Tabel 9.2.2.1 Publikasi DTPS dan Mahasiswa

No.	Jenis Publikasi	Jumlah Judul			Jumlah
		TS-2	TS-1	TS	
(1)	(2)	(3)	(4)	(5)	(6)
1	Artikel di jurnal nasional ber-ISSN	2			N-A1 =
2	Artikel di jurnal nasional terakreditasi Kemdikbud/Ristek-BRIN			1	N-A2 =
3	Artikel di jurnal internasional				N-A3 =
4	Artikel di jurnal internasional bereputasi				N-A4 =
5	Artikel dalam prosiding seminar lokal/perguruan tinggi				N-B1 =
6	Artikel dalam prosiding seminar nasional				N-B2 =
7	Artikel dalam prosiding seminar internasional				N-B3 =
8	Tulisan di media massa lokal atau wilayah				N-C1 =
9	Tulisan di media massa nasional				N-C2 =
10	Tulisan di media massa internasional				N-C3 =
11	Pameran/pagelaran tingkat lokal/wilayah/perguruan tinggi				N-D1 =
12	Pameran/pagelaran tingkat nasional				N-D2 =
13	Pameran/pagelaran tingkat nasional				N-D3 =

Asian Journal of Contemporary Education
ISSN(e): 2617-1252
DOI: 10.18488/journal.137.2019.32.111.120
Vol. 3, No. 2, 111-120.
© 2019 AESS Publications. All Rights Reserved.
URL: www.aessweb.com

SPIRITUAL NEUROSCIENCE LEARNING AT AISYIYAH EAST OF TEBET, SOUTH JAKARTA

Hasnida[1+]
Masyitoh[2]
Rusmin Tumanggor[3]

[1]*Universitas Muhammadiyah Jakarta, Lecture, Sekolah Tinggi Ilmu Tarbiyah Insida, Jakarta, Indonesia.*
Email: hasnidampd@gmail.com Tel: 081310905099
[2]*Profesor, Islaic Studies, Universitas Muhammadiyah, Jakarta, Indonesia.*
Email: Masyitoh53@gmail.com Tel: 08129289099
[3]*Profesor, Islamic Studies, The State Islamic Syarif Hidayatullah Universitas, Jakarta, Indonesia.*
Email: rusmintumanggor@gmail.com Tel: 08121899031

(+ Corresponding author)

Article History
Received: 3 July 2019
Revised: 5 August 2019
Accepted: 10 September 2019
Published: 14 October 2019

Keywords
Learning
Spiritual neuroscience
Early childhood
Kindergarten.

ABSTRACT

Spiritual neuroscience is one of neuroscience sub-discipline which specialized in a study over brain and human spiritualism. Spiritual neuroscience study is aimed to enhance early childhood's potentials, particularly, brain spiritualism. This research is directed to answer, to know, and to analyze over a study of spiritual neuroscience in a Kindergarten called TK Aisyiah 4, East Tebet , South Jakarta. Research result showed that spiritual neuroscience indicators are the meaning of life, positive emotions, spiritual experience and ritual that have been taught to the pupils at TK Aisyiah 4, Tebet Timur, Jakarta Selatan. The advance of spiritual-neuroscience study is it will develop spiritual potential over children in the early childhood phase and stimulate them to be religious. Childhood is a period of preparation, training and habituation. A spiritually intelligent individual is not only able to solve life's problems in a rational or emotional way, but it also relates them to the meaning of life spiritually.

Contribution/ Originality: The paper's primary contribution is to find that the learning of spiritual neuroscience in kindergarten serves to stimulate a child's spiritual brain. Spiritually intelligent individuals are not only able to solve life's problems rationally or emotionally, but they also relate them to the meaning of life spiritually.

