling is more directed to guidance, not just to teaching, especially in the field of computer media. Parents also must have positive beliefs about the use of computers, mostly to enhance educational development and technological awareness and influence the relationship between children's computer use and children's self-characteristics (Hadzigianni & Margetts, 2014; Davis, 2014). In European countries, children use more digital technology such as computer, tablet and others gadget (Palaiologou, 2016).

Technological advances that occur in the world today have the potential to create positive and negative side effects, especially in children. The positive side requires increased empathy and acceptance of technological diversity through prosocial behavior modeling, while the negative can be manifested in aggressive behavior and others. These challenges raise particular attention to the rights of protection and care of children in connection with the use of technology. Huda et al., (2017) explores critically how children adapt technology skills and how they respond to media influence. The findings revealed that adaptive technology skills needed sufficient guidance for child protection and careful involvement of digital information. The study of daily use of technology in family homes tends to ignore the role of children and, in particular, young children. Through an ecocultural approach, Plowman, (2015) identifies and develops various methods which illuminate the unique mix of residents, learning opportunities and resources and to investigate parent ethnotheories, or cultural beliefs, which give rise to the complexity of practices, values and attitudes and their intersection with technology and support for learning at home so as to produce a better understanding of the role of technology in the lives of children aged 3 and 4 years.

The phenomenon of the use of computer media in children today, such as research by (Vittrup, Snider, Rose, & Rippy, 2016) which surveyed the attitudes and perceptions of parents about their

children's knowledge and involvement with various media technologies, as well as to explore children's actual knowledge and experience with these tools. The results show large media consumption both among parents and children, and a large number of children, including the youngest, have personal access. Not many parents can accurately identify the technological abilities of their children, and although there are many uses, many children misidentify various media tools. Parents show a positive attitude towards the media for children's development, but many do not understand the recommendations of expert sources regarding age-appropriate screen time.

The heavy use of digital parental technology has been linked to non-optimal parent-child interaction, but there are no studies examining the relationship with children's behavior. McDaniel & Radesky, (2018)'s research shows that technological disturbances are related to children's problem behavior, the use of appropriate technology by parents during the introduction of computers and other technological media in early childhood requires proper parental perspective. Parents' perspectives on the importance of using computers in early childhood, one of which is by integrating Internet-related applications into preschool teaching activities can enable children to develop various aspects of their learning abilities as well as cognitive, affective, and relevant skills. Chen & Tu, (2018)'s revealed that parents view the Internet as an innovative and useful tool that improves their lives and improves their work performance. Their perception of the usefulness and value of practical work related to the Internet positively influences their attitude towards preschool expectations, and recognizes the pedagogical advantages associated with integrating Internet-related applications into teaching to develop children's learning abilities.

In Greece, there is inadequate integration of ICT in early childhood education and also have two factors were extracted: 'playing with ICT as an effective way of learning and developing children's technological competence' and 'using ICT as a free game'. Teachers' confidence influences their classroom practice and children's learning. ICT as a mode of learning that must be embedded in the curriculum is expected to lead to ICT (Nikolopoulou & Gialamas, 2015). A study of K-5 care versus two comparative schools for one academic year showed that teachers advanced one stage in a six-stage technology adoption model as a result of a focused, needs-based education technology integration delivered throughout the school year. Need-based technology integration education has been proven to have a positive and rapid effect on teacher attitudes, such as computer anxiety, perception of the importance of computers, and computer enjoyment. This type of education has been shown to have a positive time lag effect on student attitudes as well (Christensen, 2002). Much of this polemic debate comes from an adult perspective but children are the main users in dizzying technological advances and their views are important elements in understanding the conceptualization of tablet devices as pedagogical tools (Dunn, Gray, Moffett, & Mitchell, 2018).

This study aims to see whether the steps of adults / parents in seeing critical thinking patterns in early childhood? What are the efforts of adults / parents, social environment and early childhood education institutions in establishing criteria for the results of satisfaction with the abilities of children after an early age? What are the efforts to implement computer learning steps in early childhood? What are the expected results from the application of computer learning in early childhood?

2 THEOROTICAL STUDY

2.1 *Early Childhood Education and Technology*

Early childhood is a phase of development and a critical phase in which, both physically and mentally. All sensors are collected optimally from what they see and feel. The development of this sensory and emotional sensor occurs at the age of 1-4 years. The researchers look at these components from their own experience to observe the development of the childhood world in children who do not have the opportunity to development a computer component used by adults at work. Children is person who want to see and try what adults do. The basic concept associated which is the critical thinking base that every human being possesses when they see, tries and senses all the components present in the environment. To quote the basic understanding of the new century calls for a critical rethinking of learning objectives and means. Then, education must be based on four pillars: learning to know, learning to do, learning to live together (UNESCO, 2015). This understanding has created a learning system for all. The initial understanding of human development with the perfection of all the components that exist in its potential begins.

From the daily vision, children build up thinking to try. Based on the first instinct that responds to children aged 0 to 2 years, ways are found to keep trying and not knowing it before it is done, this is what we recognize as potential for early thinking and development to balance early childhood's ability to begin life. Early recognition in computer media for early childhood, is a form of preparation (Ariputra, 2018). The concept of an inclusive program is set according to the abilities and needs of students for students, become successful and can optimize their potential. A common critical or theoretical foundation for DGBL (Digital Game- Based Learning), they propose a conceptual framework that challenges what they perceive as dimensions of autonomy, play, affinity, and institutionally invalidated space that are important for DGBL (Nolan & McBride, 2014). They argue that these dimensions are ideally located within an inclusive and play-based early learning environment, and that the early years are very important, but neglected, locations for more holistic and inclusive thinking about DGBL.

Need to be prepared in terms of skills and be able to master the field of computer media can be one obstacle, in, but can be overcome by calling a private computer teacher for early childhood. Appropriate scientific competence among age teachers early is needed to increase children's chances of getting certain science-related experiences (Sageide, 2016). The age of 0-2 years is very vulnerable to the things that are fundamental to the development of children. the formation of self-confidence, critical thinking and non-thinking of all the fundamental considerations that he sees is always tried and tried. Researchers see. The development of thinking ability has developed since the child sees and hears at the age of less than 1 year. After all the components are done, the child looks around and begins to crawl, this basic instinct is the basic ability of each person to form the likeness and togetherness in which the optimize the child's potential. In its absence, a number of myths about children's experiences with technology have emerged. We chose seven statements, both for and against the use of children's technology, to represent the positions we met from the media, parents, and educators. Findings from detailed case studies of the daily lives of children three and four years old (Plowman & McPake, 2013).

Preschool teacher beliefs about the use of computer technology are in line with their perceptions of their teaching practices, even though their beliefs and perceptions about their practices are quite

moderate. The results also reveal significant differences between kindergartens that support public kindergartens, and training programs that support trained teachers, whereas there are no differences due to the field of certification. Opinions are quite representative, about the importance of computer learning systems in early childhood in kindergarten (Ihmeideh, 2010). Exploring the attitudes of early childhood teachers towards the use of technology is very important to determine the characteristics of their teaching practices. Negative attitudes can inhibit their use, while positive attitudes increase the effectiveness of using their technology. The aim of this study is to investigate the attitudes of early childhood teachers related to the use of technology in Turkey (Ko, 2014). The researchers thought during the development process and formed thoughts to create equality and similarity with the environment. Lead only for adults and not teach. For understanding researchers' thinking of 1-3 years, the components of the process of implementing the basic development environment is seen in a standing state.

Under crawling in early childhood, we understood the value of emotional bonding between parents and children even in the immediate environment. Stand up. Researchers see that value is a form of enhancing the value of the ability to are all potential early childhood guidance. In this case, in terms of research conducted in terms of relevance shows the same value and process. For the development of children aged 1 to 3 years, the guidance of the citizens of the Council and the environment is essential in order to shape the intelligence and to fully exploit the children's potential. Nurturing patterns that guide and communicate understanding the process of providing information about everything small children do to develop critical thinking in order to build skills and intelligence. Early childhood reaches the age of 3-6 years and builds up all the potential components that are fundamentally beneficial to seeing, hearing, feeling, touching, thinking, understanding, learning, and building skills and intelligence.

Adults more instruction in terms of stamina and sincerity, focusing on specific items. This condition is incorporated into the understanding of early childhood by demonstrating the desire to be the same as adults when it comes to recognizing and understanding computers as a means of activity. Adults need to provide opportunities to understand and understand the attainment of the expected value of early childhood satisfaction in achieving value indicators based on the understanding and ability of critical thinking of these young children. The researchers see values from the results of daily observations and developments, which in principle determine the limits of the performance indicators for each early childhood. The environment is very active in building structured learning to understand and understand the development patterns and performance indicators that each child has. For understanding these basic researchers, there is no clear component in conducting research. Therefore, researchers are generally engaged in applying qualitative attempts to collect information and data on critical thinking indicators of early childhood development related to the use of computer technology and other electronic media.

In developing the character of adult learning mechanisms, the environment and educational institutions must systematically monitor, promote and guide early childhood to build technological understanding as a vehicle for enriching their knowledge and intelligence. Based on the basic application of "Compassion," learning will build intelligent thinking and rapid skills and abilities. The general recognition of the computer deviates from the actual target mechanism, the computer is often needed as a game medium compared to learning. This requires the use of an effective guidance and guidance system in monitoring and guidance.

2.2 *Learning Computer for Early Childhood*

Learning of computer media from an early age: The purpose of this research is to "focus" on the benefits of introducing computer media from an early age, so that early childhoods get to know more about computer media so that in time, they will understand and understand more about media computer. The author sees that the field of computer learning in early childhood is indeed needed. One of the efforts that can be done to improve the quality of education is by developing curriculum in accordance with the needs of this era.

The feasibility of tablet computers in early education by investigating the ease of preschoolers in adapting to tablet technology and their effectiveness in engaging them to draw. As many as 41 children aged three to six years were recorded when they used tablets. The study found a significant difference in tablet usage rates between sessions, and involvement increased with age. The teacher reports a child's high interest and image as typical of the above expectations. Children quickly develop a stylus for drawing. Despite the technical problems in learning this new technology, children are interested and survive without frustration. What seems important for children's learning is the way teachers choose to apply this technology (Couse & Chen, 2010).

Chinese preschool teachers have an emerging understanding of the social and technological impact on the use of ICT in early childhood education (ECE), but they recognize the value of ICT for children small and limited themselves. This limits the use of active and meaningful children's ICT for early learning and development. We argue that there is a need to develop ICT policies and explicit curriculum guidelines for the ECE system that emphasize the active and creative use of young ICT for early learning and development, and better support teacher learning (Dong & Newman, 2016).

Relationship learning demands external socialization and to acquire new skills on the one hand, and, on the other hand, the prerogative of individuals to build their own identities, to protect their integrity and to direct the course of their own lives. Everyone including early childhood must learn to understand the complex world in which they live. They must be able to collaborate, talk and act for positive change (UNESCO, 2015). High appreciation expressed by researchers by calling these people sustainable citizens. What is meant by the above statement is the generation that is awakened by striving to continue to develop positive attitudes and lifelong learning starting with the development of abilities from early childhood as assets of the next generation of human life in the future, and early childhood education, the most important thing is also how they are excited, in learning computer media, as a basic introduction, so it needs a pleasant room, how children express that children feel, with the environment that contributes (Atkinson & Biegun, 2017).

