



Contribution of Indonesia Cahaya Method to the Improvement of Early Childhood Teachers' Skills

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Introduction. The article is devoted to the enhancement of quality of teachers' skills in Indonesia. Qualified teachers do not happen by themselves, it requires conscious, planned, continuous efforts to improve their knowledge and competencies. This research aims at examining the contribution of the Indonesia Cahaya Method to fostering teachers' skills, including motivation in teaching, learning management skills, presenting effective learning materials, preparing interesting and fun learning, developing teaching aids; creating a dynamic learning atmosphere. The Indonesia Cahaya Method is one of the most popular learning methods for early childhood education system in Indonesia. This method was developed through a longitudinal study conducted by Dr. Masnipal, M.Pd. and Onyas Rohayati, which aims at determining the contribution of the Indonesia Cahaya Method to improving teaching skills of early childhood teachers.

Materials and Methods. The study was conducted as follows: giving a pre-test to teacher before the training began; carrying out training (treatment) for 8 hours (2 x 4 hours) with the help of the team, applying the method into learning in their respective schools in 6–8 weeks (minimum 30 and a maximum of 40 classes); and conducting a post-test by a colleague (one of the teachers at the primary/elementary school) with observations and interviews.

Results. The research findings conclude that the Indonesia Cahaya Method has contributed to the improvement of early childhood teachers' teaching performance. The improvement of teachers' teaching skills can be seen in: teachers' motivation in teaching, skills in managing learning, skills in presenting effective learning materials, interesting and fun learning packaging skills, and ability in creating an atmosphere dynamic learning. In addition, the improvement of teachers' teaching skills was followed by an increase in students' participation in learning.

Discussion and Conclusion. The training method is considered feasible to be followed, studied, developed and implemented in learning by early childhood education teachers. The results of this study add new references to various parties that the Indonesian Cahaya method can be an alternative in developing the competence of early childhood teachers and open up opportunities for further researchers to develop this method, especially at the elementary school level. The article targets primary school education managers and teachers.

Keywords: Indonesia Cahaya Method, teaching skills, early childhood learning methods, teacher competency training, student participation

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Вклад индонезийского метода Кахайя в совершенствование навыков педагогов дошкольного образования

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Введение. Подготовка квалифицированных учителей требует постоянных усилий по совершенствованию знаний и компетенций. Данное исследование направлено на изучение вклада индонезийского метода Кахайя (Света) в совершенствование навыков преподавания педагогов дошкольного образования, включая мотивацию в преподавании, навыки управления обучением, подготовку и представление эффективных учебных материалов, разработку учебных пособий, создание творческой атмосферы в классе. Метод Кахайя является одним из наиболее популярных методов обучения детей младшего возраста в Индонезии. Этот метод был разработан в результате лонгитюдного исследования, проведенного М. Маснипалом и О. Рохаяти для оценки эффективности подготовки педагогов дошкольного образования в Индонезии.

Материалы и методы. Исследование проводилось по следующим этапам: предварительное тестирование учителя до начала обучения, обучение командным методам (8 ч), применение метода обучения в дошкольных учреждениях (6–8 недель), проведение пост-теста коллегой (одним из учителей в школе), наблюдение и интервью.

Результаты исследования. Полученные результаты позволяют сделать вывод о том, что индонезийский метод Кахайя способствовал повышению эффективности деятельности учителей, работающих с детьми младшего возраста. Улучшение педагогического мастерства учителей наблюдалось на примере их мотивации к преподаванию, развития навыков управления процессом обучения, презентации эффективных учебных материалов, а также умения создавать творческую атмосферу в классе. Кроме того, за повышением квалификации учителей последовало расширение участия учащихся в образовательном процессе.

Обсуждение и заключение. Статья предназначена для специалистов системы дошкольного образования.

Ключевые слова: индонезийский метод Кахайя, педагогические навыки, методы обучения детей дошкольного возраста, подготовка компетентных педагогов, участие студента

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Introduction

Teachers are one of the spearheads of educational success; hence, every country in the world pays great attention to the teachers' quality. Qualified teachers do not happen by themselves, it requires conscious, planned, continuous efforts to improve their knowledge and competencies, through re-training, pre-service, refreshment, workshops, technical guidance, teacher education in the field of study [1–3]; in-service training [4]; teacher continuing education in their fields of study [5]; pedagogical staff professional skills improvement [6].

The programmes that are designed to improve teacher qualifications and competencies have been carried out in many countries in the world. African countries such

as Kenya, for example through the ECDE program, has trained their early childhood teachers to have skills in educating their students in schools, by sending teachers to study at Kenyatta University and universities in Moi and Nairobi, through degree programs, masters, and doctoral in the field of early childhood education [7]. Another example, an in-service early childhood teachers' training programme has been conducted in Cyprus in order to meet teacher competencies [8]. Portugal, since 1974, has developed an early childhood teacher training program known as Ciclos Ensino Básico (CEB, the Basic Education Cycle) [9]. The government of Ghana, West Africa, has trained many early childhood teachers through various universities [2].



Like other countries reforming their education system since the 6th REPELITA (1995–2000), Indonesia has paid more attention to improving teacher competence in addition to the development of students, from early childhood teachers, elementary schools, secondary schools, senior high schools to lecturers in college. Studies of Micheal Thair and David F. Treagust of the Science and Mathematics Education Centre, Curtin University of Technology, Perth, Western Australia in 1999 on developing teacher competencies in Indonesia showed that Indonesia had undertaken massive curriculum reform and teacher training by utilizing senior professional teachers from foreign and local academic facilities [10].

