Religious Scientific Learning Based on Sentra in School

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The development of schools on a religious basis is experiencing rapid increase, especially in kindergarten education. Parent awareness of the importance of the early in life introduction of religious values is one of the reason for this. It is necessary to have appropriate preparation for learning activities in kindergarten age children, through religious scientific learning at the sentra. The application of scientific learning in such a way is very appropriate for children of kindergarten age because every step of the learning stimulates children in various aspects of child development, while religious learning is applied to children due to the importance of developing religious and moral values to children from an early age so that they grow and develop as a whole, both in terms of knowledge as well as moral human beings who in accordance with their religion.

Keywords: *scientific learning, religious, kindergarten, sentra*

Introduction

The importance of a quality education is the main focus for human development to develop individuals who have the ability and intend to benefit themselves and the surrounding community (Ehren, Altrichter, McNamara, & O'Hara, 2013). Every human being needs education and occurs from infancy to adulthood with the most important education period during the span of human life during early childhood. This is due to the fact that the start of the child's development and learning can predicate and stimulate optimal development throughout life. Kindergarten children are individuals in the process of growth and development both physically and spiritually (Abodunrin, Oni, Dosunmu, & Isaac-Phillips, 2014).

As stakeholders, kindergarten children, in this sensitive and critical period need special attention or else they will grow into individuals who have problems in the future. As we see today in the media there are many issues among adolescents, including brawls, excessive use of online games and drug user. Therefore educators and parents need to provide appropriate stimulation and learning for children so that they grow into human beings who have achievements, success and noble character (Arthur & Carr, 2013).

The development of human potential and abilities cannot be separated from the influence of the environment in which humans are located (Pane & Patriana, 2016). So, to make humans into individuals who benefit themselves, society and the development of science and technology, it is necessary to have a quality education (Smith, 2016).

Future challenge for the current kindergarten generation are that they must have the ability to be able to think clearly, communicate and be sensitive and critical (Jo & Park, 2016). They also need the ability to consider the moral aspects of an issue, the ability to be responsible citizens, the potential to dare to do things new, to understand and be tolerant about the opinions of others who are different and the potential and ability to live in a global society (Chen, 2013; Lapsley & Yeager, 2012). The parent generation of the current kindergarten students have broad life interests and readiness and ability to work and complete tasks properly, have intelligence in accordance with their talents/interests, want to be responsible for participating in protecting the surrounding environment and believe that it is important for their child to have a strong religious belief so that they are able to apply these positive religious values in daily life as it is very important to instill religious belief in early childhood (Ghirotto & Mazzoni, 2013; Yasin, 2019).

The minimal elements that must be present in the learning system are a child, a goal and a work procedure to achieve the goal (Curtis & Carter, 2014). In this context, the teacher (instructor) is not included as an element of the system, because their function may under certain conditions be replaced or transferred to other media as a substitute such as books, films, slides, programmed texts, and so on. Learning can be defined as a process in which an organism changes its behavior as a result of experience. Learning and teaching are two concepts that

cannot be separated from each other (Berman, 2015). These two concepts become integrated in one activity where there is interaction between the teacher and students, as well as between students when learning takes place. Learning does not merely involve the relationship of stimulation and response but more than that, learning involves a very complex thought process. In order for kindergarten children to learn well, teachers must be able to teach effectively (Jiang, Li, Wang, & Li, 2019). Therefore, teachers need to know learning theories or learning theories (Admiraal et al., 2017).

Learning is essentially a process of interaction between students and their environment, so that there is a change in behavior towards the better (Alderman, 2013). As such, the main task of the teacher is to condition the environment in order to support changes in student behavior. Here the role of educational psychology is to understand and improve the teaching and learning process. Educational psychology develops knowledge and methods and uses the knowledge and methods of psychology and other disciplines to study learning and teaching in everyday situations (Chin & Huang, 2016).

The learning process not only involves the relationship of stimulation and response but more than that, the learning process is a complex thought process (Arthur & Carr, 2013; Curtis & Carter, 2014). In class, learning is a system that works well. Currently, there is a change in the learning process from teacher centered to student centered. Changes to children's learning activity essentially are that they have become more actively and directly involved in the learning activities than was previously the case, thus providing optimal learning outcomes (Alderman, 2013; Curtis & Carter, 2014; Nivens & Moran, 2016).