Computers as learning support tools, which need to be known by early childhood, so they do not stutter technology, but also, we need to pay attention when they use it, maybe there can be an influence on their development. Most researchers focus on the theory pedagogical behind using touch screen devices, but there have not been many empirical studies of how this technology affects student learning processes (Martin et al., 2018). Technological development is inevitable. Computers become a necessity of life in helping humans solve problems and speed up work processes. This basic thing that the researchers, put forth is fundamentally. Technology was created to help humans not become a burden in the implementation process.

2.3 *Parental Perspective in Early Childhood Computer Learning Media*

Natural human development helps humans to form technologies that can help their lives, competence is a human creation, therefore, to understand and understand must be obtained by pursuit. For adult-level understanding, many do not yet understand the function and use of computers optimally, therefore it is necessary to recognize early in building thoughts that raise positive change from an early age on the use and management of appropriate technology. Their theory discusses how guidance and assistance from the teacher or parent learning model in the surrounding environment helps children to advance their positive way of playing.

Computer education for children at an early age is needed, especially the basic introduction of computer media, so that media is not a foreign object, when they will use it, because during the development period children need a balance between education and experience. Children at the stage of fundamental movements must be acquainted with activities including balance, vestibular stimulation, bilateral integration, rhythm and spatial orientation (Waal, 2019). Computer education in children does require teacher skills, because this media needs to be studied in depth such as opinions. Some examples of satisfying computer integration into early childhood education environments are found, however, substantial levels of frustration and disappointment also found in many programs that have computers.

Computer media is a new experience for children, so they are usually more focused with forms that can be entertainment or preferences, so here there needs to be guidance from teachers and parents. Schools must formulate holistic policies to deal with parents' problems responsively and proactively to get support. Schools can enhance parents' pedagogical understanding of the use of computers and the internet (e-learning) in early childhood and overcome parental problems through parent-school communication (Kong, 2018). Therefore, the test and document how teachers use computer technology in their early childhood classrooms, and they become comfortable in their classrooms.

Convincing evidence about improving learning outcomes remains surprisingly difficult to understand, and secondly, the unresolved debate about whether ICT should be understood as supporting the delivery of traditional pedagogical or radically different vision based on soft skills and digital literacy new. The difficulty in establishing traditional benefits, and the uncertainty in pursuing alternative benefits, raises fundamental questions about whether society really wants a technology-transformed and mediated relationship between teacher and student (Livingstone, 2012). In computer education in early childhood, teachers must also have adequate skills so that in teaching until their age children are also more professional. Most teachers get information and their computer skills are all based their experience and stated that the use of computers is suitable for early childhood education (YurtaNılgün & Kalburan, 2011). It was also stated that most teachers use computers to support activities in their daily plans and include computers 1-2 times a week in their curriculum.

Providing computer education in early childhood, is an early introduction and teachers as instructors in schools, of course must better understand and recognize this, such as opinions (Barenthien, Oppermann, Steffensky, & Anders, 2019). Science is an important domain in early childhood education. However, preliminary results indicate that preschool teachers rarely offer science activities, against this background professional development aims to encourage preschool teachers to provide more frequent science activities, so that the basic learning of the Computer is more directed.

3 METHODS

3.1 *Participant*

This study uses a qualitative approach with a case study model. Authors took a limited scale internally with participants/informants in the environment of children going to school. This study involved 15 early childhood and their parents. Qualitative research is methods for exploring and understanding the meaning and meaning or events that a number of individuals or groups of people are ascribed to social or humanitarian problems (Creswell, 2012). Authors took five parents and their children as participants and went to school. In collecting data, the author makes field observations, and then prepares questions/for interviews, on participants who are willing to be interviewed related to computer media research for the interview time, the writer spends time when parents wait for their children at school. Authors use models Miles & Huberman. The most frequent form of data display for qualitative research data in the post is the narrative text with a combination of conditional techniques (adjusting to conditions), so that this research is more natural and runs according to the reality in the field (in accordance with the rules of qualitative research).

3.2 *Instrument and Data Analysis*

In analyzing the data the author takes several steps in accordance with the rules of qualitative research, such as coding (data coding), narrative analysis of the results of interviews, conducting an inventory and investigation of data, and making limited questionnaire data (purposive sampling), this must be done to study / research more in, regarding information provided by participants. And the questionnaire was only given to participants who were selected according to the informant's criteria. The results of the interview will be the analysis and discussion results, as the most important part of this research.

4 RESULT AND DISCUSSION

4.1 *Results*

Data processing and interviews with participants (parents of children) can be illustrated that important the introduction of computer media for the development of children in the present or future. The result according to interviews shows benefits of computer media learning in early childhood.

Name: HT
Age: 36 years old.
Status: Mother / Parent

Reason: 'I introduced my computer to my child, at the age of 4 years, and now, my child has understood enough, with computer media that is increasingly needed' '(interview informant I)

Name: JS
Age: 27 years
Status: Mother / Parent

Reason: "I am giving private lessons to my 5-year-old child, for the introduction of computers. So that my child can get to know and understand computers faster, because it is very important

for the future / when he is already at school / working (Interview, from informant II)

Name: NK
Age: 37 years old
Status: Mother / Parent.

Reason: "I have a computer at home. My child trained at the age of 5 to get to know the computer media, hold the keyboard and type randomly, good results, my child is more skilled than his friends. And this is useful for him for his future (Interview from informant III)

Name: YR
Age: 38 years
Status: Mother / Parent

Reason: " I introduced the computer to my 4-year-old child, and the results are good, my child looks smarter, now he can use the keyboard, even though the writing is random. (interview from informant IV)

Name: PE
Age: 31 years old.
Status: Mother / Parent

Reason: 'I trained my child since he was 3 years old, to get to know computers, because computers are very important for development and for work (Interview from informant V)

4.2 *Discussion*

From interviews with five participants, they all seemed to be teaching supporting computer media for children, for the sake of their children's future. Teachers do not have a certain understanding of the benefits and advantages of using children's computers (Alkhawaldeh, Hyassat, Al-Zboon, & Ahmad, 2017). However, some of them have some potential advantages for using computers for young children, such as gaining basic computer skills; the provision of new means of escape; improved learning, special in literacy and arithmetic; and enrichment of the school curriculum. Good design of these components should help teachers to integrate ICT into their curriculum in an effective way (Wang, 2008).

The constructivist learning theory, interactivity design and usability understanding provide the theoretical foundation for the construction of this model. Some examples of the application of this model to the design of web-based learning environments, online discussion facilitation and the implementation of ICT tools are presented. Using a socio-cultural approach, we discuss various technologies that children encounter at home, the various forms of learning they take, the role of adults and other children and how family practices support this learning. Many parents believe that they do not teach children how to use technology (Plowman & McPake, 2013). We discuss parents' beliefs that their children 'take' their competencies with technology and identify trial and error, copying and demonstration as typical modes of learning. Parents tend to assume that their children are self-taught and underestimate their own role in supporting learning and the extent to which learning with technology is culturally transmitted in the family.

This is also an obstacle faced by schools, as generated in research in Jordan, about the lack of knowledge about computer media by the teacher, of course this also happens in our country, in research the authors do only to early childhood which have been introduced by the computer

media, by their parents, either through private tutoring or taught by their parents and family. The results of the study show that children who have been introduced/taught in computer media are from the beginning smarter than children who do not know computer media at all, other observations with a greater understanding of the implementation on computer media are intended to facilitate the learning of early childhood. From all components, the participants showed that there is no problem in implementing computer learning in early childhood.

Given the importance of the developmental level of early childhood learning, it is recommended to use developmentally appropriate practices throughout early childhood education (Bredekamp & Copple, 2009) to take into account the level of development. It is important to consider the developmental variability innate between individuals and also different types of development, including cognitive, psychomotor, emotional and social. To further complicate this challenge, types of development can have strong interactions, such as when psychomotor development can influence social and cognitive development, such as: Muscle building that influences language and social engagement. Technology in education is considered in empirical and theoretical literature as beneficial and dangerous for children's development. In the field of regulation of the early years there is a dilemma whether early childhood or not teachers must use technology as a source of learning and teaching. This paper has a pedagogical focus, discussing the advantages and potential problems of computer practice in children's learning and behavior in the early years arrangements and also suggests teaching methodologies about useful computer practices (Theodotou, 2010).

The second problem concerns the environment and the principles of understanding and understanding of family and the environment. The development of science, discipline and technology is very expensive. Computers are increasingly becoming a part of the lives of preschoolers. Tate, Warschauer, & Kim, (2019) found that earlier computer uses predicted writing skills in early childhood that affected future academic achievement. Therefore, government policies are needed to support the use of computers in the form of facilities for early childhood and support the provision of knowledge to parents in the importance of the introduction of computer use in early childhood.

The basic coaching pattern for producing reliable organizers of activities is defined in the context of education and training in line with the development of early childhood learning. For professionals, the scope of the game strategy is appropriate to consider the level of early childhood development. The understanding of early childhood play strategies should not be underestimated in the context of professional activity implementers. As highlighted in the previous section, a child's age can affect what he / she can understand cognitively, what it can physically achieve and what it is socially interested in. However, the uncertainties and concerns voiced related to the use of technology with early childhood, mobile devices have become an inevitable and valuable part of modern life (McCloskey et al., 2018), many play strategies are not suitable or applicable for early childhood students. It must also be remembered that the game itself, unlike the game, is only applicable after the development of appropriate behavior. "A child can first control his behavior according to the rules of group play and only then can a voluntary self-regulation of behavior emerge as an internal function.

The atmosphere of children's learning in this early childhood between playing computer and computer learning. Explains the dialogue meeting and fun does not occur because of planning directed (Karjalainen.S., Pu, & Maija, 2019). Arguing, they demand that teachers support everyday moments that explode as an important space for creating mutual relations and mutual respect with

children. It seems that there is a gap between children's access to and use of ICT at home and in early years settings, and between state-run and unmanaged sectors (Aubrey & Dahl, 2014). The training implications are marked. The cost of purchasing, maintaining, and replacing age-appropriate digital technology remains a challenge and the development of active pedagogy to maximize the benefits of technological progress must produce imaginative solutions. The obstacles faced by our country also, in addition to a shortage of human resources/teachers who are reliable and skilled in the use of computer media and digital technology, also with a limited and relatively expensive internet network.

This is a challenge for teachers and also the government, in this case the readiness of human resources and the completeness of the media and funding budget in its implementation. The introduction of computer learning in early childhood requires systematic and coordinated monitoring of guidance and guidance between family, environment, and educational institutions. All components are intensively monitored and advised. to direct the function and use of positive use in accordance with the characteristics of critical thinking early childhood, the he motivation contest is of limited relevance for younger children. among them children aged 2 and 4 years.

Many researchers do not recommend that children under 3 years use computers. The Digest also notes that many educators use computers with children in ways that are not developmentally appropriate. However, developmentally appropriate ways to use computers with children ages 3 and 4 are different from the way computers are used at kindergarten and elementary school level. Janisse, Li, Bhavnagri, Esposito, & Stanton, (2018)’s research shows children who use computers show much greater improvement in cognitive development than children from not using. Children's access to computers at home and at school is increasingly common. This is actually not a problem if the computer is taught early, but according to the level of thinking ability of children, in this case for example in the pattern of games (educational games) or drawing applications, etc.

The use of ICTs that support basic ICT skills and attitudes occurs more frequently and is related to the level of preschoolers, ICT competencies felt by teachers themselves, and the number of years of experience with ICT in schools (Kerckaert, Vanderlinde, & van Braak, 2015). The use of ICTs that support individual content and learning needs is closely related to the level of preschool children, ICT competencies felt by teachers, ICT professional development, and teacher`s attitudes towards the possibility of ICT for teachers in early childhood education. They were asked about the technology they had, and how it was used. This provides an opportunity to explore whether their use of technology is consistent with their beliefs about teaching and learning. The findings show that technology is seen more than computers and that technology is used to support various activities in line with practitioners' pedagogical beliefs. This study specifically doing for the field of computer media technology, because it is very useful in the intellectual development of early childhood, as evidenced by the results of research the author has done (Jack & Higgins, 2018).