The seriousness of the Indonesian government towards teacher and lecturer education can be seen from the issuance of the Law of the Republic of Indonesia No. 2 of 2003 concerning the National Education System; Republic of Indonesia Law No. 14 of 2005 concerning Teachers and Lecturers; Republic of Indonesia Government Regulation No. 19 of 2005 concerning National Education Standards; Republic of Indonesia Government Regulation No. 19 of 2017 concerning changes to Government Regulation No. 74 of 2008 concerning teachers; and Republic of Indonesia Government Regulation No. 101 of 2000 concerning Civil Servants Education and Training. Based on the policies of the Government of the Republic of Indonesia, every teacher in Indonesia must foster his/her skills to become a skilled worker and have pedagogical, professional, personal, and social competencies, according to his/her fields [11].

Various training and upgrading, as a professional development program for educators and education personnel with various types of activities, have been held either by the government or private parties or private education providers and higher education in a constant manner, including through Initial Competency Tests (UKA,

Ujian Kompetensi Awal), teacher certification through PLPG (Pendidikan dan Latihan Profesi Guru, Teacher Professional Education and Training), UKG (Ujian Kompetensi Guru, Teacher Competency Tests), PKG (Penilaian Kinerja Guru, Teacher Performance Assessment), and PKB (Penilaian Kinerja Berkelanjutan, Sustainable Performance Assessment) conducted by the Ministry of Education and Culture of the Republic of Indonesia, 2015; Ministry of Research, Technology and Higher Education of the Republic of Indonesia, 2017. These activities are also being implemented including teachers in the field of early childhood education throughout Indonesia in order to continuously improve their professionalism, especially in facing challenges in the Industrial Revolution 4.0 era.

Unlike other countries, the serious concentration in the field of education of children in Indonesia has only occurred in the last 10–15 years. Therefore, in-depth studies on the development of learning methods for early childhood are still very limited. Many early childhood teaching methods are introduced by experts from other countries or brought by Indonesian academics and education experts from other countries, such as quantum teaching, contextual teaching and learning, team teaching methods, cooperative learning¹ [12]. However, the learning method or model is difficult to be implemented for early childhood teachers in Indonesia who have different knowledge and experience compared to teachers in developed countries. In Indonesia, due to teaching staff shortages, many scholars from other disciplines have become early childhood teachers, such as in the fields of psychology, society, language, and even engineering, even though this time it has begun to be put in order. Many in the early childhood education are only graduates of high school and do not have basic education for early childhood teachers. Teaching methods that are considered appropriate are methods that can be done by teachers

¹ Setiawan I. [Contextual Teaching and Learning: Make the Activities of Learning – Teaching Engrossing and Meaningful, translated from the karyar Elaine B. Johnson, Contextual Teaching and Learning: What it is and Why it is here to Stay]. Bandung: Mizan Learning Center (MLC), cet.3; 2007. (In Ind.)

according to their knowledge and abilities [13; 14]. In addition, many learning methods adopted from developed countries are not described in detail how to use them in practice in the field, so that only certain teachers can implement them in learning practices.

Hence, Indonesia Cahaya Method seeks to develop teachers' knowledge and abilities of early childhood teachers in Indonesia. The effectiveness of this method has been tested in various regions with different levels of social, cultural, economic strata, and education, thus, it can be used for teachers' training before implementing it to their students at school. Indonesia Cahaya Method is one of the strategies for creating effective learning for young children, which is able to combine children's development tasks with academic development (interests and hobbies in reading, writing and arithmetic). This method was developed by Dr. Masnipal, M.Pd. and Onyas Rohayati through a longitudinal study in 2004 and continued to be tested and revised until 2012. The effectiveness of this method was also studied by several students of the master program such as by Marhamah², Zainnah³, Komariah⁴, Annisah⁵. Since it was socialized in mid-2012, this method has been implemented by around 2,000 teachers from both government and private schools. In February 2019, through the Institute for Research and Community Service (LPPM) of University Islam Bandung, this method has been registered to the Ministry of Law and Human Rights of the Republic of Indonesia to obtain a patent.

There are at least two main targets for the development of the Indonesia Cahaya Method. Firstly, to help early childhood

education teachers prepare and present exciting, interesting, and fun learning for students through play and game, using special learning media, special teaching aids, specifically-made music and songs (singing). The method is remained to be used in the scope of thematic learning with a holistic and integrative approach in developing all development aspects: physical-motor, cognitive, language-communication, social and emotional.

Secondly, to help early childhood education teachers integrate child development tasks by developing their interests and fondness of reading, writing and arithmetic through interesting and fun learning. The development of interest and fondness for reading, writing and arithmetic (academic) is one of the needs that must be prepared for children aged 5 and 6 years old before entering elementary school [15]. At least, the Indonesia Cahaya Method can be an alternative for teachers, and parents of students in learning to read, write, count, for early childhood in Islamic kindergarten or Raudhatul Athfal (RA). The basic teaching skills including opening and closing the lesson, explaining and managing the class, asking questions, reinforcing, making variations in teaching styles and media, the skills of guiding small group discussions, skills in teaching individuals and small groups [11; 16; 17]. Considering the breadth of basic competencies that must be fulfilled by a teacher, this research focuses on (a) teachers' motivation in teaching, (b) learning management skills, (c) effective learning material presentation skills, (d) skills in preparing interesting and fun learning, (e) skills in developing teaching aids; and (f) teachers' ability to create a dynamic learning atmosphere.

² Marhamah E. [Analysis of Training Methods Fungalistung Light of Indonesia to Increase the Professional Competence of Early Childhood Teachers: Tesis, PPS Universitas Islam Bandung]. Not published. 2014. (In Ind.)

³ Zianah R.I. [The Effectiveness of the Method Fungalistung to an Increased Interest in Letters and Numbers: Thesis PPS Universitas Islam Bandung]. Not published. 2015. (In Ind.)

⁴ Komariah E. [The Implementation of the Method Fungalistung Light of Indonesia in Developing Six Aspects of the Development in the Group B (Studies in KINDERGARTEN Light Indonesia as a School laboratory): Tesis, PPS Universitas Islam Bandung]. Not published. 2019. (In Ind.)