Teachers must be able to create a pleasant learning atmosphere in the classroom so that students feel happy in their learning. Pleasant learning is learning that has an exciting atmosphere so that the attention of students is focused entirely on the learning so that the attention time spent ("time on task") is high (Curtis & Carter, 2014; Ghirotto & Mazzoni, 2013). According to the results of the study, a high amount of focused time was shown to improve learning outcomes. Indonesian society is a religious society, where there is respect for every religious value held. An increasing religious enthusiasm, as currently evidenced it fostered the establishment of religious-based schools. Schools with a religious basis include more religious elements in the learning process when compared to public schools. Producing quality human beings is certainly not an easy thing and needs process and support from the both the physical and non-physical environment around the child (Mahfud, Prasetyawati, Agustin, Suarmini, & Hendrajati, 2019; Yasin, 2019). Moreover, the future challenge si the need to prepare a generation that has the ability to think clearly and critically which encompasses the ability to: consider the moral aspects of a problem; be a responsible citizen; understand and tolerate different views; live in a globalized community; have a broad interest in life; be ready to work together and be responsible for the environment (Ghirotto & Mazzoni, 2013). The main goal is to have a strong

religious belief so that good values apply in daily life in accordance with the teachings of the adopted religion.

One of the educational programs that is currently being promoted by the government is early childhood education. Development Institutions that established early childhood education programs have experienced rapid development both in urban and rural areas (Nakajima et al., 2019; Proulx & Aboud, 2019). Education for early childhood is at the initial yet most meaningful level of education as it is the most basic foundation (Jiang et al., 2019; Löfdahl & Hägglund, 2012) because early childhood is an asset of the nation and its success determines the future success of that nation.

In the management of the national education system, early childhood education in the form of formal education is in the form of kindergarten (RA), Raudhatul Athfal (RA), or other equivalent forms. Kindergarten is the first formal educational institution that young children enter after the informal education they receive in the form of family education and / or non-formal education in the form of Play Groups (KB), day care centers (TPA), or other forms of equivalent (Siswanto, 2017). The rapid development of the education world today, as well as increasingly more complex social problems, and also the increasing understanding of parents of the importance of religious education from an early age for children have resulted in the exponential development of kindergarten-based religious education (TK) based on (Mahfud et al., 2019). It is understood that early childhood is the golden age phase, where all aspects of child development are open, making it easy to learn everything, and religious and moral values are thus very important to be taught early on to children through habituation activities at school and also children's daily lives (Manoppo, Janis, & Wuwung, 2019; Pane & Patriana, 2016).

Scientific-based learning is a learning process that is guided by scientific principles (Marcus, Haden, & Uttal, 2018). This approach is characterized by highlighting the dimensions of observation, reasoning, discovery, validation and explanation of a truth (Cannady, Vincent-Ruz, Chung, & Schunn, 2019). Scientific learning is a learning process that is designed so that students actively construct concepts, laws or principles through the 5M stages of observing, questioning, collecting data, associating and communicating (Mills et al., 2019) Some of the principles of a scientific approach to learning activities are as follows: 1) child-centered learning; 2) learning forms self concept; 3) learning avoids verbalism; 4) learning provides opportunities for students to assimilate and accommodate concepts, laws and principles; 5) learning encourages an increase in children's thinking abilities; 6) learning increases student motivation; 7) provide opportunities for children to practice their abilities in communication; 8) there is a process of valiation of concepts, laws, and principles constructed by children in their cognitive structures.