5 CONCLUSION

5.1 *Conclusion*

All these developments can be successful if the collaboration of environmental parents and educational institutions is realized with all components, processes that complement and evaluate each other's observations in improving children's intelligence and sensomotoric development in early

childhood. The expected achievement of the mechanism for implementing the implementation of the technique is effective and efficient, it will be appropriate to pay close attention to early childhood will lose social ecological control which is the basis of future continuing education in building future generations that are reliable and quality. Indicators are directed towards explaining children achieving a greater compilation of skills from parents and teachers that are compatible with child-centered beliefs, low control, and high support. This means that it can be interpreted as a kind of computer skills for early childhood, which can educate the brain. Therefore, because of the importance of computer media being learned and introduced to early childhood, it is necessary to have a kind of curriculum, to guide the teacher as a mentor in learning the computer.

5.2 *Suggestion*

Early childhood is a golden age that needs to be considered during its development. Indeed, there is a disagreement among researchers about the teaching of computer media in early childhood, but from the results of the research that the author did, even early childhood who were given the introduction and teaching of basic computers turned out to be smarter in understanding the lesson. Learning computer media in early childhood is not just extracurricular, but it should become a required field of learning/teaching, in accordance with their age, namely basic introduction, to computer media, so that they will be ready, more skilled, in the operation of these devices, and more importantly also, the computer sector is needed in every activity, whether in offices, companies, campus/schools, this certainly makes them ready to become a reliable and skilled workforce in the future. For further researchers, please comprehensively explore this matter because this good research is a research that is developing and finding new things (novelty), in the same field or others, for the benefit of mankind.

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Preparing for Parenthood; Parenting Training Module on six Child Development Aspect in East Jakarta

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ABSTRACT: The age period of 0-8 years is the most important moment for every human being to develop all the developmental features supported by parents at home and teachers / tutors at the Early Childhood Education Institute (ECE). In parenting, six main aspects must be known and applied by each parent. Lack of education, nutritional knowledge, care and care, and aspects of clean-living habits in the family can have an impact on children's growth and development processes. This study aims to develop a module 6 aspects of child development for parental guidance. This study uses a research and development approach to test the effectiveness of the posttest design. Respondents in this study are parents who have children up to 5 years and early childhood educators. The findings show that from these six main aspects, it seems that parents and ECE tutors do not yet understand the ECE concept. In another perspective, there is still a lack of knowledge about these 6 main aspects which require training and parenting modules to develop the 6 aspects of child development.

Keywords: Early Childhood Education, Child Development Aspect, Parenting Training Module

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1 INTRODUCTION

Variables that improve social and emotional health in infancy and early childhood, at a minimum are the basic resources in the family home environment need to be fulfilled. Families must have food, housing, clothing, and medical care and childcare that is easily accessible to ensure that attention can be given to meeting the care of children. The lack of resources and knowledge in parenting puts excessive pressure on parents and early childhood and puts children's social, emotional, and cognitive development at ongoing risk. A child must experience parenting interactions and relationships, at least one, in a family context. Morris & Williamson, (2019)'s scientific studies identify that sensitive and responsive care leads to the safety of children in parent-child relationships, promoting social and emotional well-being.

The transition to parenthood is a challenging and stressful time for many couples. Interventions and other resources to help parents face these challenges have the potential to provide great benefits. For example, in a family of two parents, increasing the ability of parenthood to minimize daily stress, negative influences, and conflict in their relationships can provide a more stable context and enrich children's development (Jones et al., 2018). Co-parenting - how couples relate to each other in their shared roles as parents - is a prediction of various family and child outcomes. Sheedy & Gambrel, (2019)'s research tries to understand how couples negotiate co-parenting relationships during the transition to parenthood. The relationship between the two parents is the key to improving the six aspects of child development. A stable relationship between parents depends on the ability to regulate the emotions of each partner. Rutherford, Wallace, Laurent, & Mayes, (2015) examines the role of emotional regulation in parenting, taking into account the unique demands for caring for children and recognizing that parents must facilitate regulation in children, especially early in development so that children can complete their developmental tasks. Childcare programs require parental emotional stability for a child's well-developed success.

The Indonesian Human Development Index (HDI) ranked 113 out of 180 countries in the World (UNDP, 2018). Some of HDI assessment indicators consist of economic, education, and health aspects. Those indicators show that there must be full attention to the improvement of Indonesia's human resources, which must start at an early age. Meanwhile, data from the Directorate of Non-Formal Education recorded that the number of early childhoods in 2008/2009 was 29,847,739. The Ministry of Health data in 2017 showed that around 27.77 million (10.64%) of Indonesia's population lives below the poverty line. Low levels of education (averaged junior high school) surely have an impact on the level of early childhood health. The latest data in 2015, according to the Ministry of Health, showed that the maternal mortality rate was quite high, around 305/100,000 births. Moreover, the Statistics Indonesia 2016 showed that the infant mortality rate in 2016 was around 25.5/1000 births. These conditions undoubtedly have an impact on early childhood development programs, where children need good nutrition and proper care and nurture so they can grow into a high-quality generation.

Latest comprehensive analysis of early childhood development interventions in five sectors of health, nutrition, education, child protection, and social protection. The (Britto et al., 2017) review concluded that to make childcare interventions successful, intelligent and sustainable, it needs to be implemented as a multi-sectoral intervention package that is tethered to the method of early childhood care. While interventions will continue to increase with the development of developmental science, the evidence now strongly suggests that parents, caregivers, and families need to be supported in providing care nurturing and protection for small children to achieve their developmental potential.

Parenting quality - an environment of warmth, responsiveness, and stimulation of children - encourages the cognitive, social, and emotional development of young children. But how to provide care programs in low- and middle-income countries (LMICs) to produce a larger effect size and consistency in improvements in early childhood development. Knauer, Ozer, Dow, & Fernald, (2019)'s longitudinal study found that parental warmth and responsiveness in infancy were significant predictors of a child's development at 3-5 years of age. during the prekindergarten period, the practice of parent stimulation is a significant predictor of concurrent child development. The findings indicate the importance of quality caregiving throughout childhood, and that the effects of aspects of care can vary from infants to prekindergarten. Programs or training that target parents of young children must adapt their curriculum to the specific age of the targeted child.

This research is an advanced research with a broader field. From the results of previous studies, namely in 2016 and 2017 in East Jakarta (Rawamangun and Duren Sawit), it is known that young mothers in the ECE institution did not apply their concept of daily care (parenting and childcare and nutrition knowledge) (Akmal 2017; Akmal 2017). That's because the insight or information received is not detailed (too general or too rough) and is obtained through conversation in the daily lives of young mothers. In addition, there is also a lack of desire to learn and read news from various social media related to parental concepts. Therefore, this study was conducted to find out the extent and knowledge and understanding of parents and ECE tutors about care related to the six main aspects, by developing a fun, meaningful, and contextual Early Childhood Training Module, and testing the effectiveness of module development. Early Childhood Care Training Module and its relationship to six aspects of child development for parents and ECE tutors.

2 THEORITICAL STUDY

2.1 *The Importance of Parenthood in Early Childhood Development*

New parent education programs use home visits, but the high cost of this intensive approach can be a barrier to providing parenting education to parents. Gilmer et al., (2016) identifies effective and efficient new parental education approaches that can realistically be given at a universal level as well as evaluations that identify educational programs or processes that meet parental criteria in understanding stimulation aspects of child development. Interventions to support parenthood to function properly and prevent the transmission of negative care models from generation to generation and promote child development and overall family health. Increasing the number of divorces, poverty, substance abuse, and mental health problems among parents increases the risk of neglect and child abuse. New interventions that are effective, preventive and promote health are urgently needed to support families with young children. Kalland, Fagerlund, Von Koskull, & Pajulo, (2016)’s research provides a theoretical understanding of the importance of parental mentality for the development of parent-child relationships and child development and proposed action mechanisms for increasing mental capacity.

The longitudinal study by Kopala-Sibley et al., (2018) investigated the mothers who also reported the behavior of their 3-year-old children. mothers who care for children with hostility, record the results of unfavorable cognitive development in children. Conversely, mothers who have regulations in parenting result in an increase in children's brain connectivity. The results showed parenting was associated with changes in parental emotions and parenting influenced the connectivity of the child's brain. Therefore, it is important to provide guidance to parents through various

intervention programs and parenting training for parents as a provision to care for young children positively.

Grindal et al., (2016) study examines the potential additional benefits of parenting education for parents, the most common form of parent-focused services provided by preschool programs (parenting programs), on the development of children's cognitive and pre-academic skills. The results show that childcare education that provides examples or opportunities to practice positive interactions with children will have a stronger additional impact than parental education programs; and second, the impact of cognitive improvement on children will increase with the intensity and frequency of parenting education provided.

Another important thing from parenting in early childhood is the theory of the cyclical relationship between parent and child interaction with violence and coercion and behavioral problems that begin in early childhood. Coercive interactions have been theorized and were found to facilitate the development and growth of early behavioral problems in children, parenting program interventions for parents from the outset often target childcare to prevent or reduce the initial behavioral problems that interfere. Sitnick et al., (2015)'s findings provide longitudinal confirmation that increasing positive involvement in parent-child interactions can reduce children's growth in problematic behavior.

Today's economic phenomena also contribute to the importance of parenthood knowledge for parents in the millennial era. Psychological parents (parental stress, depression, and social support from friends and family) increasingly show the importance of parenting knowledge among high-risk families. Theise et al., (2014) findings show that parents with less psychological resources are likely to benefit from special programs on parenting provided by the school or government in order to deal with various problems in childcare. Parent-focused and family-based intervention programs promise to strengthen care among the families with the highest risk.

2.2 *Parenting Training Module on Six Child Development Aspect*

Families with disadvantaged socio-economic backgrounds and ethnic minorities are often difficult to reach for the prevention and handling of disturbing child behavior problems. Parenting programs that are carried out for parents give results in reducing disruptive behavior in children. Successful parents in program implementation such as increasing the use of praise and reducing harsh discipline show results in the form of changes in children's behavior. Such a study by (Leijten, Raaijmakers, Orobio de Castro, van den Ban, & Matthys, 2017) shows that ethnic minority families who are socially and economically disadvantaged in disadvantaged environments can be involved and benefit from parenting programs for childcare interventions to reduce disruptive child behavior.

Parenting training for parents has been developed in many countries. The rapid global spread of parenting programs in childcare interventions, but little is known about their effectiveness when transported to countries that are different from where they came from, or about factors that influence success. The first systematic effort to overcome this problem, focusing on interventions to reduce child behavior problems. Gardner, Montgomery, & Knerr, (2016)'s results found a higher effect in countries with families where childcare values are focused on survival compared to countries that rank more individually. Contrary to popular belief, parenting programs for childcare interventions appear to be at least as effective when transported to countries that are more culturally different, and in-service provision, than interventions in which they are developed.

The development of the parenting program module is also based on the growing development of child abuse which has become a global problem affecting high-income countries (HIC) and low and middle-income countries (LMICs). Research has shown that children who live in the poorest countries and communities in the world are more likely to suffer abuse and neglect. There is some evidence that parenting training programs on childcare interventions can help in the prevention of child abuse, but most of this research has been conducted at HICs. The findings show that parenting programs have the potential to prevent and reduce the risk of child abuse. However, there is a lack of good evidence from LMICs where the risk of child abuse is greatest (Coore Desai, Reece, & Shakespeare-Pellington, 2017).