⁵ Annisah S. [Implementation of Training, Methodical Fungalistung Light Indonesia as the Improvement of Teacher Competency Early Childhood Education. Tesis, PPS Universitas Islam Bandung]. Not Published. 2019. (In Ind.)



Aim of Study. This research aims at examining the contribution of the Indonesia Cahaya Method to improving teachers' teaching skills, including (a) motivation in teaching, (b) learning management skills, (c) presenting effective learning materials, (d) preparing interesting and fun learning, (e) developing teaching aids; (f) creating a dynamic learning atmosphere.

Hypothesis.

Ho: There is no contribution of the Indonesia Cahaya Method to improving teaching skills of early childhood teachers.

Ha: There is a contribution of the Indonesia Cahaya Method to improving the skills of early childhood teachers.

Literature Review

Competence of Early Childhood Teachers. The Law of Republic of Indonesia No. 14 of 2005 concerning Teachers and Lecturers; The Governmental Regulation of Republic of Indonesia No. 19 of 2005 concerning National Education Standards; and the Regulation of Republic of Indonesia No. 19 of 2017 concerning amendments to Governmental Regulation No. 74 of 2008 concerning teachers show that the Indonesian government requires early childhood education teachers to have a first-level education qualification in the field of early childhood education teacher education and four competencies, namely pedagogic, professional, personality, and social. Pedagogical competence is related to the knowledge and skills of educating, assessing, planning, implementing, and evaluating learning. Professional competence is related to the ability of teachers to understand the task of child development, developmental achievement standards, teaching methods, guiding and caring. Personality competence concerns teacher behaviour, ethics, attitude, friendly, honesty, cheerfulness, and responsibility. Social competence concerns the ability of teachers to deal with others, parents, students, superiors, peers, and the community in working together, tolerance, and empathy [18–20].

Teaching competence is teachers' ability in managing classrooms, creating effective learning, being a good facilitator and

motivator for students, able to optimize the role of media, materials, teaching aids in achieving educational goals [3; 16; 21; 22]. Classroom management and effective learning are marked by the students' activeness in following the learning process; the more active the students are in learning, the more effective the learning is [23]. Students' involvement and initiative are factors whether the class managed by the teacher is effective or not [24]. Rohmawati states that the effectiveness of learning is determined by the teachers' readiness and competence in planning learning [17]. In addition, Slavin mentions that the effectiveness of learning can be seen from four indicators (1) the quality of learning, (2) the suitability of students' level of readiness to grasp new material, (3) how much the teacher's effort in motivating students to complete certain tasks, and (4) completion of learning activities by students on time [25]. Furthermore, Witruha and Wrigh affirm that indicators to determine learning effectiveness, including (1) organizing good material, (2) effective communication, (3) mastery and enthusiasm for lessons, (4) positive attitude of students, the flexibility of learning approaches [26].

Teacher Training. Public demands of quality teachers continue to increase in line with the development of society and information and communication technology. Students need guidance from a competent teacher since the experiences gained by the child heavily depends on teachers' skills and understanding in teaching [8]. However, teachers with high competence and experience do not happen on their own, efforts are needed intentionally, continuously, and continually refreshed through coaching by the principal or the local education office, discussions with experts, routine refreshment activities or participating in training, workshops or technical guidance related to research in pre-service education, teacher continuing education [5; 27].

Training is one of the strategies carried out by many countries to improve teachers' competency. The study of Hyatt, Filler shows that teacher behaviour can be modified with various interventions because

it can facilitate changes in students [28]. Some research on the impact of teaching skills training shows an increase in teachers' concepts and skills [1]. Like other field teachers, teachers who teach early childhood need to receive obtain regular guidance, and refreshment through training [9; 29]. In specific, considering that teaching early childhood has a higher level of difficulty that requires patience, tenacious, perseverance, and high skills. Whereas, training for early childhood teachers contributes to the ability and skills in dealing with children [8; 9].

Training of the Indonesia Cahaya Method to Early Childhood Education Teachers. To learn the Indonesia Cahaya method, the teachers (as participants) must study the guidelines containing recommended scenarios and strategies, including the requirements and use of media, props, games, singing, and music. After that, they must follow how the method is applied in the practice of learning through training. To add to the experience, participants can also make observations on actual learning in the classroom, i.e., the Cahaya Indonesia Kindergarten. Until mid-2019, training methods have been attended by up to 2,000 teachers from various professional teaching organizations for early childhood education, such as HIMPAUDI (Himpunan Pendidik dan Tenaga Kependidikan Anak Usia Dini Indonesia, Indonesian Early Childhood Educators and Education Personnel Association), IGRA (Ikatan Guru Raudhatul Athfal, The Association of Raudhatul Athfal Teachers), and IGTK (Ikatan Guru Taman Kanak-Kanak Indonesia, Indonesian Kindergarten Teachers' Association). According to these 2,000 trained teachers, this has inspired thousands of other teachers in various regions who have not had the opportunity to attend training, even elementary school teachers.

The 2 x 4 hours Indonesia Cahaya Method training covers four stages: First, an introduction to the method (goals, objectives, the scope of use) for 60 minutes

using slides. Second, participants observe direct learning practices demonstrated by the developer. Third, after being divided into small groups of 10 people, each group practices learning with guidance. Fourth, each group is evaluated to find out the advantages and disadvantages. Hence, the learning process can be understood as a whole, each participant is involved in learning activities, can be as students or as a teacher (peer-teaching). In addition, if there are training participants who have not mastered the materials, the developer gives them an opportunity both in groups and individually to come and see first-hand the learning process in the Cahaya Indonesia Kindergarten, as a laboratory where this method is employed.

Oriented toward Developmental Task and Academic Development. The aim of early childhood education is to develop all developmental tasks, including physical-motor, cognitive, communication-language, social, and emotions⁶. All aspects of this development are carried out through thematic learning, which is holistic and interrelated with other aspects (integrative). Holistic and integrative principles are important in early childhood education, meaning that teachers must be able to enhance all those aforementioned aspects without ignoring any of them and making integration between all those aspects.