1. INTRODUCTION

The learning process that maximizes brain function does not only empower one hemisphere of the brain, but it also maximizes the maximization of both functions. In general, everyone usually has tendency to be dominant in one hemisphere the brain. Some are left brain dominant, some are right brain dominant. The dominance of the role of the cerebral hemispheres can be happens because it is influenced by the environment that is surrounding the person, for example: the education system in family, at school, and in the community. That condition disadvantage is if domination causes other hemispheric functions become weak. If this matter happens, it will make our thinking ability not optimal. According Jacolyn (1988) brain dominance is A normal condition in which one hemisphere or one quadrant of the brain is better suited than the others for performing certain information processing functions. Sometimes also referred to as cerebral dominance or lateralization. (Lateralization is Left-right assymetry in brain functioning). Brain dominance has been studied in connection with numerous individual characteristics.

© 2019 AESS Publications. All Rights Reserved.

The study of the brain stems from research in the field of Biology and then spread to the world of education so that a new kind of neuroscience is born. According to Suyadi (2014) Neuroscience studies find the fact that at birth the brain cells of children reach 100 billion, but only very few of these cells are connected to each other, namely brain cells that control heart rate, respiration, reflex motion, hearing and living instincts. When children enter the age of 3 years, brain cells have formed about 1,000 trilion connections/synapses. This number is 2 times more than cells in adult. Every simulation that the child receives will birth new connection or strengthen existing connection.

Neuroscience discoveries today are not only useful for the medical field but also various other fields such as psychology, management, business and education. The education field should benefit greatly from new discoveries in the field of neuroscience. In western countries, neuroscience has become a reference in formulating an educational curriculum. Nowadays, Indonesia begins to use the findings in the field of neuroscience in education.

Spiritual Neuroscience is a sub-discipline of neuroscience that specializes in the study of the brain and human spirituality. The focus of attention is on spiritual neuroscience for example, meditation prayer, forgiveness, hope, rituals, and myths, all of which are seen from the perspective of the brain ("what happens in the brain due to these events") and the implications that rised (Pasiak, 2009).

Improving the quality of learning can be done in various ways, one of which can be done is to create learning conditions that allow the brain (as the center of the information processes) to function optimally. Among the various findings of experts about the ability of the brain in terms of learning, Barbara K given in Eric (2008) states that the human brain has the ability to learn according to five versions:

First, the emotional version. In this version the brain learns things related to passion. For this reason, learning must be designed to be interesting and motivating to leave an impression on students. Here the educator acts as a mentor. Second, the social version. In this version the educator's brain and students will learn things related to social interaction. Here the educator acts as a partner. Third, cognitive version. In this version, the educator's brain and students learn matter relating to reason and logic. So learning in this case must provide inspiration, the posititon of educators as facilitators. Fourth, the physical version. In this version, the educator's brain and students learn physical activity. For this reason, learning with this version must be energetic and dynamic, educators here are located as trainers. Fifth, reflective version. In this version, the educator's brain and students learn matters relating to self-existence. So learning on this principle must be imaginative and get ready to be a talent scout for students.

Table-1. Neuroscience spiritual.

Dimension	Definition	Neuroscience aspects
Meaning of life	Manifestation of spirituality in social relations (interpersonal), where someone is useful, inspires and bears something that is valuable to human life, as well as the way he gets his unique existence as a human.	Cortex prefrontal (union structure of the human brain)
Positive emotions	Spiritual manifestations in intra-personal relationship, where the ability to think of a person goes beyond his feelings. With this someone has live values that are based on the ability to think right.	CPF, *gyrus cingulatus* and limbic system (especially amygdala)
Spritual experience	Manifestation of spirituality in intrepersonal relationship, where a person experiences a specific and unique experience in the form of union with sacred substances at various levels, stems from a more aesthetic-sensory experience of experience of unity that is more essential. This experience can make someone melt and disappear from himself.	AAO (Area Asosiasi, Orientasi), especially in lobus occipitalis, and AAA (Attention Association Area) mainly in the lobus frontal
Ritual	Manifestation of spirituality in the form of structured, systematic, repetitive actions, involving aspects of motoric-cognition and affection, which are carried out according to a certain procedure by aiming to bring someone into particular cognition, especially to enter into spiritual experience.	*Cortex prefrontal*, *cortex somatosensorik*, limbik system, temporal lobe temporalis, basal ganglia

Sources: Pasiak (2012).

© 2019 AESS Publications. All Rights Reserved.