The preparation of the parenting training module is also based on the results of research that the parenting program can influence parenting patterns that have an impact on the development of the child's executive function, cognitive development and behavior. Lucassen et al., (2015) investigated the relationship between strict childcare and sensitive childcare practices and the executive function of children (EF) in early childhood in 607 families. The results show parenting that is less sensitive than the mother and parenting that is harder than the father's is associated with lower metacognition scores and self-control that is inhibiting. Parenting is not associated with child flexibility. This study extends previous research on the relationship between childcare and EF with a focus on the role of fathers and shows the independent effect of mothers and fathers on EF children.

The Parenting Program Module, in addition to providing knowledge to parents on how to improve cognitive aspects or executive functions, this module also provides knowledge on other aspects such as children's social emotions. Although there are many children who are affected by anxiety and depression, the trajectory of the development of internalization disorders is not well understood. The study applied a group-based modeling approach to examine the interaction between the temperamental nature of negative emotions and parenting on the symptoms of internalization from early childhood to adolescence. Interestingly, children with high negative emotions are more likely to be group members with high levels of internalization symptoms if their mothers show high warmth / sensitivity. The research findings add to the understanding of the developmental pathway of internalization problems from childhood to adolescence by suggesting that a combination of tempera and certain childcare can increase the tendency of adolescents to develop internalization problems (Davis, Votruba-Drzal, & Silk, 2015).

Likewise, the behavioral content in the parenting training module is based on research conducted by Guyer et al., (2015) research on behavioral inhibition (BI) is a temperament that is characterized by social aversion and withdrawal from a foreign or novel context and carries risk for social anxiety disorder. Developmental outcomes related to this temperament can be influenced by the context of childcare. The convergence of a child's temperament disposition and caregiving environment is finally expressed at the level of behavior and nerves in emotional and cognitive response patterns to social challenges. In contrast, all adolescents showed decreased custodial responses to peer rejection at higher levels of care. These findings indicate that BI in early life is associated with greater neurological sensitivity to differences in parenting styles, especially harsh parenting.

The relationship between symptoms of child externalization, disruptive maternal care, and control of children's efforts was examined. Both disruptive care and low child endeavors have been linked to psychopathology, but the problem of externalizing children and low child endeavors may affect

the quality of care and each other. This finding is consistent with the view that externalizing children's behavior undermines children's efforts and contributes to be a nagging mother and that the relationship between disruptive parents and children's effort is two-way at all times. Thus, parenting programs for interventions that focus on modifying the problem of externalizing children (as well as the quality of care) can influence the quality of care received. The Parenting Program Module developed by researchers is expected to be able to provide knowledge that inspires parents to raise their children to be superior (Eisenberg, Taylor, Widaman, & Spinrad, 2015). Semi-structured observations by Sulik, Blair, Mills-Koonce, Berry, & Greenberg, (2015) about caregiving prospectively estimating performance on a set of executive function tasks and the primary caregiver report on externalizing behavior. In addition, the relationship between early childcare and externalizing behavior is mediated longitudinally by the executive function, providing support for a process model where sensitive care promotes children's self-regulation, which in turn reduces the child's externalizing behavior.

The developing children's brains are very sensitive to the input from their social environment. Maintaining social experience enhances the acquisition of social and cognitive skills and emotional competence. However, many young children are faced with unhealthy development, including poverty, improper care, and violence, and increased sensitivity to the social environment means that children are very vulnerable to adverse childhood experiences. One source of social difficulties in a child's life can come from strong, inconsistent, insensitive or hostile parenting. Parenting is seen as a cornerstone of early socio-emotional development and poor parenting style is associated with adjustment problems and a higher risk for developing moods and behavior disorders. The growing literature shows that an important predictor of parenting behavior is how parents, especially mothers, become parents themselves.

Lomanowska, Boivin, Hertzman, & Fleming, (2017) examines how difficulties in early life influence later parenting behavior and how these effects can continue between generations. The psychological basics of parenting, including responsiveness to young people, executive functions and influences, as well as physiological mediators of parenting behavior, including hormones, brain regions and neurotransmitters, and how developments in this relevant domain can be influenced by difficulties experienced early in life. Genes and early experiences interact to predict maternal behavior, including the involvement of epigenetic mechanisms. Understanding how adverse parenting breeds the next generation of harmful parenting is very important to design interventions that aim to prevent this intergenerational cycle of early generation between generations.

The parenting training module contains the level of achievement of child development standards, which is the first standard that must be considered. Child development achieved is the integration of aspects of understanding religious and moral values, cognitive, language, social emotions, physical motor and art. Early childhood development and growth are unique and individual therefore their needs are also individual. To stimulate learning can be grouped by age, such as childcare for children aged 0-2 years, play groups 3-4 years, kindergarten age groups 5-6 years (Kurniah, Andreswari, & Kusumah, 2019).

2.2.1 *Social Emotional Development Aspect*

Parents need to be trained in how to measure social and emotional development in early childhood. The parenting training module needs to describe the relationship of social and emotional development to children's functioning and overall well-being, and then present the main measure-

ment challenges associated with this domain, including the lack of clarity around the conceptualization of subdomains of social and emotional development, and issues related to quality and ease of use for actions that still exist (Darling-Churchill & Lippman, 2016).

Children's social competence is the ability to build and maintain social contact in the process of interaction on the basis of a positive self-attitude. Communicative competence, or competence in interaction, is a system of psychological knowledge about self and others, communication skills, behavioral strategies for social situations, which allows building effective communication in accordance with the goals and objectives of interpersonal interaction. Emotional intelligence is the ability to experience emotions, to understand the emotions of others and others and to regulate their expressions. Emotional literacy is a combination of knowledge and skills needed for adequate perception of communicative situations, evaluation and emotional expression (Parhomenko, 2014).

2.2.2 *Physical and Motor Development Aspect*

The child's physical and motor development must be considered in certain contexts. Crawling and learning to walk illustrate how much mother's daily practice in raising children is important to master the motor physical development benchmarks of children. Parents also need to understand the maturation of the child's brain and nerve structure which produces a beneficial effect on strength and balance by increasing the speed and efficiency of information processing. The relationship between motor development and brain growth is mainly expressed at the age of the baby, and this can also be attributed to the accelerated growth of the unique cerebellum (Đorđić, Tubić, & Jakšić, 2016). Parents need knowledge in improving children's independent walks which increase children's mobility and opportunities for social interaction, while motor development in general has a significant effect on children's cognitive and language development.

2.2.3 *Moral Development Aspect*

Moral development can be considered as a process of developing behavior regulation based on an internalized norm system. In the cognitive aspect it is knowledge of the norms and consequences of violating the norm, in the emotional aspect the orientation to emotional feelings about the cognitive approach starts from J. Piaget cognitive and intellectual structure, moral judgment and moral reasoning. These ideas are embodied in the theory of developing moral awareness proposed by L. Kohlberg. Childhood is an important time for humans in moral norms and moral development at that age. Social-cognitive psychological development in childhood provides the conditions necessary for moral development. The development of social relations and communication with peers at an early age plays an important role in moral development (Molchanov, 2013).

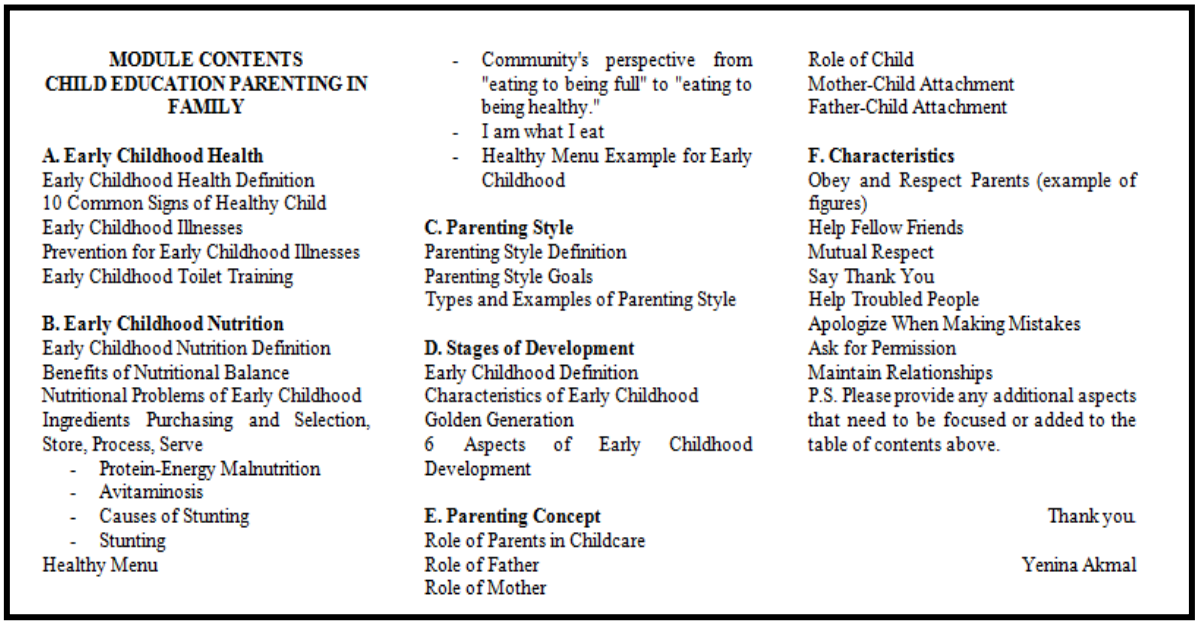
2.2.4 *Cognitive Development and Nutrition*

Jürges' research in education, health, and development economics has highlighted the important role of early health (at all stages of infancy and childhood) in human cognitive and non-cognitive development and later life outcomes. The importance of the initial state of life has been shown both theoretically to provide credible evidence from cleverly designed observational data and field experiments. This literature also highlights the importance of policy interventions that can improve educational attainment through better child health. Most existing studies on the relationship between health and cognitive development in developed and developing countries have focused on physical health. Compared with the effects of poor physical health, e.g., malnutrition or

childhood infections, on cognitive development, little is known about the relationship between poor mental health in children and long-term outcomes that are mediated mainly through cognitive development. Therefore in the parenting training module, it is necessary to instill knowledge in parents about proper nutrition and stimulation for children. (Jürges, Schwarz, Cahan, & Abdeen, 2019)

2.3 *Parenting Training Module*

The following is the conceptual model design of the parenting training module:



MODULE CONTENTS
CHILD EDUCATION PARENTING IN FAMILY

A. Early Childhood Health
Early Childhood Health Definition
10 Common Signs of Healthy Child
Early Childhood Illnesses
Prevention for Early Childhood Illnesses
Early Childhood Toilet Training

B. Early Childhood Nutrition
Early Childhood Nutrition Definition
Benefits of Nutritional Balance
Nutritional Problems of Early Childhood
Ingredients Purchasing and Selection, Store, Process, Serve
- Protein-Energy Malnutrition
- Avitaminosis
- Causes of Stunting
- Stunting

Healthy Menu
- Community's perspective from "eating to being full" to "eating to being healthy."
- I am what I eat
- Healthy Menu Example for Early Childhood

C. Parenting Style
Parenting Style Definition
Parenting Style Goals
Types and Examples of Parenting Style

D. Stages of Development
Early Childhood Definition
Characteristics of Early Childhood
Golden Generation
6 Aspects of Early Childhood Development