In recent years, the learning needs of early childhood have continued to change. The community does not only want their children to fulfil developmental tasks, but also the ability to simultaneously read, write and count, especially for students aged 5–6 years who are preparing to enter elementary school. The demands of parents are reasonable because many schools require students to be able to read, write and count when entering elementary school.

Early childhood education experts in several states in the United States of America have given priority to the ability to read, write and speak and listen. Morrison mentions that the kindergarten curriculum

⁶ [Regulation of the Minister of National Education of the Republic of Indonesia Number 146 Year 2014 about the Curriculum of Early Childhood Education]. (In Ind.)



should not only include emotional and social development activities, but also include academic experiences namely reading, writing, and mathematics, natural sciences, social sciences, and arts learning [15]. These experiences must consider the abilities and desires of early childhood aged 5–6 years through playing while learning. The experts' opinion asserted that learning in kindergarten, especially for children aged 5 and 6 years, does not neglect the content of academic experience in addition to focusing on fulfilling development tasks. In other words, the kindergarten curriculum should include reading, writing and counting skills activities together and integrating with the development of all aspects of development, in preparation for children entering elementary school. One of the conclusions from the study results of lecturers' visits from the Bandung Islamic University to Finland in 2018 was that learning to read, write and count had been given at the primary school level from the age of 5 years.

Activities of Reading, Writing and Numeracy from Perspective of the Expert and Science of Development. The prominent figures of early childhood education have presented their theories. Pestalozzi included counting, measuring, feeling, and touching activities in his theories. Montessori asserts the importance of teaching reading, writing, and arithmetic (mathematics) in the academic materials group in addition to practical life activities, and sensory materials. In terms of the science of child development, Havighurst (1972) states that one of the tasks of child development that must be prepared in early childhood is reading and developing basic skills for reading, writing and arithmetic at the end of childhood.

In line with this view, Hurlock suggested that early childhood should be taught speaking skills, such as pronunciation, adding vocabulary and form simple sentences. He adds that reading activities have been shown by children in early childhood, namely by looking at pictures in books, happy to hear stories or fairy tales [30]. Hurlock's opinion about early childhood reading activities that have emerged in

early childhood is in line with the results of longitudinal observations made by researchers for six years on their own children (2003–2009), that the instincts of children's interest in reading and writing activities have even been shown at the age of 15 months, namely through the activity of flipping through picture books and the emergence of a penchant for doodling with crayons/markers. This result of a longitudinal study has been published in the book entitled *Siap Menjadi Guru dan Pengelola Pendidikan Anak Usia Dini Profesional (Ready to Become a Professional Early Childhood Teacher and Manager)*, published by Gramedia Jakarta in 2013 and in a book entitled *Menjadi Guru Pendidikan Anak Usia Dini Profesional (Becoming a Professional Early Childhood Education Teacher)*, published by Rosda Karya Bandung in 2018.

It has been stated that children at the age of 22 months like to doodle, hold/grasp crayons or markers, and can make a series of simple drawings. At the age of 27 months, they can already tell the results of their scribbles and pretend to read by looking at pictures in books. At the age of 30 months old, they begin to like stories read by their mothers. At the age of 34 months, adults can tell the contents of the picture. At the age of 36 months, a child can fantasize by pretending to read what he made himself; along with the emergence of interest and hobby of cutting which is a basic writing skill. At the age of 42 months, children can correctly tell the contents of stories in picture books, even though they have not been taught to read. At the age of 48 months, children can already read on their own without help, even if they read haltingly. From these developments, it can be concluded that children's interest and fondness for reading activities actually appear before the age of 5 and 6 years [13; 14].

Pro and Cons Studies of Learning to Read, Write, and Count. Study of different opinion (pros and cons attitudes) of pre-reading, pre-written and pre-computation learning among early childhood education teachers, parents of students, managers of kindergarten institutions below and the

Department of Education of the Ministry of National Education and Raudhatul Athfal under the Ministry of Religious Affairs of the Republic of Indonesia was conducted by Dr. Masnipal, M.Pd. and Arif Hakim in 2017. It has been published in the Golden Age Journal in 2018. The results of this study show that: (1) 52.5% of the Office of Education and the Ministry of Religious Affairs of the Republic of Indonesia did not require teachers to provide reading, writing and counting activities. Meanwhile, based on the amount, 31% of the respondents stated 'forbid', and 40% of the respondents stated 'allow', and 29% of the respondents stated 'ignore'; (2) Most kindergartens and Raudhatul Athfal provided students with learning to read, write and count; (3) Only a small proportion of elementary schools (SD) requires children to be able to read, write, count when class begins; (4) Most reasons that school principals and teachers provide reading, writing and arithmetic learning is due to demands of the parents; (5) Majority of school principals and teachers admit that learning to read, write, and count is done privately with the consent of parents of students [20].

This aforementioned research results at least illustrated that (a) There were indeed differences of opinion regarding learning to read, write, count in the community; (b) Most Islamic kindergartens and Raudhatul Athfal apparently provided reading, writing and arithmetic learning; (c) Most reasons of the provision of learning to read, write, and count are due to the demands of parents of students in preparation for entering elementary school.

Indonesia Cahaya Method. One method of learning for young children that are oriented towards developing all aspects of development as well as academic experience is the Indonesia Cahaya Method. This method can be trained for early childhood teachers and can be a solution for parents of students who demand that their children obtain developmental tasks and have academic experience. This method (Total Learning Oriented to Task Development and Academic Experience (Read, Write, and Count), through Interesting and Fun

Learning) or also known as the Cahaya Indonesia Funcalistung Method was conceived and developed by Dr. Masnipal, M.Pd. and Onyas Rohayati in 2004. The initial idea of this method was to address the problems that were widely discussed by the people at that time, namely (1) the pros and cons of learning to read, write and count in the community, (2) the rise of learning to read, write and count by filling up, stuffing, and private methods in kindergarten; (3) kindergarten teacher confusion; (4) the demands of parents of students who want their children to be able to read, write and count before entering elementary school; (5) the number of primary schools that make the ability to read, write, count as an entry requirement; (6) the number of reading and writing books in circulation is not in accordance with the child's development; and (7) prohibition of learning to read, write and count from the education office.