It becomes very interesting when conducing an assessment of human spiritually whose approach uses neuroscience. The development of neuroscience has touched the spiritual dimension. According to Pasiak (2012). the development of neuroscience has touched the spiritual dimension, there are four things that when combined will produce spririituality: The meaning of life, positive emotions, spiritual experiences and rituals, as shown in the Table 1.

Related to all above, every individual educator must pay attention to the concept of early childhood education. Some concepts of early childhood education include: curriculum and material in the perspective of Islamic education, the right teaching concepts for students and the right method. Indeed, God has equipped a child with a set of abilities that have been implanted in him in the form of a number of abilities, such as abilities in moral and ethical development, as well as abilities in personal, social and social development. That potential must be captured by parents and teachers, to be further developed in a positive direction. Children with a touch of education will become human beings who are dignified and able to become human beings who can achieve glory in their live according to their nature.

The efforts of Aisyiyah Kindergarten 4 North Tebet of South Jakarta integrites the 2013 *PAUD* Curriculum with Al-Aisyiyahan/MUhammadiyahan Islamic based on the indicators on students' report cards giving birt to the application of spiritual neuroscience learning for early chilhhood consisting of the meaning of life, positive emotions, spiritual experiences and rituals.

2. PURPOSE OF STUDY

This study aims to answer, find out, and analyze how the application of spiritual neuroscience learning in Aisyiyah Kindergarten 4 North Tebet of South Jakarta.

3. RESEARCH METHODOLOGY

This research was conducted in Kendergarten Aisyiyah 4 North Tebet of South Jakarta. The method used was the case study. Data collction using interview technique, observation, and and document study. Data analysis technique using data reduction, data display and conclusion drawing. The informants consisted of the Principal, the Center for Preparatory Teachers, the Center for Arts Playing, the Teacher of Faith *Taqwa*, Curriculum and B group students.

Table-2. Aluthe activities of the students at aba kindergarten 4 East Tebet, South Jakarta.

No.	Times	Activities	Place	Information
1	07.30-08.00 a.m	Morning journal, free activities, reading Iqra'	In the classroom	With the respective homeroom teacher
2	08.00-08.30 a.m	IPledge, prayer before learning, memorization of short *surah*, daily prayers and selected *hadits*		
3	08.30-09.00 a.m	Having exercise together and playing play ground	In the school yard	
4	09.00-09.05	Washing hand	In the classroom	
5	09.05-09.20	Circle time		
6	09.20-09.30	Preparation to the center		
7	09.30-11.00	Play in the center	Di ruang sentra In center room	With the center teacher on the schedule
8	11.00-11.15	Having lunch /*snack time*	In the classroom	With the respective homeroom teacher
9	11.15-11.25	Tooth brush		
10	11.25-11.30	Pray after study, Go home		

Sources: TK Aisyiyah 4 East Tebet (2018).

© 2019 AESS Publications. All Rights Reserved.

4. RESULT OF THE RESEARCH

Since the enactment of the 2013 PAUD Curriculum in cities throughout Indonesia, TK ABA 4 Tebet of South Jakarta has also implemented a learning plan using the 2013 Curriculum which is integrated with Al-Islam, Aisyiyahan/Muhammadiyahan (AIK).

The indicator of spiritual neuroscience in early childhood learning is the result of integrating the two curricula. The semester program is relegated to the weekly program and weekly program will be reduced to the implementation of daily learning, following the flow of spiritual neuroscience learning activities at TK ABA 4 Tebet 4, South Jakarta.

In the implementation of spiritual neuroscience learning implemented of ABA Kindergarten 4 North Tebet, South Jakarta with the following development aspects:

4.1. Meaning of Life

a. Planning for future: The teacher explains about the various kinds of proffesion that exist in the community. How it works, what tools are used, and what methods/ effort must be made to be able to work like the profession described by the teacher. After that, the teacher asks the children what they want to be when they become adults? Usually children can mention their ideals, the teacher gives reinforcement about how to achieve these goals.

b. Making decision: When moving class children enter the center class they must make a decision about sitting where, near whom, playing with whom, choosing what activities. Because class moves are done everyday so children become accustomed to making independent decisions.

c. Making grades and assessments: Conducting good habituation done with class teachers or center teachers such as smiles, greetings, say thank you, exuseme, sorry and others make children can give an assessment of the behavior of their friends. Including the habit of parising good things, good work and others. When the main activity of displaying the theme of the work of the children praised the works that were extended.