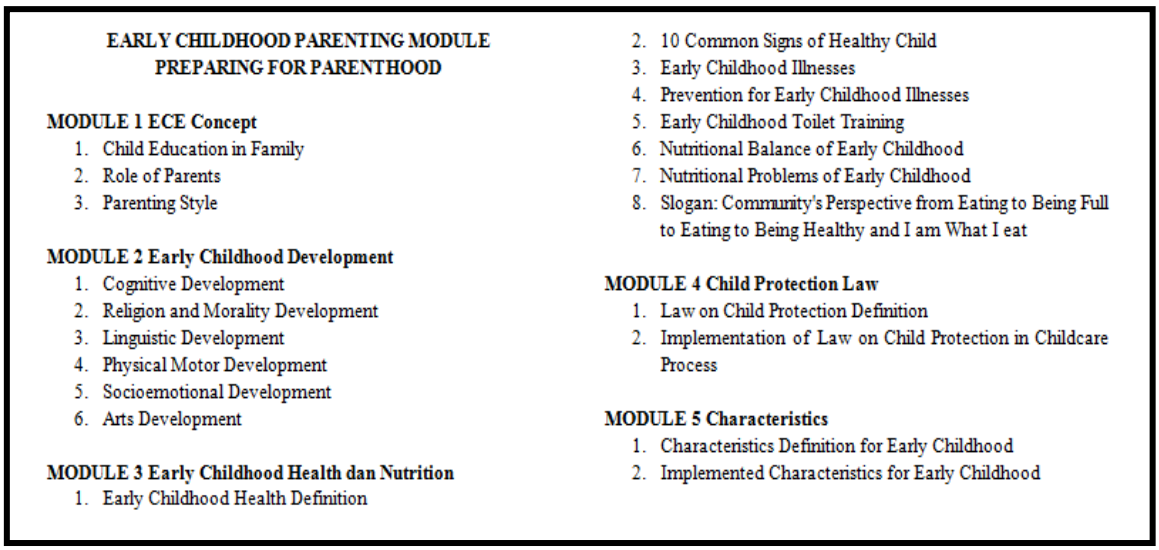
E. Parenting Concept
Role of Parents in Childcare
Role of Father
Role of Mother
Role of Child
Mother-Child Attachment
Father-Child Attachment

F. Characteristics
Obey and Respect Parents (example of figures)
Help Fellow Friends
Mutual Respect
Say Thank You
Help Troubled People
Apologize When Making Mistakes
Ask for Permission
Maintain Relationships
P.S. Please provide any additional aspects that need to be focused or added to the table of contents above.

Thank you.

Yenina Akmal

Figure 1. Contents of Early Childhood Parenting Training Module



EARLY CHILDHOOD PARENTING MODULE
PREPARING FOR PARENTHOOD

MODULE 1 ECE Concept
1. Child Education in Family
2. Role of Parents
3. Parenting Style

MODULE 2 Early Childhood Development
1. Cognitive Development
2. Religion and Morality Development
3. Linguistic Development
4. Physical Motor Development
5. Socioemotional Development
6. Arts Development

MODULE 3 Early Childhood Health dan Nutrition
1. Early Childhood Health Definition
2. 10 Common Signs of Healthy Child
3. Early Childhood Illnesses
4. Prevention for Early Childhood Illnesses
5. Early Childhood Toilet Training
6. Nutritional Balance of Early Childhood
7. Nutritional Problems of Early Childhood
8. Slogan: Community's Perspective from Eating to Being Full to Eating to Being Healthy and I am What I eat

MODULE 4 Child Protection Law
1. Law on Child Protection Definition
2. Implementation of Law on Child Protection in Childcare Process

MODULE 5 Characteristics
1. Characteristics Definition for Early Childhood
2. Implemented Characteristics for Early Childhood

Figure 2. Contents of early childhood parenting module

3 METHOD

This study used Research and Development method (Gall, & Borg, 2007). Educational Research and Development (R&D) is a process to develop and validate educational products such as the learning objectives, methods, curriculum, evaluation, both hardware and software, and procedures. The ultimate goal of R&D learning is the appearance of new products to improve the performance of education and learning. Thus, the learning process becomes more effective and efficient and will be suitable for the demands of the needs.

The process of collecting data used qualitative and quantitative. The population in this study were parents and ECE tutors who have children up to 8 years of age who attend the BKB Sakura ECE institution in East Jakarta. Sampling used in this study was purposive sampling technique. Purposive sampling technique is a sampling technique performed by taking a subject that is not based on strata, random, and region, but based on the existence of objectives (Arikunto, 2010). Data collected by structured interviews. Furthermore, triangulation is carried out to improve the overall content and the title of the training module after several trials. And last, after the improvement process, post-test execution through the last parenting activity.

Qualitative was used to interview participants who join in parenting, both the first and second stages. In qualitative, the authors conducted a post-test in the third stage. To recheck the validity of the data, the authors used Triangulation, i.e., asked the expert about the Table of Contents of the planned module. In this study, the targeted ECE institutions were institutions that were still newly established and located in poor areas in East Jakarta.

4 RESULT AND DISCUSSION

This research consisted of five stages. (1) The first stage was the pre-intervention stage. At this stage, data collected from service in Rawamangun, East Jakarta, and research and service in Duren Sawit, East Jakarta in 2013, regarding parenting. The population and sample of this reserach are parents and ECE tutors in BKB Sakura, Rawamangun, East Jakarta. The population consist of 16 parents and ECE tutors. The popultion's background in this reserach are dominated by Senior High School, although there are elementary, middle school or even bachelor's degree graduate. The age of the population is about 21 – 49 years. The population were single, had no children, and had three children.

Table 1. The Information of Population in This Research

No.	Name	Age	Education	Amount of Child
1	U	33	Bachelor's Degree	2
2	E S H	37	SHS	2
3	L B	34	SHS	-
4	L M	26	MHS	1
5	S R	39	SHS	2
6	M	28	SHS	2
7	W	37	MHS	2
8	S	49	Elementary Schoold	7

No.	Name	Age	Education	Amount of Child
9	A T	36	Vocational High School	1
10	E S S	32	Bachelor of Early Childhood Education	2
11	D K W	30	Bachelor of Early Childhood Education	2
12	A S	33	Vocational High School	1
13	F A	22	SHS	-
14	A P	21	SHS	Not Married Yet
15	S F	30	SHS	3
16	R S J	33	Bachelor of Early Childhood Education	1

(2) The second stage was a parenting activity titled "The Role of Parents in Educating Children Through Their Character." The activities included participants conducting Focus Group Discussion (FGD) and the execution of structured interviews. Then, it continued by providing input in preparation for making the Early Childhood Parenting Training Module.

(3) In the third stage, parenting activity titled "Early Childhood Health and Nutrition" with FGD and table of contents improvements from the FGD results were implemented to examine the first module. The fourth stage contained the second module trial activities through parenting activity with the title "Care and Protection of Early Childhood in Industry 4.0" as well as an FGD and module content improvement (table of contents) with Triangulation. In the fifth stage, module repairs were carried out. Based on input from participants and experts, the module title had improved, i.e., "Early Childhood Parenting Module - Preparing for Parenthood" with content referred to the six main aspects. Furthermore, at this stage, a post-test was also conducted to see the understanding extent of the participants after going through several steps.

Data analysis in this study was conducted to determine the extent of the understanding of 16 parents and ECE tutors regarding the main aspects of parenting. Data analysis was obtained from the results of the post-test conducted in Stage 5 (the last stage). The post-test consisted of ten multiple-choice questions consisting of five main aspects of parenting contained in the Early Childhood Parenting Training module, namely ECE Concepts Aspect, Early Childhood Development Aspect, Early Childhood Health and Nutrition, Child Protection Law, and Characteristics. Question number 1 and 2 are a question of ECE Concept, question number 3 – 7 are a question of Early Childhood Health and Nutrition, question number 8 is a question of Characteristics, question number 9 is a question of Child Protection Law and question number 10 is a question of Early Childhood Development Aspect.

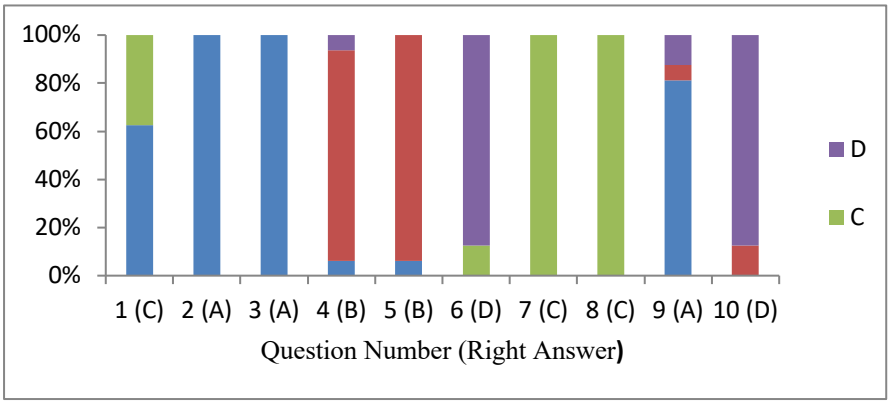


Fig 3. Post Test Answer from 16 Parents and ECE Tutors

The Diagram (Fig. 3) shows that on question 1 there are 62,5% (10 person) parents and ECE tutors who gave incorrect answers and on question 2 and 3 all of the parents and ECE tutors chose the right answer. Question 4 there are 12,5% (2 person) parents and ECE tutors who gave incorrect answers, on question 5 there are 6,25% (1 person) parent and ECE tutor who incorrect answer. Question 6 there are 12,5 (2 person) parents and ECE tutor chose incorrect answers. Question 7 and 8 all of the parents and ECE tutors chose the right answers. There are 18,75% (3 person) parents and ECE tutors on question 9 incorrectly chose answers. Last, on question 10 there were 12,5% (2 person) parents and ECE tutors who gave answers incorrectly.

Based on Fig. 4, it can be seen that only 13.50% of parents and ECE tutors understood the aspect of ECE Concept. In the Early Childhood Health and Nutrition aspect, 68.75% of parents and ECE tutors grasped the aspect. Based on the tabulation above, all parents and ECE tutors comprehended the aspect of Characteristics. In the aspect of Child Protection Law, 81.25% of parents and ECE tutors acknowledged the aspect. Finally, 87.50% of parents and ECE tutors apprehended the aspects of Early Childhood Development.

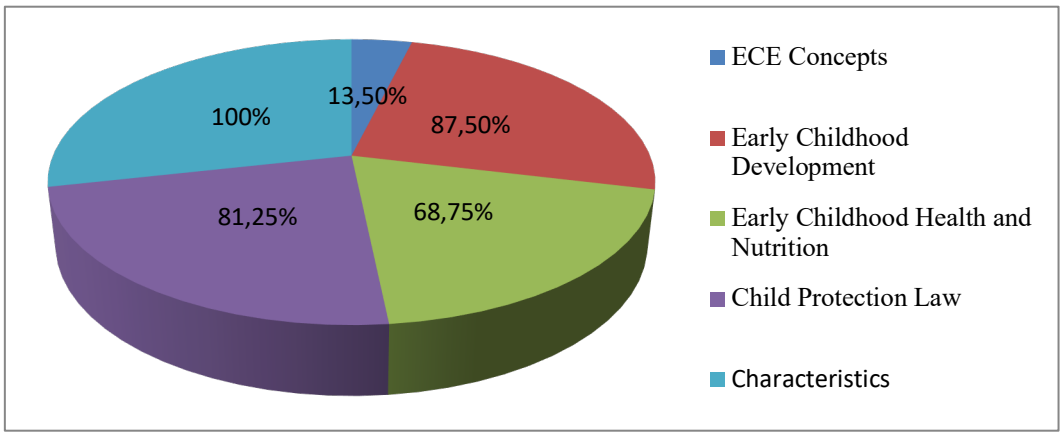


Figure 4. Main Aspects of Parenting Understanding

From the data above, the understanding and knowledge of parents and ECE tutors were already good enough but need an improvement in the aspect of Early Childhood Health Nutrition. This research focus was on studying early childhood. As we know, early childhood will encounter a golden age from birth to 8 years of age. It will affect the growth and development of early childhood whenever an error or mistake occurs in the care and nurture process that starts from a lack of knowledge or understanding of the ECE concept. In this regard, the post-test result data showed

that there was still a lack of knowledge and understanding from parents and ECE tutors about ECE concepts. It should not be possible for parents, particularly for ECE tutors who are on duty to teach in ECE institutions daily. Thus, parents and ECE tutors need an Early Childhood Parenting Training module.