The Indonesia Cahaya Method was developed through a long process, starting from conducting discussions with teachers, principals, and managers of early childhood education institutions; research and study of various theories of development and curriculum in various developed countries; limited trials in kindergarten laboratories; expert consultation; guidance and training is limited in some kindergartens until it was officially introduced to the community in 2012 through training and workshops. Until 2019, the training of this method has been conducted in several cities in Indonesia. The first research to test the effectiveness of this method was conducted by students of the Psychology Master's Program of Maranatha University in Bandung in 2007, which tested the reliability of this method for improving language skills (receptive and expressive) of early childhood in the 5–6 year age group. A total of 100 students aged 5–6 years were randomly selected from seven kindergartens in Bandung City. The results showed that there was a significant increase in children's language abilities after learning using the Indonesia Cahaya Method.



Research on the effectiveness of the Indonesia Cahaya Method was also carried out by Ema Marhamah who was a master student in Islamic Education for Early Childhood Education from Universitas Islam Bandung in 2014. Her study analysed the impact of the Indonesia Cahaya Method on increasing the professional competence of Early Childhood Education teachers in Cianjur Regency. The conclusion of the study shows that the Indonesia Cahaya Method had a significant impact on the improvement of the professional competence of Early Childhood Education teachers.

In 2015, Ika Rustika Zainnah, a student at the Islamic Education Masters Study Program in Early Childhood Education of Bandung Islamic University conducted a study on the effectiveness (implementation) of the Indonesia Cahaya Method in growing students' interests in recognizing letters and numbers. The results of the study showed that this method had a significant influence to increase early childhood students' interest and fondness in recognizing letters and numbers.

Another study on the Indonesia Cahaya method was carried out by Euis Komariah who was a master student at University Islam Bandung in 2018, by observing and analysing the implementation of the Indonesia Cahaya method in developing all aspects of development. The study concluded: (a) the Indonesia Cahaya method was planned carefully by using good material, media, props, and music and songs into an inseparable unity; (b) the method is able to embody students' motivation in learning, which is seen from enthusiasm, and student involvement in an interesting and fun learning process; (c) this method is very good in developing all aspects of development as well as the academic development needed by an early childhood in preparation for entering elementary school.

Furthermore, in early 2019, a study of the influence of the Indonesia Cahaya method on improving the competency of early childhood teachers was carried out by Sri Annisah, in her thesis for Bandung Islamic University. The study resulted in the conclusion that Indonesia Cahaya method had a significant impact on increasing the competence of early childhood education teachers.

The Excellence of the Indonesia Cahaya Method. Since 2012, there have been around 20 trainings in the Indonesia Cahaya method conducted in several cities in Indonesia. To accelerate its spread, starting in 2020 a training of trainer (ToT) will be held for trainees who are considered successful using this method to be further disseminated to early childhood education teachers throughout Indonesia.

From the recapitulation results of the assessment of participants after participating in the Indonesia Cahaya Method training, it can be inferred that this method (a) is easily understood by teachers with various educational backgrounds and experiences; (b) is proven to be able to develop all students' developmental tasks and academic experiences; (c) encourages teachers to be creative in creating games, media and teaching aids; (d) is highly favoured by children as it is packaged with interesting, fun, through singing, having fun, and exciting games, so that it does not seem like learning but playing; (v) make teachers like and feel very satisfied after seeing their students' enthusiasm.

Several studies have shown that the Indonesia Cahaya method is effective in creating interesting and fun learning for young children, and is able to develop all tasks of child development and academic experience⁷.

Principles and Learning Materials of the Indonesia Cahaya Method. The use

⁷ Marhamah E. [Analysis of Training Methods Funcalistung Light of Indonesia to Increase the Professional Competence of Early Childhood Teachers]; Zianah R.I. [The Effectiveness of the Method Funcalistung to an Increased Interest in Letters and Numbers]; Komariah E. [The Implementation of the Method Funcalistung Light of Indonesia in Developing Six Aspects of the Development in the Group B (Studies in KINDERGARTEN Light Indonesia as a School Laboratory)]; Annisah S. [Implementation of Training, Methodical Funcalistung Light Indonesia as the Improvement of Teacher Competency Early Childhood Education].

of the Indonesia Cahaya Method adheres to the following principles (a) the use of the method is carried out by playing as a whole, namely guided play; (b) the use of a method combined with the conditioning of the learning atmosphere, specially designed games, whiteboards to attach, special props (pictures, cards), songs, musical instruments; (c) oriented towards developing interests and fondness for reading, writing and arithmetic; (d) the teacher as the director, guide and facilitator; (e) use a group/classical learning model; and (f) for only children aged 4–6 years.

In addition, the props and media used are (a) blackboard with a blackboard with bags made of mica sheets, which is used to place letters and picture cards; (b) picture cards; (c) hanging ropes, plastic balls, magnetic pegs. This method is equipped with an electronic organ, matrices in slides, student conditioning, and student worksheets (7 books).

Then, the basic learning materials include (a) training gross motoric (playing plasticine, kneading, tearing, sticking to images, cutting, sewing, thickening lines); (b) introducing and writing letters with six basic materials; and (c) introducing ending words and insertion through filling in the boxes. The follow-up material consists of seven learning activities and numeracy learning with seven activity stages. The complete basis, objectives, principles, targets, methods, and learning material using The Indonesia Cahaya Method is contained in the Guide Book to Use the Indonesia Cahaya Method compiled by the developer in 2010.