Religious values developed in early childhood learning activities are affirmed in Permendikbud no 137 of 2014 on National Standards of Early Childhood Education in the field of developing

Religious and Moral Values where religious items of learning material are developed in Early Childhood Education for children aged 4 - 6 years , titled Standard level of Achievement of Child Development. This standard is a reference in learning activities to develop religious belief in early childhood. *Believe in the existence of God through Its creation*. Indicators developed include; 1) know the Nature of God the Creator; 2) getting used to saying sentences of praise (Thoyibah); 3) recognize God's creations; 4) kinds of kinds of religion in the environment of children; 5) recognize religious holidays; 6) recognize places of worship; and 7) understand the time of worship. *Appreciate yourself, others and the environment as gratitude*. Indicators developed: 1) do not hurt themselves or friends; 2) respect friends (not making fun); 3) tolerant of others and benefactors; 4) want to share their property; 5) Lending his property with pleasure; 6) caring for personal hygiene; 7) likes to help friends; 8) distinguish between good and bad deeds; 9) life-saving behavior. *Having behavior that reflects honest attitude*. Values developed: 1) honest, straightforward in speaking; 2) Returning objects that do not belong to him; 3). Use other people's things with care. *Get to know daily worship activities and carry out worship activities according to adult guidance*. Religious values developed; 1) greetings when meeting friends; 2) greetings when parting; 3) greetings when meeting and or separating answers; 4) worship movements according to demands; 5) adab in worship; 6) prayers before and after doing activities; 7) daily prayers in daily life. *Recognize the behavior of a noble moral reflection*. The subsequent religious values developed are good behavior and courtesy to both parents, teachers, adults and friends. *Manners as a reflection of noble morals*. Religious values developed are daily life behaviors for example the correct way to eat and drink, the custom of saying thoyyibah and demonstrating respect to others.

 The BCCT approach, known in Indonesia as the center approach stimulates children to play actively at the game center (Dwiyanti, 2018; Maimunah, Aslamiah, & Suriansyah, 2018) such that children actively playing and become autonomous subjects who freely develop their abilities to the maximum. Learning centers have four steps, namely: 1) Playing environment footing (preparation, (2) footing before playing, (3) footing during play, and (4) footing after playing. Various types of centers are available such as centers for preparation, centers for playing macro roles, centers for playing micro roles, centers for natural resources, centers of faith and piety, centers for blocks and others as adjusted to the school conditions (Singer, 2013; Siswanto, 2017; Syarifah & Tasuah, 2018; Utanto & Elyana, 2017). Play activities involving a group friends at a fun center can develop every aspect of child development so that children develop according to their potential.

Method
This study uses a qualitative approach in the research setting of Sabilal Muhtadin Islamic Kindergarten and Nurul Fikri Banjarmasin Kindergarten. In this research the researcher acts as an instrument for collecting data using observation techniques, in-depth interviews and analyzing data on existing documents. Respondents are kindergarten principals, teachers and parents. This research was conducted for a period of approximately one year from the

preliminary study until the data obtained was saturated. The data obtained were analyzed from the beginning until the end of the data collection using Miles & Huberman's and Usman's interaction models.

Result and Discussion

Based on the results of interviews and observations while in kindergarten, the research findings regarding religious scientific learning at Sabilal Muhtadin Kindergarten and Nurul Fikri Kindergarten are as follows.

Curriculum

The learning activities that are applied are inseparable from the curriculum, because the curriculum is like a railroad that atrain will pass to reach its destination. In Sabilla Muhtadin Kindergarten using the 2013 early childhood education domain curriculum and curriculum, while in Nurul Fikri using the Integrated Islamic School Network (JSIT) curriculum and the 2013 early childhood education curriculum. The two kindergartens in their implementation combine two curricula.

Children as active learning

Play activities at the center make children actively play and participate in learning activities from beginning to end. The child is seen to be playing, but in fact child is learning through play. Playgrounds are provided for the class according to the density and number of children in thestudy group.

Children are conditioned to be involved in activities arranged by the school from when they enter the school yard and until after school. The activities are planned in a systematic way from morning to afternoon the children are actively involved in learning and so that aspects of child development can be appropriately stimulated.

Scientific Learning

Scientific learning activities have seen that the application of 5M has raised more portions as core activities and are dependent upon how the teacher opens the lesson with the theme of asking students to observe the media that has been prepared by the teacher prior. Teachers actively stimulate students, so students ask questions and develop children's curiosity, and children to collect information by asking questions about the themes being discussed at that time. Furthermore, how teachers develop childrens' ability to reason in activities linking new information received with information that was previously owned by children is crucial. As per TK Sabillal Muhtadi's motto, in their core learning activities they apply "Say, Show, and Check".