Research findings have shown that preschool programs can have a positive impact on children's cognitive, academic, and social-emotional development. But additional programs can reinforce what is delivered at school through stimulation programs that are similar at home. Parenting training modules are needed to complete the school program. In accordance with research conducted by Grindal et al., (2016) that one of the old strategies for increasing the effectiveness of preschool programs is to combine educational programs for children with additional programs for parents. Preschool-based parenting education programs provide parents with information about their child's development, and guidance on how they can provide growth-promoting activities, usually focusing on parent-child involvement that is likely to support a child's cognitive development. Although many preschool programs routinely include a parenting education component, little is known about the additional benefits of this program or whether different approaches have different impacts on children.

5 CONCLUSION

5.1 *Conclusion*

This study attempted to develop an early childhood parenting training model to improve life skills, especially in the parenting style of ECE parents and tutors at BKB Sakura ECE, East Jakarta. As a first step, the preliminary study concluded some initial findings related to six main aspects through community service activities and research with the same title and target in various places in East Jakarta. From the results of the preliminary study, it was concluded that ECE parents and tutors did not understand much about the six main aspects. From the initial findings, several meetings were held with ECE parents/tutors in the form of FGDs and interviews. The implementation of post-tests was also carried out to receive input from participants to complete the early childhood parenting training module. The parenting training module was intended to complement both the knowledge and application in daily life related to early childhood parenting. From these six main aspects, it seemed that the ECE parents and tutors had not understood the concept of ECE yet. It was significantly observed. In other perspectives, there was still a lack of knowledge regarding these six main aspects.

5.2 *Suggestion*

From the results of several community services regarding parenting in few ECE institutions with parents and ECE tutors as participants; then undertaking research upon parenting in Rawamangun; and conducting two experiments at the East Jakarta ECE institution, it is very explicit that parents and ECE tutors surely need training on Parenting: Preparation to Become Parents through six main aspects, and the results will be greater if equipped with the Early Childhood Parenting Training module. Thus, the training module can be required reading for ECE Institutions and parents.

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Transformation of Tolerance Values (in Religion) in Early Childhood Education

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ABSTRACT: Religious tolerance is a supporter of social harmony and brings a country to a better life. Instilling tolerance in early childhood is a challenge for early childhood educators. This study aims to describe the transformation of religious tolerance values by teachers in early childhood education. This research is a type of qualitative case study research model with researchers as observer participants. This research produces the following findings, that (1) transformation of tolerance values among religious communities, is explicitly not taught in Early Childhood Education (ECE) on the grounds that all students are of the same religion, (2) transformation of tolerance of values among religious students taught through learning integrated with other lessons, (3) although explicitly the values of tolerance among religious students are not taught, but the values of togetherness such as greeting, sharing something that is owned, and helping the needs of other students are taught by practicing at the same time.

Keywords: Early Childhood Education, Tolerance Values in Religion

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1 INTRODUCTION

Indonesia's reputation for tolerance stems from a long history of religious diversity. Hundreds of local religions and six or seven world religions have lived side by side in the Indonesian archipelago which consists of 17,000 islands for hundreds of years. However, in recent years, tensions have risen between religious and ethnic groups in Indonesia, resulting in conflicts and cases of religious based violence. This development raises the question of how to resolve the decline in religious tolerance.

Recent studies have shown that education is one of the most effective ways to prevent intolerance (UNESCO, 2015). The transformation of the values of religious knowledge is the key to combating intolerance and stereotyping (Scheiner, 2015, p. 142). Increased awareness that 'religious literacy' can give to foster religious understanding and tolerance (Moore, 2007). Religious literacy is defined as the ability to distinguish and analyse the fundamental intersections of religion and social / political / cultural life through various lenses. According to (Moore, 2007) the consequences of religious illiteracy are very deep and include triggering cultural wars, limiting historical and cultural understanding, and promoting religious and racial bigotry. Schools play a fundamental role in preparing early childhood for the realities of life in plural societies and inevitable encounters with 'other' cultures (Miedema & Bertram-Troost, 2008).

Childhood studies emphasize children's agency, their ability to understand their own world and act upon it. Children actively participate in meaningful social interactions in both formal and informal environments. Children interact in an increasingly diverse world where they face cultural and religious differences (Faas, Smith, & Darmody, 2018). Students express a preference for whole class learning rather than a "belief-specific" approach that is done in their first years. Children enjoy learning about other religious beliefs and what their friends will celebrate and believe. Some children express a preference for mixed classes, because separate lessons often eliminate them from their classmates. For many children, mixed classes also provide them with tools to deal with differences and an increasingly diverse world. One solution to instilling moral values is to combine the best approaches over the past few decades. The Comprehensive Value Education Model is progressive and includes all content, methodology, and applications throughout the school and community (Kirschenbaum, 2019).

Childhood religious experiences with peers are important in the development of religiosity. However, the influence of peers on this experience has not been operationalized and measured properly. Tratner et al., (2017) overcame this limitation by developing research on Children's Religious Experience with Peer Inventory (CREPI). The study also measured the influence of peers on childhood religious experiences, allowing for future investigations whether and how these influences predict religiosity as they mature.

Religious education is a field that requires pedagogical education, teacher skills are needed to transform religious values in children, because there is no universal method to systematically incorporate religious principles into children's education. Teachers must also have greater sensitivity and empathy, and also deep religious beliefs, which are reflected in their behavior and the way they relate to students (Ene & Barna, 2015).

Early childhood education is a comprehensive effort, with several educational policies including spiritual development as part of the approach. However, research exploring the spirituality of early childhood is still scarce, which limits understanding of the phenomenon and its full

application in the educational environment. Furthermore, maintaining children's spiritual development is a complex problem, coupled with a variety of factors, no less lack of clarity about what spirituality is. Adams, Bull, & Maynes, (2016) examines the possible spiritual characteristics of children. Efforts to define spirituality before then reviewing how the concept is conceptualized in the broader literature, and then in the literature on early childhood.

Based on previous research, the gap analysis in this study is to see how teachers transform religious tolerance values to early childhood, because tolerance values, are increasingly eroded due to the penetration of global values that sometimes conflict with values that are believed. This phenomenon tends to occur in people who live in urban areas. Tolerance is required for every citizen or among followers of religion which are basic provisions for the integrity of the nation and state. The purpose of this study is to find out how teachers change the values of tolerance among adherents of religion into small children who become students in kindergartens.

2 THEORITICAL STUDY

2.1 *Religiosity in Early Childhood Education*

Religious beliefs originate and what makes people believe in occult matters remains an open question in the science of religion. Contemporary theories that explain religion usually focus on developing biological dispositions or social factors. Łowicki & Zajenkowski, (2019) is interested in how individual differences in empathic emotional care and social learning mechanisms are exposed to credible religious actions during childhood interactions to predict religion. It was revealed that being exposed by credible religious actions explained more differences in religiosity than empathy. Overall, these findings indicate that there are at least two independent factors associated with the emergence of religious beliefs. One is an individual's tendency to feel other-oriented emotions, while the other is a social factor that is exposed to credible religious models during one's parenting. This shows the importance of religious values instilled early on both at home and at school.

Religion holds certain values as more important than others and is often a container for spreading specific values among followers. Religiosity as a definition of self, and not as spirituality or as a specific value. A meta-analysis of studies conducted in 15 different countries involving three main monotheistic religions (Christianity, Judaism, and Islam) examined the relationship between values and religiosity. In all three religions, reliability can be said to involve a sense of belonging to the religious community and participation in religious activities. Meta-analysis concludes that religious people consider Conservation values to be more important and Openness values to change are not too important. Religiosity is also associated, albeit weak, with higher virtues and lower values of self-improvement, and lower universalism (although the latter effect is very small and is related to certain countries). This study defines religiosity more broadly than religious participation, as a combination of the importance given to God in one's life, and the frequency of individual and family prayers (Uzefovsky, Döring, & Knafo-Noam, 2016).

The challenge of globalization places character education as an important part of realizing quality human beings. Efforts to improve the nationalist and religious character in the Nasima Center are carried out through a process of intervention and habituation. Character education is carried out in three domains. First, the development of nationalist character values and religious tolerance integrated into teaching and learning activities. The second domain, integrating character educa-

tion with extracurricular activities and school culture. The third domain involves student guardians to help build homes that are in line with those developed at school (Yulianti, Sutarto, & Sugiyo, 2019). Ergun & Rivas, (2019) found that social roles, religiosity, and values were important determinants. Mothers who have early childhood are important to raise concerns about changing times and have a more egalitarian and post materialistic outlook. Bano & Ferra, (2018) findings support the hypothesis that parental education, especially maternal education, is the key to modernizing religious and cultural norms in conservative societies.

Children five to 7 years like teleological explanations, but this preference decreases with age. Children aged 5 to 7 years and 8 to 10 years also find teleological explanations more useful than adults. Therefore, understanding the purpose in life events is rooted in childhood, which has the potential to reflect more general sensitivity to religious tolerance (Banerjee & Bloom, 2015).

Granqvist & Nkara, (2017) considers the effect of cultivation (including culture) on the developing psychological tendencies expressed in religious and spiritual development. An integrated understanding of the development of religious and spiritual requires sides (nurture-or-nurture) and additives (natures + nurture) by the teacher. The development of religious and spiritual has been understood as an expression of a developing cognitive module (nature) on the one hand, and socialization and social learning (nurture) on the other hand, or in similar additive terms (for example, nature produces brain / mind, culture fills in the details). Heiphetz, Lane, Waytz, & Young, (2016) points out that children's religious cognition often fits in with the implicit response of adults, revealing anthropomorphic ideas about God's mind.

Often in conservative religious populations, fantastic thinking, interests, and beliefs are not recommended because fantastic beliefs are considered to be contrary to religious doctrine. However, belief in unseen and omnipotent entities such as God and Santa Clauses tend to rely on similar conceptual abilities that might complement rather than conflict with religion. Therefore, Thibodeau, Brown, Nancarrow, Elpers, & Gilpin, (2018) examines how one's current fantasy orientation and retrospectives are related to religious orientation. The findings show cultural concern that childhood games and fantastic thinking can damage or contradict religious doctrine. This finding has important implications for understanding how religiosity and fantasy are conceptually related, as well as how cultural practices can influence conceptual development.

To study children's religious tolerance at the beginning of the twenty-first century provides a major opportunity to explore personal, social and global relationships in spiritual understanding and practice. Countless definitions of diversity have been studied, but it is also said that the value of religion is often unclear. King, (2013) suggests an open description that can be applied to childhood where the fabric of human life first appeared, fostered into further growth and shaped into adult expression. Spirituality that is fostered well in childhood or adolescence is closely related to the development of spiritual potential in adulthood. Scott, (2014) research results look at critical and constructive educational responses and corrections for every aspect of religious education mosaic. It advocates the reuse of religion, institutions, and traditions as indispensable for reopening access to children to participate in social spaces and learn tolerance with differences.