4.2. Positive Emotions

Instilling positive emotions in early childhood through the right ways is very important. At ABA Kindergarten 4 North Tebet, South Jakarta, positive emotional habituation is carried out in all centers. Class teachers and center teachers stimulate children to be able to solve problems without physical contact, control feelings, show an attitude of confidence, be proud of their own work and can become leaders and followers.

4.3. Spiritual Experience

Spiritual experience is a side of early childhood life that should not be overlooked, ABA Kindergarten 4 North Tebet conducts learning activities that provide spiritual experiences to children, more in the faith ceters of piety, teachers provide spiritual experiences through various experiences about the preparation for carrying out worship, by introducing rules of performing ablution, introduction and exemplifying the movement of ablution, introducing the prayer movement, introducing and imitating the prayer movement. At ABA Kindergarten 4 North Tebet, children are also trained to have a spiritual experience in the implementation of the *Sunnah* prayer which is really done by their own children, namely *dhuha* prayer, which began this year, and the following photos were observed.

© 2019 AESS Publications. All Rights Reserved.

Figure-1. A student is performing ablution himself.
Sources: Personal documentataian (2018).

The Figure 1 shows a child who will perform the dhuha prayer but not perform ablution from home. The child as seen in the picture above is an independently child.

Figure-2. The picket teacher accompanies students performing wudu.
Sources: Personal documentation (2018).

At the place of ablution there is a picket teacher who is always ready to help, directing the children to perform ablution correctly, not playing water, immediately closing the tap after using it and reciting prayers after performing ablution Figure 2.

© 2019 AESS Publications. All Rights Reserved.

Figure-3. An independent student is praying Duha.

The Figure 3 shows A child who is able to perform the *dhuha* prayer alone complete with the pray of prayer of *dhuha*. The child belongs to group B.

Figure-4. The teacher accompies students belong to group A to perform prayer *dhuha*.

For children who have not been able to look like the picture above Figure 4, there is a picket teacher who accompanies the childen when the *Sunnah dhuha* prayer. In addition to the spiritual experiences of the two Sunnah prayer, the children at the ABA Kindergarten 4 Tebet also have experience of pilgrimage, following is the flow of pilgrimage at ABA Kindergarten 4 Tebet, South Jakarta:

a. Group a worshipers, gather in the hallway, and group B worshipers, gather above. Together with the the accompanying pilgrim, each group.
b. All worshipes listen to the footing to be conveyed.
c. Pilgrims fly from Sukarno-Hatta airport (walking while stretching out their arms like an airplane) to Mecca (class B1 for play group worshipers, KB room for group A, and teacher room for group B.

© 2019 AESS Publications. All Rights Reserved.

d. In Mecca hotel, pilgrims recite the pilgrimage: "*labbaik Allahumma hajjan*" which means: I welcomr your call to Allah to perform the pilgrimage.
e. Then proceed with the two prayer prayers, then get ready to Arafat, in front of the *Talbiyah.*
f. Pilgrims walk quietly in order of flying towads Arafat (Playground 1/Traffic Park) as the *talbiyah* continues.
g. After the pilgrims gathered in the tent for *wukuf* in Arafat, together recited a prayer for two parents.

Figure-5. Students gather at arafah.

h. Then the pilgims prepare to go to Muzdalifah (musholla) to run orderly according to the order of the fleet.
i. Next pilgrims take a small stone (in the former swing next to the stairs).

Figure-6. Students pick up stones to throw jumrah.

j. And do a lot of throwing (under the TPQ ladder).
k. Then do the thawaf (at tha hall-climb the hall through the back stairs).
l. After the thawaf is continued with the *sa'i tahallul* and drink *zam-zam* water.

© 2019 AESS Publications. All Rights Reserved.

Figure-7. Students do Sai.

m. Pilgrims and chaperon sit together to pray together before drinking *zam-zam* water and eating dates.
n. Activities close with *hamdallah*, Hajj rituals activities are finished.
o. Pilgrims take a photo with their respective group/class, before leaving the hall.