The final step in scientific learning is communicating and is incorporated from the beginning to the end of the activity, however at the end of the activity, a large portion of communicating

looks prominent because in the closing there is an activity known as "Recalling". When recalling the child will be stimulated to retell all activities carried out while participating in play activities at the center. This activity will indirectly develop the child's potential for self-confidence, and their speaking ability so that the child's vocabulary increases. The same thing also occurs at Tk Nurul Fikri, where learning activities are carried out in accordance with the steps of playing at the center by activating children in every activity in the center.

Religious Learning

Religious learning activities are integrated in the learning activities centers. From the beginning of the activity until it ends. Early activities include how children are stimulated to always say hello when they will enter into the classroom, meet with the teacher and kiss the teacher's hand. This ritual is not only taught with the correct pronunciation but children are also taught to say it politely, which is a way of interacting with peers or with older people,Other habitual activities include reciting the thoyibah sentence, reading daily prayers such as the prayer to learn, prayer to eat, prayer in and out of the bathroom, and memorization of short surahs, mentioning Asma Ul Husna, and Dhuhr prayer and Dhuha prayer. This activity is followed by children in an orderly manner and in the interest of creating pleasant religious and moral learning situations for children.

In addition to the teacher compiling a good program, they must also be a strong positive role model for children and provide a good example to them with regard to how to be polite in practice in situations and communicate politely. The child as a master copycat needs an appropriate and good example so that the positive attitudes and behaviors that are expected in the child's development are achieved as expected.

As an effort to introduce God to children, the teacher uses objects that are around the child, especially objects created by God. Learning activities can be accomplished through stories, songs, applause about the Five Pillars of Islam and the Five Pillars of Faith, in telling the stories of Telada, and the Companions of the Prophet, and coupled with the memorization of Short Hadith. Specifically Nurul Fikri Kindergarten was more prominent in linking each material with the Koran and Hadith, as well as growing and instilling in every activity the existence of God as a human regulator and helper, as well as fun learning activities with religious songs.

Discussion

Sahbilal Muhtadin Kindergarten and Kindergarten IT Nurul Fikri similarly apply the 2013 early childhood education curriculum and for TK Nurul Fikri combined with the JSIT curriculum which is implemented in learning centers every day. The learning that is carried out involves the child actively (Singer, 2013) for each of the scientific learning steps raised at the beginning, core and end of the activity (Syarifah & Tasuah, 2018). Children look confident so it is easy to communicate and ask questions of the people around them.

Learning that has been prepared by the teacher is fun learning for children. Children play while learning and thus feel happy and are motivated to learn. It is very important for the teacher to build a pleasant atmosphere in the classroom (Alderman, 2013). In the learning process teachers are required to create a pleasant atmosphere so that children are active, explore, ask, question and express ideas (Berman, 2015). Learning for young children, including during kindergarten has its own characteristics and learning activities in kindergarten should prioritize playing while learning and learning while playing (Utanto & Elyana, 2017). Naturally playing motivates children to know things more deeply and children spontaneously develop their abilities (Singer, 2013). Characteristic of the class using the BCCT approach or the center is cooperation, mutual support, joy and passionate learning, (1) integrated learning, using various sources and active children (3) fun and sharing with friends and (4) all students are critical and creative teacher.

Learning in the sentra is in the form of non-direct teaching and not patronizing children (Dwiyanti, 2018). When the teacher acts as a motivator and facilitator, everything that is done by the child originates from the child himself (Utanto & Elyana, 2017). Play activities at children's sentra will stimulated active involvement in play activities so that children become centers of learning while teachers as motivators and facilitators provide an educational footing so as to make children stronger in what they discover when playing. The environment created around children is an environment that can stimulate children to explore everything around them (Curtis & Carter, 2014). Children want and are able to explore the information they need. This will help children to build their construct of thought and creativity by providing opportunities to explore their environment in order to develop their creative potential. All play equipment and materials available at the center are prepared in accordance with the stage of development of the child so that the child is able to find their own knowledge through playing in a fun scenario (Maimunah et al., 2018; Singer, 2013; Van Hoorn, Monighan-Nourot, Scales, & Alward, 2014).