Training the Indonesia Cahaya Method to Teachers. The Indonesia Cahaya Method can succeed if teachers understand and master the skills in guiding their students. For this reason, every teacher who is interested in using this method is required to attend training activities or technical guidance beforehand from the method developer. Until the middle of 2019, the training has been attended by up to 2,000 teachers from various professional organizations of early childhood education teachers, such as HIMPAUDI (Himpunan Pendidik dan Tenaga Kependidikan Anak Usia Dini Indo-

nesia, Indonesian Early Childhood Educators and Education Personnel Association), IGRA (Ikatan Guru Raudhatul Athfal, The Association of Raudhatul Athfal Teachers), and IGTK (Ikatan Guru Taman Kanak-Kanak Indonesia, Indonesian Kindergarten Teachers' Association). These 2,000 trained teachers have inspired thousands of other teachers in various regions, even elementary school teachers.

The 2 x 4 hours of training covers four stages: First, an introduction to the method (goals, objectives, the scope of use) for 60 minutes using slides. Second, participants observe direct learning practices demonstrated by the developer. Third, after being divided into several small groups of 10 people, each group practices learning. Fourthly, each group is evaluated to find out the advantages and disadvantages. To make the learning process can be understood as a whole, each participant is involved in learning activities, can be as students or as a teacher (peer-teaching). In addition, if there are training participants who have not mastered this method yet, the developer gives them an opportunity both in groups and individually to come and see first-hand the learning process in the Kindergarten of Cahaya Indonesia, as a laboratory where this method is being developed.

Materials and Methods

To find out the contribution of the Indonesia Cahaya Method in improving teacher teaching skills, this research employs a PR experimental approach with One-Group Pretest-Posttest Design, which uses only one group, pre-test, treatment, and post-test [30–33]. The research was conducted to one group (population) of teachers who had participated in the Indonesia Cahaya Method training, totaling 80 people from 80 kindergartens. The study was conducted in the following steps: (a) conducting a pre-test to a teacher before the training began; (b) carrying out training (treatment) for 8 hours (2 x 4 hours) with the help of the team, (c) applying the method into learning in their respective schools in 6–8 weeks (minimum 30 and a maximum of 40 learning); and (d) conducting a post-test



by a colleague (one of the teachers at the school) with observations and interviews. The research design was as follows (fig. 1).

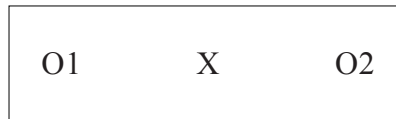


Fig. 1. Research Design

Source: [33].

Note: O1 = pre-test score (before given treatment), X = treatment (training of the Indonesia Cahaya Method), O2 = post-test score (after given treatment).

The subjects of this research were teachers who participated in the training of the Indonesia Cahaya Method. They were training participants from Islamic early childhood education teachers (Raudhatul Athfal) (RA) in Bandung Regency, West Java, from three districts, namely Cicalengka, Nagrek and Cikancung. This research collaborates with the professional organization of the Raudhatul Athfal Teachers' Association (IGRA, Ikatan Guru Raudhatul Athfal) Bandung Regency Branch. The data were collected using limited observation and interview sheets equipped with rubrics for teacher skills assessment. In addition, the instrument validation was done by expert judgment.

The selection of research subjects is based on considerations: (a) It is located in a suburban area, in which it is believed that the participants have not had the knowledge and never participated in the training of the Indonesia Cahaya Method; (b) a preliminary study showed that most teachers in these three regions had not been able to develop task-oriented learning and academic development that are interrelated.

All members of the population (training participants) had a comparable level of education and lengths of teaching experience are asked by their principal to participate in the training. In other words, the threat of internal validity can be controlled [34]. Threats related to external validity are as follows: (a) the subjects involved in the study acted differently than expected;

(b) the subjects had set the situation and condition of the students before the observation took place; (c) a span of 6–8 weeks, there may be subjects who do not continuously apply the Indonesia Cahaya Method in schools due to various factors, thus disrupting the generalization of research results [34]. External validity can be controlled by ensuring the above factors are avoided through agreements and commitments signed by the research subjects at the time of the pre-test. In addition, before the post-test was conducted, it has been ensured that only subjects who were willing and meet the criteria were observed.

To process and analyse data about the teaching skills of a group (population) of teachers who participated in the training of The Indonesia Cahaya Method using the average formula, Chi-square, and t-test [35].

Findings. The following description presents the results of mean, normality test and hypothesis test based on the teaching skills data of Raudhatul Athfal teacher who participated in the training of the Indonesia Cahaya Method and applied the method in learning in schools. The post-test data analysis was conducted on 80 participants who were all women. The following is a recapitulation of the description of the final grade data for teacher teaching skills.

The pre-test results of teaching skills obtained an average value of 71.83 and 86.96 for post-test results. The data shows that the teaching skills of teachers have increased from before and after being given treatment through the training in the Indonesia Cahaya Method.

The results of the normality test using the Chi-square formula in the post-test was at a significance level of 5% and the degree of freedom = 5, obtained X^2 count = 4.68 and X^2 table = 11.07, then the value of X^2 count < X^2 table, then the distribution statistical value of 80 teachers normally distributed. Based on that, the statistical test used in this study is the t-test using the variance test formula. From the analysis of the hypothesis test, the results in the following table 1, 2 are obtained.