4.4. Ritual

The forms of rituals that are carried out in learning activities at ABA Kindergarten 4 Tebet are praying in congregation every Friday, Sunnah Dhuha prayer which is done independently, praying(there are seventeen prayers taught to children in one semester), and giving compensation to erderly mothers and foster children, distribution of groceries to people in need in the month of *Muharram* and *Ramadhan*, collection of *zakat fitrah* to be distributed to residents who are entitled to receive, sacrifices from children, helping various victims such as flood and fires and donations to various kindergarten Aisyyah Branches. Assessment of spiritual neuroscience learning with four indicators (meaning of life, positive emotions, spiritual experience and rituals) in three forms of assessment: AP (early development), B (evolving), and C (good). Following assessment results in Figure 8.

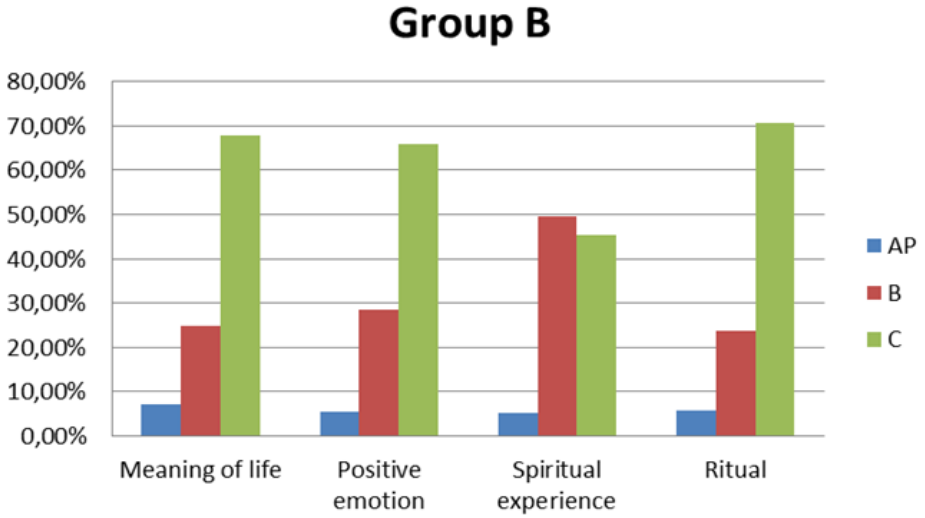

Figure-8. Assessment of spiritual neuroscience learning for one semester.
Sources: Personal documentation (2018).

© 2019 AESS Publications. All Rights Reserved.

5. DISCUSSION

5.1. Meaning of Life

The meaning of life is important concept introduced to children from an early age because by having these abilities a person can overcome life's challenges and maximize the unique potential he has. Without being introduced early someone does not necessary when an adult is able to become a person who has the ability to overcome life'challenges. Many are found in the daily lives of adults who are pessimistic and desperate, some even commit suicide, all of which is a sign that such people do not have the ability to overcome the problems of his life.

According to Bastamam (2007) the meaning of life are things that are considered important and valuable and give special value to someone, so that they are worthy of being used as a goal in life.

5.2. Positive Emotions

The ability of early childhood to manage emotional self is part of the maturation of emotional development of children in the transition from pre-operational into a concrete operational period. The ability to early childhood in managing their own emotions can be seen from the dimensions of the child's ability to use positive emotions themselves, the ability to manage emotions in accordance with situations and conditions of the self, and the ability of self-defense of the child himself in various forms of position of the child's self-problems naturally.

When someone feels positive emotions, he feels connected to others and actually allows himself to be open and put others into their own sense of self. Positive emotions make someone feel one with others. This inclusion effect has a tremendous impact on personal relationships with others. It does not only see others as part of one's own concepts but makes it possible to understand others from other people's perspectives.