Sentra-centered learning is carried out thoroughly from the beginning of the activity to the end and focuses each group in one activity sentra (Dwiyanti, 2018). Each sentra supports the development of children in three types of play namely sensorimotor or functional play, role playing and constructive play (building children's thinking) (Siswanto, 2017). The Sentra learning model is a learning model that focuses on playing sentras when learning. Play sentra is an area of activity that is designed inside or outside the classroom, contains a variety of play activities with materials needed and arranged based on the abilities of children and in accordance with themes developed and designed in advance. The sentra allows children to manipulate the sharing of objects, engage in role playing conversing with friends, explore, interact physically, emotionally, socially and cognitively as well as other interesting varied activities (Utanto & Elyana, 2017). Sentras provide opportunities for children to play both individually, in small groups and large groups and even classically.

Children are allowed to choose activities that interest them and ultimately make them both active and interactive learners. Play activities are carried out by children in small groups in centers or areas where there are a variety of play materials. Each play sentra is prepared by the teacher in accordance with the development program that will be taught to children within a predetermined schedule. All play activities are directed to achieve targets that are tailored to the abilities of the child's interests (child-oriented). Through active play sentras, children are actively involved both physically and mentally as they gain a variety of learning experiences by seeing, hearing and doing directly or through direct practice (learning by doing) (Nugroho & Suparno, 2019).

Student activity is defined as the involvement of students in the form of attitudes, thoughts, attention and activities in learning activities to support the success of the teaching and learning process and benefit from these activities (Kombe, Che, Carter, & Bridges, 2016) in the learning process to support the success of the activities of children involved. Learning that is managed well, according to the needs and characteristics of children, can optimize their intelligence potential from an early age as the learning process is a means for potential stimulation of a child's intelligence (Cabrilo, Grubic Nesic, & Mitrovic, 2014). For this reason, attention needs to be made to determining methods, strategies, media and approaches in the learning process that are in accordance with the themes and materials provided to children. Learning with a scientific approach is able to develop creativity, ideas, and imagination of children in addition to also developing religious and moral values, motor, cognitive, language, social, arts, and emotional skills in children (Mills et al., 2019). The relationship between students' scientific learning skills and critical thinking skills is scientific learning that conditions children through observing, classifying and communicating together, cumulatively affecting children's ability to think (Cannady et al., 2019).

From the explanation above, the characteristics of scientific learning in kindergarten are defined through five stages, known as 5 M, observing, asking questions, gathering information, reasoning and communicating accompanied by media and learning resources that surround the child, so that children are actively involved in learning activities in the classroom and outside the classroom through play activities and learning centers (Maimunah et al., 2018). The characteristics of religious learning in the Islamic Sabilal Muhtadin Kindergarten, and Nurul Fikri Kindergarten have the same characteristics and all children are activated to participate in any religious development activities. The activity starts from the morning greeting when the teacher welcomes the child with a hello and a kind smile, as part of the hadith that reads "Your smile to your brother becomes a Shodaqoh for you (HR. Tirmidhi cleans Shaykh Al Albani). The teacher greets the child in a friendly manner setting an example for children (Marcus et al., 2018) as a mentor or teacher of Early Childhood education units automatically needs to have certain characteristics including patience, compassion and a caring, friendly, tolerance towards children where empathy and warmth in communication are accepted as what it is, fair, creating an open and honest relationship with children. Early childhood education teacher must

have the following characteristics: (1) have behavioral attitudes that reflect curiosity, enthusiasm, creative, innovative, empathy, tolerance, understanding, and affection, (2) Early childhood education teachers must be flexible, (3) able to foster good relations with all parties, (4) have high self-confidence, (5) have the ability to involve every child in activities that occur, (6) are learners, (7) Early childhood education teachers must be able to think critically in solving problems. (8) warm but soothing, (9) not afraid to say that he does not know. (10) patience especially to children when making mistakes.