Table 1. Result Analysis Pre-test and Post-test

| Analysis Result | Pre-test | Post-test |
|---------------------------|----------|-----------|
| Mean | 71.83 | 86.96 |
| Min | 60.00 | 75.00 |
| Max | 83.00 | 97.00 |
| Interval class | 23.00 | 22.00 |
| Numbers of interval class | 6.00 | 6.00 |

Table 2. Recapitulation of t-test Analysis

| No | Population | N | t-count | t-table | Status |
|----|------------|----|---------|---------|-------------|
| 1 | Teachers | 80 | 6.086 | 1.960 | Ha accepted |

From the analysis results obtained $t \text{ count} = 6.086 > t \text{ table} = 1.960$ at a significance level of 5% ($\alpha = 0.05$), then thus H_a is accepted. This means that there was a contribution of the Indonesia Cahaya Method

to improving teachers' teaching skills. The magnitude of the difference in the results of the pre-test and post-test improvement of each aspect of teaching skills is depicted in the following figure 2-4.

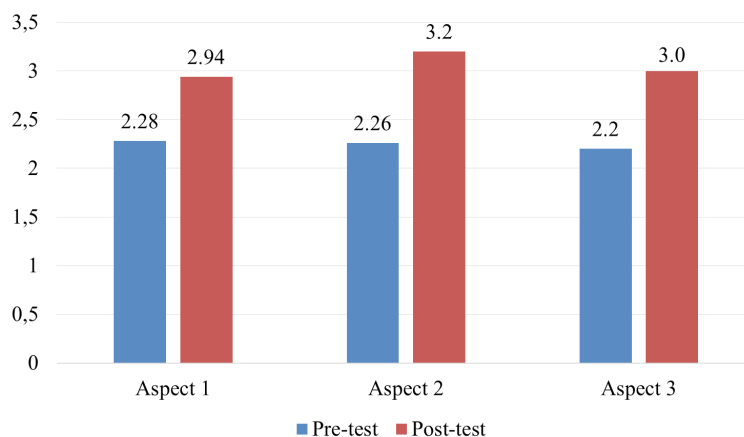


Fig. 2. Mean of Pre-test and Post-test on 1, 2, 3 Aspect Contribution

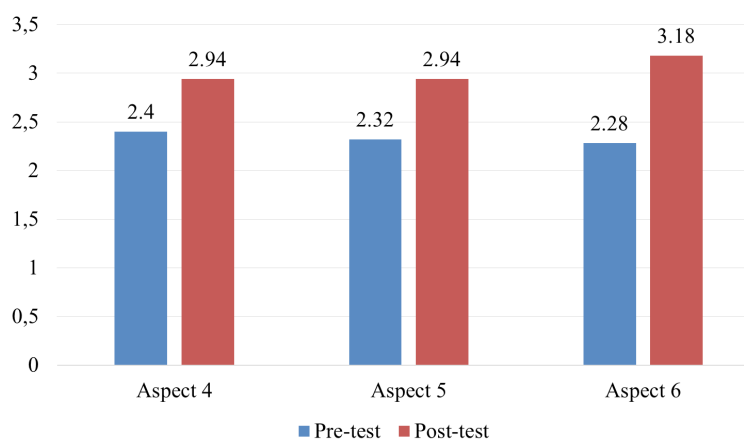


Fig. 3. Mean of Pre-test and Post-test on 4, 5, 6 Aspect Contribution

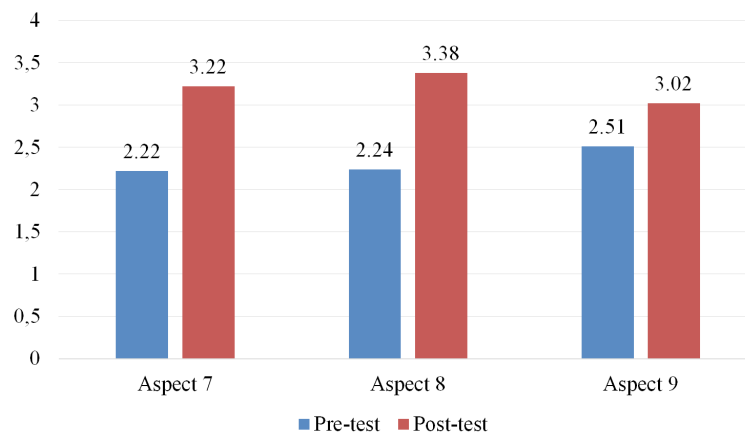


Fig. 4. Mean of Pre-test and Post-test on 7, 8, 9 Aspect Contribution

Discussion and Conclusion

This research examines whether the Indonesia Cahaya Method that has been trained to teachers can improve their teaching skills, hence, it has an impact on the success of learning for students. For a long time, training activities have been a means for teachers to improve their knowledge and skills. The results of this research are in accordance with previous theories regarding the role of training activities, workshops, technical guidance as a means of increasing teacher competence that has been proven by many experts. Training, upgrading, workshops are still the choices of many developing countries such as Indonesia as a means of increasing teacher competence [1; 28]. Not surprisingly, these activities have become a routine agenda every year in many countries in the world [27]. Teacher training has been proven to contribute to efforts to develop the abilities and basic skills of early childhood teachers [8; 9].

Early childhood teachers including Islamic kindergartens such as Raudhatul Athfal, are spread across nearly 3,000 islands throughout Indonesia. Improving educational qualifications in large cities requires great distances, difficult transportation, especially since they have to leave their students in remote villages where there is a shortage of educators. Upgrading training activities, refreshing activities,

workshops, and technical guidance that last from 1 to 2 weeks are expected to be the best method to improve the competencies needed by early childhood teachers [9]. Teacher competence is very influential in early childhood development [36].