5.3. Spiritual Experience

Religious activities that are mostly done in places of worship at school and invite children to participate, know the rules of ablution, recognize the ablution movement, know the prayer movement, recognize/imitate the prayer movement and know the rules of prayer, so that all the power of God has been felt when in place places of worship and also at home. Children's experiences every day are always associated with spiritual activities, so the child will feel God is always nearby and hears his/her prayers. According to El Fiah (2014) giving spiritual experiences to children from an early age is very mportant. A spiritually intelligent individual is not only able to solve life's problems rationally, but he relates them to the meaning of life spiritually. Spiritual experience is the highest peak that can be reached by humans and an affirmataion of its existence as a spiritual being. Spiritual experience is the highest human need, thus the so-called to spirituality that is the event that returns a person to his true self. The main essence of spiritual experience is empthy, caring for others.

5.4. Ritual

Rituals are manifestations of spirituality in the form of structured, systematic, repetitive actions, involving motoric aspects of cognition and affection, which are peformed according to certain procedures with the aim of bringing someone to certain conditions, especially to enter into spiritual experiemces. One of ritual that is often performed is prayer. ABA Kindergarten 4 North Tebet also accustoms children to pray in congregation, *dhuha Sunnah* prayers, group B children on average they can already do their own prayers and Hajj ritual activities.

Prayer is the most important ritual in Islam, therefore, children are accustomed to pray as early as possible. Habit of praying in congregation at school, with prayers carried out together or in congregation, it will educate to be egalitarian and being a sense of social. Prayer is not an obligation that must be fulfilled by early childhood, but it is the duty of parents and teachers to introduce and teach it. According to Hasanah (2018) there are several reasons why prayer needs to be taught as early as possible as follow: first, prayer as described above is the first and foremost one that can save a believer in the hearafter. Second, at an early age is the golden age or period where children are

© 2019 AESS Publications. All Rights Reserved.

quick to respond to various stimukus and learning. Third, early age determines the development and personality of an individual. When a child is accustomed to being taught and educated on all matters relating to prayer, it is hoped that when he grows up he will become an individual with the personality of a true muslim; believers, piety and blessed karima. And fourth, early childhood is very childhood is very fond of imitating the people around him. Children who often see their parents or teachers and even their idol figures pray, usually children will tend to imitate them.

6. CONCLUSION

Learning spiritual neuroscience can stimulate early childhood to become religious, even though the child has difficulty in imitating ritual prayer movements such as bowing, prostration and sitting between two prostrations. With the method of repetition and habituation the child can mimic all these prayer movements correctly. Ruku in the right position will provide benefits can help the health and work of the cerebellum and train the limbic system so that emotions remain stable. Sitting between the two sujud is to straighten your right foot and sit on the left foot with tumakninah, the benefits can be to balance the electrical system and nervous balance of the body.

Funding: This study received no specific financial support.
Competing Interests: The authors declare that they have no competing interests.
Contributors/Acknowledgement: All authors contributed equally to the conception and design of the study.

REFERENCES

Bastamam, 2007. Logotherapy; psychology to fulfill the meaning of life and achieve meaningful life. Jakarta: PT.Raja Grafindo, J.

El Fiah, R., 2014. Developing the potential of early childhood spiritual intelligence implications for guidance. CONSELI: Guidance and Counseling Journal 1(2): 95-103.

Eric, I., 2008. Brain based learning, brain ability based learning, new ways of teaching and training. Yogyakarta: Pustaka Pelajar.

Hasanah, A., 2018. Teaching salat to children through demonstration, question and question, and habitual methods. Al Hikmah: Indonesian Journal of Early Childhood Islamic Education, 2(1): 14.

Jacolyn, B.G., 1988. Disertasi: The relationship of brain dominance to attitude, achievement, and creativity among Atwater High School students. (Brigham Young University).

Pasiak, T., 2009. Model company spiritual context in neuroscience. Dissertation, Graduate UIN Sunan Kalijaga, Yogyakarta.

Pasiak, T., 2012. Lord of the human brain. Bandung: PT. Mizan Pustaka.

Suyadi, 2014. Theory of early childhood learning in neuroscience studies, Bandung. Bandung: Remaja Rosdakarya.

Views and opinions expressed in this article are the views and opinions of the author(s), Asian Journal of Contemporary Education shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.

© 2019 AESS Publications. All Rights Reserved.