The importance of the teacher figure for children in the learning process is that the teacher not only acts as a model or role model for the students they teach, but also as a manager of learning (Chin & Huang, 2016). Thus, the effectiveness of the learning process is largely determined by the quality or ability of its teachers. In addition, patience is needed by the teacher in guiding children continuously in completing their tasks, especially for example where there are children who have difficulty and need examples of honest and helpful behavior in comparison to dishonest and helpful behavior . It is imperative then that a Kindergarten teacher must be patient in guiding until the child can act correctly, independentanly; or when there are children who have difficulty when understanding the learning the teacher must act as guide and provide similes that are easy for children to understand (Poulou, 2017).

The introduction of science to kindergarten students is intended to develop their abilitiy to engage in exploration and investigation, activities to observe and investigate objects and natural phenomena (Syarifah & Tasuah, 2018). The development of basic science process skills such as making observations, measuring, communicating the results of observations develops curiosity, pleasure, and nurtures a desire to engage in inquiry or discovery activities to gain understanding and knowledge about various objects, their characteristics, structure and function. Child religious development in the form of habituation, is an effective method to train students to do good things (Berkowitz & Bustamante, 2013). All activities in kindergarten are carried out from morning during school hours and children are accustomed to following rules involving greetings, apologizing and asking for help, saying thoyibbah, and performing daily prayers and prayers.

All habituation values modelled to children are based on the Al-Qur'an and hadist. Not only teachers but all kindergarten staff and employees must be exemplary role models to anyone who enters kindergarten. This method is very effective in developing religious values in children, because during early childhood, they are very good imitators. Direction from the teacher to the child before starting the activity so the child understands the value of what they will do is modelling. For example children need to be taught to pray as a form of gratitude for the gift that Allah SWT has given to children. Assignments are a method that is quite effective in applying and instilling religious values to children (Lee, 2016). Creating environment and culture religion in kindergarten, conducive environmental conditions support the process of implementing religion. All the citizens of the village set an example that reflects Islamic values.

This can create conditions for learning, comfort in Islamic tradition so that children are happy to follow the example in kindergarten.

In the world of education, most learning starts from knowing, training and being (Nakajima et al., 2019). The habituation developed in kindergarten by the teacher is closer to being, or the learning process through the habituation process, which results in children also continually striving to know and be able to carry out the modelled behavior in everyday life. So here there needs to be exemplary, routine activities and conditions conducive to supporting facilities that allow the habituation to be implemented. During early childhood, children imitate the actions of adults around them (Pane & Patriana, 2016) and therefore, habits and role models really need to be introduced and familiarized from this age (Singer, 2013).

There are several stimulations to improve children's religious development through involving children in religious activities, so as to make a special impression on children because they feel directly various experiences of religious activities and this will be the basis for further religious sensitivity. Familiarizing observances of worship as habituation are more effective in kindergarten than at elementary school (Muttaqin, Raharjo, & Masturi, 2018). The development of thematic teaching materials in a scientific approach is needed by teachers in carrying out teaching activities in kindergartens. This shows that scientific approach is very appropriate to be applied for early childhood learning.

Every childhood learning in the center with the scientific learning approach is integrated with the development of children's religious values so that children undergo learning activities in a pleasant atmosphere with habits and various kinds of games prepared in order that they can grow and develop as into intelligent and creative adults (Singer, 2013).

Conclusion

The application of scientific learning in such a way is very appropriate for children of kindergarten age because every step of their learning stimulates them in various aspects of child development. Religious learning is necessary for children due to the importance of developing religious and moral values from an early age so that they will grow and develop as a whole, both in terms of knowledge as well as human beings who have morality in accordance with their religion.

References

Abodunrin, I., Oni, A., Dosunmu, S., & Isaac-Phillips, M. M. (2014). Evaluating the Quality of Parents' Participation in Formalized Early Childhood Education in Lagos. *Liceo Journal of Higher Education Research*, *10*(1), 205–217.

Admiraal, W., Louws, M., Lockhorst, D., Paas, T., Buynsters, M., Cviko, A., … Kester, L. (2017). Teachers in school-based technology innovations: A typology of their beliefs on teaching and technology. *Computers & Education*, *114*, 57–68. https://doi.org/10.1016/j.compedu.2017.06.013

Alderman, M. K. (2013). *Motivation for achievement: Possibilities for teaching and learning*. Routledge.