2.2 *Religious Tolerance Values in Early Childhood*

Studying an understanding of religious tolerance among students is very important for the continuity of community peace in the future. Firdaus, (2018) research results show that there is a ten-

dency for students to increase their religious tolerance when they understand the meaning of religious tolerance in the teachings of Islam as exemplified in history by the Prophet Muhammad (PBUH). Some other students are intolerant in religion because they are more likely to be religious exclusively with a legal style ideology that only chooses black or white choices over truth. These results indicate that students generally can understand good religious tolerance during an investigation when they understand the true Islamic inclusiveness of various religious societies.

Religious education can be considered important for the development of a tolerant society. The education system is one of the main institutional structures that maintain the value of intolerance. Increasing tensions based on religious belief in many multicultural societies, this is the right time to review educational assumptions and practices. The state education system centralizes the curriculum to ensure that all children receive adequate religious education (Coleman & Eds, 2011).

The need for tolerance not only increases because of the epidemic of hatred, but also because of daily social interactions that require treating each other with respect and dignity. (Religious) intolerance is most often reflected in insults in classrooms, aisles and playgrounds, outbursts of anger, social clicks, rejection and dismissal of the perspectives of others during class discussions (Van Der Walt, 2014). Tolerance is not the only way to deal with differences, nor is it always the most appropriate way. Sometimes there may be good reasons not to tolerate certain forms of behavior or practices, and sometimes only "tolerance" can be considered inadequate because it requires negative evaluation and forms of rejection of identities and practices that appear to be valuable and worthy of recognition to others. To map the conceptual space where "tolerance" can be placed as a way to engage with differences, researchers in the ACCEPT pluralism project have developed a threefold concept, temporarily called "accept". It distinguishes between spaces of intolerance, one tolerance and one outside tolerance and where differences are handled on the basis of equality, respect and recognition (Maussen et al., 2012).

Maturity of social, emotional and cognitive skills is needed for the development of tolerance. (Lehtonen, 2019) research illustrates the development of identity skills that lead to tolerant behavior. Variations in the way children of various ages show tolerance in their conversation behavior. The reluctance to disagree and deal with others among early childhood contrasts with more frequent and direct quarrels. Despite differences of opinion, children show the ability to work towards solutions and respect each other's views. An environment of collaboration with opportunities for dialogue and negotiation can encourage tolerant behavior and promote learning about procedural tolerance. Collaborative contact with other people who have different beliefs is very important in this regard. Identifying students' religious and non-religious backgrounds and giving them the opportunity to discuss their beliefs in an inclusive and respectful environment, can increase children's self-esteem, create trust, and show them how to deal with diversity and difference. However, these skills are all needed to live in a multicultural democratic society in which schools must prepare children.

Religious education emerged as an important dimension / component of education with important effects on the moral health of the nation, and as a factor influencing human well-being (Niculescu & Norel, 2013). Cultivating religious tolerance at an early age is important, to instill awareness in children of different beliefs in society. School programs in religious tolerance can be presented in various forms of certain attitudes learning indicators that contain tolerance values. It is very important for individuals to develop a tolerant view of culture other than their own in order to function well in a peaceful society. Teaching fundamental values, principles and attitudes about tolerance at an early age can help in achieving this goal. Atamturk, (2018) found that children

basically have positive perceptions about tolerance and tolerance education needs to be developed at an early age to help good people in social life.

The studies conducted above have produced a number of findings, namely; the meaning of high tolerance among religious believers is that there is no open conflict between religious believers, even among adherents of good cooperation. The occurrence of the view that religion and beliefs are the personal affairs of each that gives birth to an awareness of mutual respect and the realization of an agreement not to interfere with each other's beliefs. Tolerance appears in various forms, including participation in rituals, community service, mutual assistance in celebrations, mixed marriages, and visiting each other when someone is sick. There are also a number of motivating factors for mutual tolerance, among others, the existence of a marriage culture between different adherents, socialization of tolerance in the family, and village leadership that emphasizes the importance of tolerance.

Sari & Indartono, (2019) explained the shape multicultural based education with various aspects of diversity. Theology taught tends to only strengthen the faith and attainment of heaven without being accompanied by dialogue with other religions. This condition sometimes causes intolerance. Although there needs to be a philosophical-paradigmatic reorientation about how to build multicultural, humanist, dialogue-persuasive, contextual, substantive, and socially active diversity. In the current postmodern era, aside from religious education, social studies must be used as a place to foster mutual tolerance and maintain harmony. This is because Social Sciences is directly related to social and real problems. Furthermore, there is also what is done in everyday life. Multicultural-based education on the character of religious tolerance with approaches that can be combined with socio-cultural values. This approach is a synthesis in order to face the seeds of intolerance that have begun to grow in the young generation of this nation. Teachers need to teach religious tolerance through social studies education based on a multicultural approach.

The results of research on growing tolerance in early childhood include (1) the addition of a learning plan in fostering an attitude of tolerance for early childhood, contained in the daily plan of activities (DPA), (2) the implementation of learning that refers to the daily plan activity (DPA) made by teachers, (3) the introduction of an introduction program to foster an attitude of tolerance to early childhood which is done through habituation, (4) the growth of tolerance in early childhood.

2.2.1 *Tolerance Logic*

In the conventional sense, tolerance refers to the decision to go alone or stick with what someone dislikes or disapproves of even when someone has the power to do something about it. Objects of tolerance or things that can be tolerated include various things including beliefs, practices, ideology, religion, ethnicity, social groups and others, and political organizations.

As for subjects or agents of tolerance, that is, those who practice it, they can be individuals, organizations or, more specifically, countries with a monopoly on their physical strength. Tolerance presupposes the following, all of which are closely reviewed and collectively define their conceptual identity.

First of all, the object of tolerance is a concern or interest for us. We believe that other people's trust or way of life or well-being is not our concern, we have no reason to ask how we should respond or what attitude we should take towards them.

Second, because the object of tolerance is thought to concern us, we judge and form a negative view of it. We may not like it, but it is never enough and needs to involve an element of disapproval. As rational beings, we generally want to convince ourselves that our dislike is not irrational or baseless but is based on good reason. In addition, to do something about the object of our dislike, we need support from others, especially the government, which we cannot secure without giving a good reason. Because different people don't like different things, not all of them can be objects of intolerance, they need to show why some dislikes are different and demanding and deserve to act. This is why those who oppose homosexuality don't just say they don't like it; they also argue that it is not natural, parasitic, socially subversive and so on. Likewise, a white racist is rarely satisfied saying that he doesn't like black people. He insisted on the intellectual and moral inferiority they suspected, showing their habits, history, practices and ways of life, and claims to show why they did not deserve to be treated equally.

Third, because disagreement involves judgment, it has a normative basis and presupposes the value or standard on which that assessment is based. Values or standards can claim to be universal in their validity or at least in societies which are objects of tolerance.

Fourth, tolerance presupposes that a person can do something about the object of tolerance, such as prohibiting, prohibiting, persecuting or stopping it, and thus acting on one's disapproval. If one does not have such power, all that can be done is to live with objects that are not approved as bad weather. Tolerance is only possible when intolerance is a choice

Fifth, even though someone has power over the object of tolerance and can forbid or end it, one chooses not to use that power and shows patience or self-control. This creates a problem because allowing it to continue can be easily misinterpreted to approve it, even though it isn't. The agents of tolerance need to clarify this partly to counteract the possibility of criticism from their opponents, partly to limit the expectations of the object of tolerance, and partly to inform the latter that their tolerance is an act of generosity that deserves recipient gratitude. They generally do so by continuing to express their disapproval of it, asking the object of tolerance not to make further demands, and, sometimes punishing tolerant views and practices.

Finally, tolerance presupposes some level of plurality of values. Because this involves self-control, it implies that a person has values that stop someone from acting on their disapproval. Someone may allow unapproved beliefs or practices to continue because someone respects the integrity or autonomy of the agent or believes that trust cannot or at least should not be forced, that physical or legal force must not extend to certain areas, or that peace and civil order don't have to be risky. These values do not rule out initial disapproval, but block or prevent action based on it, and must be clearly different from the one on which the initial disapproval is based. In this case tolerance involves at least a minimum number, which supports the initial disapproval, and which does not allow it. If the first is considered outside pare (Parekh, 2019).

Referring to the accumulation of the above research results, the state of the art and the difference in essence or novelty of the research plan to be carried out is on how teachers instill tolerance values among religious believers in early childhood in big cities whose lives are very complex, such as Jakarta. Thus, it is hoped that this research can complement the existing research treasury, namely the pattern of transformation of tolerance values from teachers to early childhood in kindergartens located in South Jakarta.

Meanwhile, the values of tolerance that will be studied in this study are based on early researched as follows; (1) Attitudes and actions that respect religious differences, (2) Attitudes and actions that respect ethnic differences, (3) Attitudes and actions that respect ethnic differences, (4) Attitudes and actions that respect differences of opinion, (5) Attitudes and actions that respect differences in attitude, (6) Attitudes and actions that respect differences in actions, (7) Respect the rights of others, (8) Respect the obligations of others, (9) Maintain and maintain school facilities, (10) Empathize with natural disaster victims, (11) Participate in the mutual assistance program to guard the school, (12) Respect for the worship of others, (13) Do not force will on others, and (14) Love each other.

3 METHODS

3.1 *Participant*

The location of this research was conducted at Al Qorny ECE located on Jl. Barkah II RT. 009 RW. 06 No. 13 Manggarai Selatan, Tebet, South Jakarta 12860. ECE Al Qorny is a product of the activities of the residents of the neighborhood committee. ECE Al Qorny is led by Ms. Yy with her last education graduated from high school. Ms. Yy is assisted by three female teachers who teach 22 students, who are divided into two age groups.

3.2 *Research Design*

This study used descriptive qualitative method. In this research, it is explained and analyzed how the pattern of transformation of tolerance values by teachers to early childhood in East Jakarta and South Jakarta. In this study, researchers acted as instruments and played an active role in digging in depth data information (in depth interviews and probing questions). All data obtained and relevant analyzed as material research wealth.

The research begins with a study of documentation that is relevant to the research material. The next stage is to focus group discussions (FGD) with teachers who teach in kindergarten as reference in East and South Jakarta. It is assumed that in kindergartens the transformation of tolerance values by teachers to early childhood has been carried out. The next step is to prepare an observation and interview guide as an effort to collect research data. Because this type of research is a descriptive qualitative that records, records, and describes events or phenomena that occur at the study site, participatory data collection is used in collecting data. Data collection was carried out in a participatory manner, in which the researchers placed themselves as instruments of life that carried out in-depth interviews with informants and key informants.

This research was conducted at two early childhood education institutions, namely Al Qorny ECE in South Jakarta. Research data were collected by means of documentation studies to assess various actual conditions of tolerance values and their implementation that occur in kindergartens or ECE research targets. The results of the study documentation are referred to at the beginning and end of the study as expert justification.

4 RESULT AND DISCUSSION

Al Qorny ECE is included in the category of educational institutions that lack adequate education delivery facilities (ECE). ECE floor is still made of cement plastered soil without ceramics. Study

space is open or without boundaries between one age group and other age groups, so that activities in one group mingle with other study groups. The Al Qorny's ECE Head Room, which is more appropriately referred to as the managing coordinator, also has no meaningful boundaries between the leader's "room" and the study room. The ECE Management Room is also used jointly by the Management Lead and teachers, during breaks.