The results of research on the contribution of the Indonesia Cahaya Method to improving teaching skills of Raudhatul Athfal teachers further strengthen the findings of previous research conducted by several masters and undergraduate students in several universities in Indonesia. The students are also a teacher in early childhood education and are experienced in applying various learning methods, so there is no difficulty in applying the scenario of the Indonesia Cahaya Method. This research has proven that the Indonesia Cahaya Method that has been trained to teachers previously contributes to improving (a) teachers' motivation in teaching, (b) teachers' skills in managing learning, (c) teachers' skills in presenting effective learning materials, (d) teachers' skills in developing interesting and fun learning, (e) skills in developing teaching aids; and (f) skills to create a dynamic learning atmosphere. These skills also contribute to increasing students' enthusiasm and interest in learning, students' involvement during learning, and students' mastery of learning material⁸ [37]. The results showed that all aspects increased in varied magnitude, and there

⁸ Ibid.

were no aspects that did not increase. This could mean that the use of The Indonesia Cahaya Method by the teacher Raufhatul Athfal contributed to the improvement of teacher teaching skills and had a positive impact on students' participation in the learning. Learning should invite students' enthusiasm, initiative and liking; active communication between teacher-students, students and students; and students' involvement and participation. This is in line with the findings of Prameswari & Budiyanto that teachers are needed to create effective ways of learning, assisted by students in understanding the relationship of subjects [38].

The findings of Rohmawati [37] and Dobrescu & Grosu [24] that effective learning is based on at least two factors, namely how to make students easy and happy to learn, and the presence of competent teachers. Competent teachers are able to organize students and material well, are able to communicate with students effectively, master learning, and be positive towards students, and flexible in using the learning approach. These findings are also in line with the opinion of Eggen and Kouchak [23] that the effectiveness of learning is characterized by the activeness of students in participating in the learning process; the more active the students are in learning, the more effective the learning [38].

The contribution of the Indonesia Cahaya Method in developing teachers' abilities and skills in creating effective learning for young children is supported by the findings of Marhamah, Zainnah, Komariah, and Annisah. Marhamah's study examined the correlation of The Indonesia Cahaya Method to improve the professional competence of Raudhatul Athfal teachers in Cianjur district, West Java⁹. This study

involved 60 samples from 400 people who attended one month earlier. The findings of her research indicated a high correlation (0.75) between the training of the Indonesia Cahaya Method with the professional competence of teachers.

Moreover, Annisah's study examined the effect of the Indonesia Cahaya Method on improving pedagogical, professional and social competence in Garut Regency, West Java¹⁰. The study involved 50 early childhood teachers (kindergartens and Islamic kindergartens) who had attended training two months earlier. The conclusion of her study shows that the Indonesia Cahaya Method had a very significant influence on the increasing pedagogical, professional and social competence of teachers.

The above findings resulted in the conclusion that the Indonesia Cahaya Method has made a positive contribution to improving the competence of early childhood teachers, which includes pedagogic, professional, personal, and social competencies¹¹. Learning becomes more interesting and enjoyable because it involves the teacher's total role and the use of media, teaching aids, singing, and music, thus making the atmosphere and climate of student learning more conducive; increase students' motivation to be actively involved; communication flow learning more smoothly; and learning is more meaningful. These findings reinforce the argument that the Indonesia Cahaya Method has been effective in creating interesting and fun learning for young children and can be trained for teachers. Training to master the Indonesia Cahaya Method is appropriate if conducted by teachers of children of this age throughout Indonesia, even other countries¹² [14].

Until now, in Indonesia, the Indonesia Cahaya Method has been the only

⁹ Marhamah E. [Analysis of Training Methods Fungalistung Light of Indonesia to Increase the Professional Competence of Early Childhood Teachers].

¹⁰ Annisah S. [Implementation of Training, Methodical Fungalistung Light Indonesia as the Improvement of Teacher Competency Early Childhood Education].

¹¹ Marhamah E. [Analysis of Training Methods Fungalistung Light of Indonesia to Increase the Professional Competence of Early Childhood Teachers]; Annisah S. [Implementation of Training, Methodical Fungalistung Light Indonesia as the Improvement of Teacher Competency Early Childhood Education].

¹² Zianah R.I. [The Effectiveness of the Method Fungalistung to an Increased Interest in Letters and Numbers]; Komariah E. [The Implementation of the Method Fungalistung Light of Indonesia in Developing Six Aspects of the Development in the Group B (Studies in KINDERGARTEN Light Indonesia as a School Laboratory)].



method in developing two developmental areas at once, namely the developmental tasks and academic experience for young children, packed in an interesting and fun learning atmosphere, and using play, games, media, props, singing and music as an inseparable part. The presence of this method in the community in addition to encouraging news for early childhood teachers is also expected to be a material of study and open up opportunities for further researchers.

This research concludes that there is a contribution of the Indonesia Cahaya Method in improving the teaching skills of Raudhatul Athfal teachers. From the results of the study it can be concluded that the training in the Indonesia Cahaya Method for Raudhatul Athfal teachers in Bandung Regency has contributed to the effectiveness of learning, based on indicators of an increase in the ability and skills of teachers and student learning. Improvements experienced by teachers are: (a) motivation in teaching, (b) skills in managing learning, (c) skills in presenting effective learning materials, (d) interesting and enjoyable learning packaging skills, and (e) skills in developing teaching aids; and (f) ability to create a dynamic learning atmosphere. While the improvement of students' learning are: a) enthusiasm, initiative and stu-

dents' interest in learning, (b) students' involvement during learning, and (c) students' mastery of learning material.

The results of this study add new references to various parties that the Indonesia Light method can be an alternative in developing the competence of early childhood teachers and open up opportunities for further researchers to develop this method, especially at the elementary school level. The results of this study have implications for providing empirical information to teachers about the Indonesia Cahaya Method as one of the strategies in creating interesting and fun learning for young children who can develop children's development tasks as well as academic development. The effectiveness of the use of this method depends very much on the teacher's ability to understand the scenario of methods, games, songs and musical instruments, teaching aids, study materials and the use of student worksheets. It is highly recommended for teachers to study this method thoroughly and conduct discussions with other teachers who have attended the training. For future researchers, the results of the study are expected to be an entry point in conducting studies on the effectiveness of the Indonesia Cahaya Method in a wider scope and in different settings and subjects, such as for elementary school teachers.

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The author has read and approved the final manuscript.

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