Arthur, J., & Carr, D. (2013). Character in learning for life: a virtue-ethical rationale for recent research on moral and values education. *Journal of Beliefs & Values*, *34*(1), 26–35.

Berkowitz, M. W., & Bustamante, A. (2013). Using research to set priorities for character education in schools: A global perspective. *KEDI Journal of Educational Policy*.

Berman, A. C. (2015). Good teaching is good teaching: a narrative review for effective medical educators. *Anatomical Sciences Education*, *8*(4), 386–394.

Cabrilo, S., Grubic Nesic, L., & Mitrovic, S. (2014). Study on human capital gaps for effective innovation strategies in the knowledge era. *Journal of Intellectual Capital*, *15*(3), 411–429.

Cannady, M. A., Vincent-Ruz, P., Chung, J. M., & Schunn, C. D. (2019). Scientific sensemaking supports science content learning across disciplines and instructional contexts. *Contemporary Educational Psychology*, *59*, 101802. https://doi.org/10.1016/j.cedpsych.2019.101802

Chen, Y.-L. (2013). A missing piece of the contemporary character education puzzle: The individualisation of moral character. *Studies in Philosophy and Education*, *32*(4), 345–360.

Chin, J. M.-C., & Huang, M.-R. (2016). A Study on the Relationships Among Distributed Leadership, School Innovative Management and School Effectiveness in Taiwanese Senior High Schools. *Jiaoyu Yu Xinli Yanjiu= Journal of Education & Psychology*, *39*(2), 1.

Curtis, D., & Carter, M. (2014). *Designs for living and learning: Transforming early childhood environments*. Redleaf Press.

Dwiyanti, L. (2018). Sentra as a Model of Early Childhood Cognitive Learning Approach. *PROCEEDING: The Annual International Conference on Islamic Education*, *3*, 133–141.

Ehren, M. C., Altrichter, H., McNamara, G., & O'Hara, J. (2013). Impact of school inspections on improvement of schools—describing assumptions on causal mechanisms in six European countries. *Educational Assessment, Evaluation and Accountability*, *25*(1), 3–43.

Ghirotto, L., & Mazzoni, V. (2013). Being part, being involved: The adult's role and child participation in an early childhood learning context. *International Journal of Early Years Education*, *21*(4), 300–308.

Jiang, Y., Li, P., Wang, J., & Li, H. (2019). Relationships Between Kindergarten Teachers' Empowerment, Job Satisfaction, and Organizational Climate: A Chinese Model. *Journal of Research in Childhood Education*, *33*(2), 257–270. https://doi.org/10.1080/02568543.2019.1577773

Jo, S. J., & Park, S. (2016). Critical review on power in organization: empowerment in human resource development. *European Journal of Training and Development*, *40*(6), 390–406. https://doi.org/10.1108/ejtd-01-2016-0005

Kombe, D., Che, S. M., Carter, T. L., & Bridges, W. (2016). Student Academic Self-Concept and Perception of Classroom Environment in Single-Sex and Coeducational Middle Grades Mathematics Classes. *School Science and Mathematics*, *116*(5), 265–275. https://doi.org/10.1111/ssm.12178

Lapsley, D. K., & Yeager, D. (2012). Moral-character education. *Handbook of Psychology, Second Edition*, *7*.

Lee, D. (2016). The role of assessment in language teaching, learning and materials development. *Learning and Materials Development (December 7, 2016)*.

Löfdahl, A., & Hägglund, S. (2012). Diversity in preschool: Defusing and maintaining differences. *Australasian Journal of Early Childhood*, *37*(1), 119–126.

Mahfud, C., Prasetyawati, N., Agustin, D. S., Suarmini, N. W., & Hendrajati, E. (2019). The Urgency of Civic Education and Religious Character Education for Early Childhood in Indonesia. *Elementary: Jurnal Ilmiah Pendidikan Dasar*, *5*(1), 97–106.

Maimunah, M., Aslamiah, A., & Suriansyah, A. (2018). The Integration of Sentra-Based Learning and Involvement of Family Program at Early Childhood in Developing Character Building (Multi Case at PAUD Mawaddah and PAUD Alam Berbasis Karakter Sayang Ibu Banjarmasin, Indonesia). *European Journal of Education Studies*.