In terms of the concept of a child-friendly and healthy educational environment, ECE Al Qorny still needs improvement. The floor where children play should be free of dust and clean, so children can play happily but stay healthy. Sanitation also needs to get the attention of managers or other parties who are willing to give attention. This is consistent with Elza, Handini, & Abdurrahman, (2018)'s research that found religiosity encourages positive behaviors such as clean and healthy living behavior. Religious affiliation consisting of individual and community participation and religiosity are priorities and beliefs affecting health risks through attitudes and behavior and social support. Religious factors play a positive role in health behavior that affects one's health risk. This provides an illustration that children who have high religiosity will have a high responsibility also in maintaining health both personal and environmental health. Students with high religiosity are reflected in their knowledge, attitudes, beliefs, and values as a component of the religiosity of each individual.

In terms of educating the managers, the Al Qorny ECE Management Leaders are high school graduates, while three other teachers are 2 diploma graduates (AMd) and one graduate education (S1). Thus, in terms of fairness, the Al Qorny ECE has adequate resources to continue to be developed. In fact, one of the teachers, can teach English to students. The teacher who teaches English is quite skilled and is liked by children. This can be seen from the enthusiasm shown by the children.

This research on tolerance in kindergarten and early childhood education in South and East Jakarta is based on eight dimensions, namely Peace, Openness, Accepting Differences, Reciprocity Award, Affection, Attention, Preservation of the Kindness of Others, and Respect for Others. The eight dimensions of the study are broken down into indicators of actions that can be seen and measured in the implementation of learning in schools. The first dimension is peace which is divided into two indicators, namely providing solutions and expressing friendly tones. The second dimension is openness, which is divided into indicators that take advice and are forthright. The third dimension is to accept differences divided into three indicators which are friends with anyone, not angry when their desires are rejected, and respect the rights of others. The fourth dimension is mutual appreciation divided into two indicators, namely giving congratulations to others and replying to greetings given by other parties to him. The fifth dimension is compassion which is divided into two indicators, namely helping friends and sharing with fellow friends. The sixth dimension is attention, which is only shared by having one indicator, which is feeling happy in togetherness. The seventh dimension is appreciation for the kindness of others. This dimension is also only divided into one indicator, namely mutual counseling or reminding. While the eighth dimension, which is the last dimension, that is appreciation for others is divided into two indicators, namely saying thank you and being able to adjust. The following is an analysis of the findings in the field and their discussion.

The findings in the field, that in transforming the values of tolerance to early childhood, on the dimension of Peace, ECE Al Qorny teachers have not implemented it well. This was reflected in an interview with Ms. Yy (Chair of the Manager) who stated that "a child raised by himself adopts

a solution to the problems he faces". Thus, children do not get direction from the teacher, to find solutions when disputing with their peers.

The phenomenon of teachers who do not transform the values of Peace to early childhood like this, then the child will not have a sense of tolerance to each other, when other children are experiencing difficulties. Supposedly, children get a little help scaffolding from teachers or adults in the vicinity. In that case, children make sounds in a friendly tone, ECE teachers in Al Qorny give less praise. But on the contrary, when the child makes a high-pitched voice that tends to be less friendly, the teacher immediately persuades the child not to shout or lower the tone of voice. Giving less praise to early childhood in doing good deeds, can encourage children to no longer want to do similar acts on other occasions. Vice versa, if the teacher reacts too quickly to the words issued in a high tone, then it tends to make the child seek the teacher's attention.

All early childhood children need the attention of adults around them. Likewise, when children are at school or learning parks or playgrounds, children always seek the attention of adults around them, especially those they know. In this context, the teacher is an adult who is around the child who is following the process of transforming grades in school. For this reason, teachers should give praise to young children who do good deeds, as a form of appreciation or rewards to children. Giving rewards to children will motivate children to continue to do the same kind. Vice versa, if the child when making a high-pitched voice that is less friendly, then the teacher quickly reacts, then this situation will be repeated on another occasion. This is understandable, because children will feel more attention if they do bad deeds, compared to when children have to do good deeds.

The phenomenon that occurs in the second dimension is when a child does an action that is assumed to be less pleasant or disturbs the mutual comfort, then the child being counseled is silent but is not focused on the advice given by the teacher. Even when their peers remind, it also has the same fate, that is, the child does not focus on what is conveyed by his friend. In terms of children's courage to be frank, the phenomenon in Al Qorny ECE shows that children are still lacking the courage to express their opinions. When asked the question how he would feel if he would ask for help from others. Children tend to be quiet and need help from the teacher to answer them. The teacher needs time to persuade the child to be willing to be frank. Theoretically, if an early age child is always given the opportunity to speak candidly, then he will dare to express his opinion. Therefore, early childhood will do something depending on the habituation that occurs in their environment.

That occurs in the third dimension, which is accepting differences. This dimension is divided into three indicators, which are friends with anyone, not angry when their desires are rejected, and respect the rights of others. For the first indicator, which is to make friends with anyone, the phenomenon that occurs in ECE Al Qorny is that children are free to choose friends and without limits. Perhaps, this is caused by a culture that is relatively the same. This is relevant to the experiment with 5452 kindergarten school children from 15 cities, Pandya, (2019) examined the effects of an adjusted spiritual education program on children's quality of life. Results show that religious education in cross-cultural kindergartens has increased the spiritual domain of calmness, silence and calmness; listen; receive; loving nature; and, using radiation, endurance and efficiency in daily functions so that children have a high ability to love and tolerate various differences.

Children will quickly mingle and be friendly with those who naturally have similarities, both skin color, face shape, hair shape, even the height of the body. As for the second indicator, which is not angry when his wishes are rejected, the phenomenon of early childhood in ECE Al Qorny

shows discomfort. Children tend not to be able to accept if their desires are rejected by the teacher. This fact is shown by behavior that opposes the situation, for example by lifting the chair he is sitting on. Meanwhile, on the third indicator, which respects the rights of others, the phenomenon shows that early childhood in Al Qorny, highly respects the rights of others. It appears when a friend's belongings are dropped and then taken and placed in a container on the desk. This shows that early childhood in ECE Al Qorny respect the property of others.

In the fourth dimension, which consists of two indicators, namely giving congratulations to other people who get good luck and return greetings delivered by others to him. The facts show that children are willing to congratulate friends who succeed in pronouncing English words correctly. But when asked if he was willing to say happy holidays to friends of different religions. The child was silent and after being urged he did not dare to say congratulations to friends of different religions. However, for greetings or good morning, good afternoon or the like, children at an early age at Al Qorny are willing to answer.

In terms of saying happy holidays to early childhood who have different religions, it seems not recommended by school leaders. This was revealed when asked to the teacher; whether in ECE is taught tolerance, like saying happy holidays to early childhood who are of different religions. The answer from the teacher was not taught, because those studying at Al Qorny ECE were all followers of the same religion.

The fifth dimension, which consists of helping friends and sharing with fellow friends, can be stated as follows. Empirically, teachers always teach early childhood so that they always help their friends who are having difficulties. This is evident, when one student has difficulty picking up a book, then spontaneously another friend helps get the book. Likewise, with sharing with fellow friends, when the break arrives, one early child brings his food and is offered to his friends. From this fact it appears that the problem of affection and sharing of something owned by the child, becomes a good habit and done correctly. Spiritual experiences or encounters can be intense and impactful moments in a child's life, often shaping their beliefs long into adulthood. They can manifest as occasional but very important events or as more regular events embedded in the routine of daily life. Examples include strong dreams believed to carry divine communication; the appearance of the deceased loved one; encounter with divine beings; permanent friends unseen by others who are usually known as 'imaginary friends'; guardian angels who sit by the child's bed every night to protect them while they sleep; or, for a small minority, near-death experiences. This experience gives strength to children to have moral values because they expect better things that are believed to come from miracles. This moral value brings peace to the child and wants to share peace with peers (Adams, 2019).

The sixth dimension consists of one indicator that is feeling happy in togetherness. The phenomenon that occurs in Al Qorny ECE is that children feel happy learning and playing together with their peers. But when asked if he would be happy too if playing together with peers of different religions, the child just kept quiet. Then with the help of the teacher, he replied that he was happy to also play with friends of different religions. This phenomenon shows that actually in early childhood naturally have a strong sense of respect for others. Therefore, it becomes important if the environment provides an ongoing push for the development of a sense of tolerance in early childhood. This dimension is relevant to the spiritual development of children who are influenced by the people with whom they interact and by the world around them. An important context for young children is kindergarten, which has a high level of responsibility for their (spiritual) education. In kindergarten children meet people with different religious and spiritual

attitudes, which may be fundamental to their own spiritual development. The results of Stockinger, (2019)'s research on how two kindergartens in Austria handle this diversity and how children deal with it are summarized. One result of this qualitative ethnographic research project is that, depending on religion, children have different opportunities to develop their spiritual communication and spirituality based on religious traditions and rituals. Developing kindergarten in accordance with the metaphor of safe spaces where diversity is recognized and discussed can contribute to the creation of equal opportunities for children's spiritual development.

The seventh dimension consists of one indicator, namely mutual respect and reminding fellow friends. The phenomenon in these dimensions and indicators is quite good, because almost every child always reminds one another. With short language, one child reminds other children not to experience unpleasant things. As in the Ganjvar, (2019) research which shows the efficiency and influence of spiritual education on improving the communication behavior of children with followers of other religions through the presentation of Islamic models derived from the Quran and the prophetic tradition. Conceptual analysis of spirituality together with a brief history of attention to the spiritual education of children in the world. As well as introducing an Islamic spiritual model and its foundation and moral aspects. Key factors of the Islamic Model for Religious Education for Children which play an important role in strengthening communication skills of children with non-religion.

The last dimension is the eighth dimension which consists of two indicators, namely saying thank you and being able to adjust to the environment. The facts show that even though it is a bit old, early childhood always say thank you for receiving something from someone else. If the person giving something is an adult, then the thank you is accompanied by kissing the hand of the giver. In terms of adjustment, early childhood in ECE Al Qorny is a bit difficult. It can be assumed that the nature of early childhood tends to refrain from new situations encountered. Is it in the face of a new atmosphere or meeting new people who he knows?

5 CONCLUSION

Based on the results of the discussion and discussion in this study, it can be concluded that; (1) Al Qorny's Early Childhood Education Institution was established to fulfill the government program of one ECE village, which in Jakarta was adapted to become one ECE. (2) The organizer of Al Qorny ECE has not fulfilled the educational qualification requirements required to educate early childhood, namely at least a bachelor's education in the field of early childhood education but given the needs of residents who want an early childhood education institution in the district, the Al Qorny ECE established. (3) The transformation of tolerance values among religious people is explicitly not taught in ECE Al Qorny on the grounds that all students are of the same religion. (4) The transformation of tolerance values between religious communities is taught through learning that is integrated with other lessons, for example in learning English. (5) Although explicitly the values of tolerance between religions are not taught, but the values of togetherness such as saying good morning or good afternoon, sharing something that is owned, and helping the needs of others, are taught with at the same time practiced.

Referring to the conclusions above, it can be stated that the implication of this research is that even in an educational institution (ECE) where students have the same religion, it still needs to be taught or informed the values of tolerance between religious communities. Thus, children will

experience a habit of being tolerant between religious communities from an early age. This research can be carried out at the expense of the Jakarta State University Postgraduate Program as well as the policies of the leadership of the Jakarta State University. For all that, the researcher would like to thank, hoping that this research can be useful for the study of religious tolerance in Indonesia.

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