Manoppo, F. K., Janis, Y., & Wuwung, O. (2019). Tolerance Education for Early Childhood in Industry 4.0. *1st Annual Internatioal Conference on Social Sciences and Humanities (AICOSH 2019)*. Atlantis Press.

Marcus, M., Haden, C. A., & Uttal, D. H. (2018). Promoting children's learning and transfer across informal science, technology, engineering, and mathematics learning experiences. *Journal of Experimental Child Psychology*, *175*, 80–95. https://doi.org/10.1016/j.jecp.2018.06.003

Mills, K., Bonsignore, E., Clegg, T., Ahn, J., Yip, J., Pauw, D., … Pitt, C. (2019). Connecting children's scientific funds of knowledge shared on social media to science concepts. *International Journal of Child-Computer Interaction*, *21*, 54–64. https://doi.org/10.1016/j.ijcci.2019.04.003

Muttaqin, M. F., Raharjo, T. J., & Masturi, M. (2018). The Implementation Main Values of Character Education Reinforcement in Elementary School. *Journal of Primary Education*, *7*(1), 103–112.

Nakajima, N., Hasan, A., Jung, H., Brinkman, S., Pradhan, M., & Kinnell, A. (2019). Investing in school readiness: A comparison of different early childhood education pathways in rural Indonesia. *International Journal of Educational Development*, *69*, 22–38.

Nivens, R. A., & Moran, R. R. (2016). BEYOND PROBLEM-BASED LEARNING: HOW A RESIDENCY MODEL AFFECTS THE EDUCATION OF PRE-SERVICE ELEMENTARY TEACHERS. *The Online Journal of New Horizons in Education-April*, *6*(2). Retrieved from http://www.academia.edu/download/45165318/v06i02-011.pdf

Nugroho, H. A., & Suparno, S. (2019). Implementing Beyond Centers and Circle Time for Linguistics Intelligence of Children with Hearing Impairment at an Early Age. *International Conference on Special and Inclusive Education (ICSIE 2018)*. Atlantis Press.

Pane, M. M., & Patriana, R. (2016). The significance of environmental contents in character education for quality of life. *Procedia-Social and Behavioral Sciences*, *222*, 244–252.

Poulou, M. S. (2017). Social and emotional learning and teacher–student relationships: Preschool teachers' and students' perceptions. *Early Childhood Education Journal*, *45*(3), 427–435.

Proulx, K., & Aboud, F. (2019). Disaster risk reduction in early childhood education: Effects on preschool quality and child outcomes. *International Journal of Educational Development*, *66*, 1–7.

Singer, E. (2013a). Play and playfulness, basic features of early childhood education. *European Early Childhood Education Research Journal*, *21*(2), 172–184.

Singer, E. (2013b). Play and playfulness, basic features of early childhood education. *European Early Childhood Education Research Journal*, *21*(2), 172–184.

Siswanto, D. (2017). Learning Methodology for Early Child Education Education (Paud) in the Recognition of Legal Capitals based on Android. *IOP Conference Series: Earth and Environmental Science*, *97*, 12047. IOP Publishing.

Smith, R. (2016). Technology and education. *International Journal of Innovation, Creativity and Change*, *2*(3), 13.

Syarifah, I., & Tasuah, N. (2018). The Science Process Skills Of Class B Children Reviewed from The Decision-Making Learning Model at TK ABA Rendeng, Purworejo City. *BELIA: Early Childhood Education Papers*, *7*(2), 107–112.

Utanto, Y., & Elyana, L. (2017). Role of Self-Regulated Learning in Early Childhood Education Learning. *9th International Conference for Science Educators and Teachers (ICSET 2017)*. Atlantis Press.

Van Hoorn, J. L., Monighan-Nourot, P., Scales, B., & Alward, K. R. (2014). *Play at the center of the curriculum*. Pearson.

Yasin, M. (2019). Character Education Based On Religius Values (Analysis Study In The Majlis Taklim Dzikir Sholawat Syadziliyah Ta'mirul Islam Surakarta). *ATTARBIYAH: Journal of Islamic Culture and Education*, *4*(1), 88–106.