

Peer Coaching Model To improve the competence of PAUD teachers in applying Scientific Learning

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Abstract.

Teachers have a role that determines the success of learning, including in early childhood education (PAUD). Scientific learning is one of the recommended approaches in PAUD, but the competence of teachers in implementing it is still low even though they have attended various related trainings. Peer coaching is one of the professional development models inherent in the work of teachers, but teachers need to be prepared to apply it consistently and sustainably. The peer coaching model developed prepares teachers in a series of collaborations with fellow teachers starting from determining focus, making observations, reflecting on observations, providing inspiring feedback and actively making improvements and strengthening so as to ensure the continuity of the professional development of PAUD teachers. From the results of the development and internal testing of the model, it is proven that the model is feasible to be applied. The results of field trials also prove that the peer coaching model is effective in increasing the competence of PAUD teachers in implementing scientific learning through the three stages of the peer coaching cycle..

Keywords: Competency, Peer Coaching, Saintific.

I. INTRODUCTION

Early childhood education (PAUD) is a level of education before basic education is a coaching aimed at children from birth to the age of six years. Coaching is done through the provision of educational stimuli to help spiritual and physical growth and development so that children have readiness to enter further education [1]. As the spearhead of PAUD implementation, PAUD teachers must have competencies, namely personality competence, social competence, pedagogic competence and professional competence to support the implementation of their duties, especially starting from planning, implementing and evaluating learning programs in PAUD units [1]. The results of the teacher competency test in general are based on data from the Competency Certification Institute (LSK) from 2014 to 2019 from 6012 PAUD teachers who have been tested for competence nationally, 4250 people successfully passed with a graduation rate of 71%, but in North Sumatra the percentage who passed the test lower competence (49%) than those who did not pass (51%) [2]. The facts show that there are still many teachers who do not have the competence, including in

applying scientific approach-based learning even though they have participated in training activities / workshops / seminars and so on. Based on a preliminary study conducted on 40 PAUD teachers, it was observed that only 6 people were seen to apply scientific learning in its entirety, as many as 34 (85%) teachers stated that scientific learning was still teacher-centered.

In response to this, it is necessary to consider a model of continuous professional development. Professional development needs to move from theory-only, lecture-based models to more effective personal learning models such as peer coaching [3]. The results of the study found that only 5 (five) percent of teachers will transfer new skills into practice as a result of theory, while 95 percent will transfer new skills into practice if supported by peer coaching [4]. A learning culture occurs when the elements of effective coaching are transferred into practice in the education unit [4]. The concept of "coaching" in "peer coaching" is a professional improvement strategy that is carried out continuously and is inherent in the work of a teacher because it is in accordance with real conditions in the education unit and with fellow teachers [5]. In addition, peer coaching is also beneficial not only for teachers but also for students, school leaders and educational institutions [6]. Peer coaching has an impact on professional development because it offers teachers opportunities for self-reflection, sharing classroom experiences [7] and experiencing shared growth in teaching [8].

The peer coaching model was developed so that teachers create a culture of professionalism among teachers and colleagues [9], continuous improvement is built on the basis of trust and honesty among teachers, ensures a comfortable learning environment for teachers, teachers can grow together with colleagues. Peer coaching has a non-judgmental and non-evaluative nature because communication is horizontal, prioritizes collaboration, positive and mutually supportive responses, shows a desire to know what is already known and recognize gaps in their own understanding, motivated to respect each other [10]. Especially in the implementation of PAUD, it is explained that when PAUD teachers are involved in peer coaching collaboration, it can reduce feelings of isolation for teachers [11]. The nature of peer coaching is that colleagues work closely together, matching the collaborative nature of early childhood education. Peer coaching helps early childhood teachers respond better to children. One of its strengths is that being a peer coach means that coaches also have to reflect not on their own practice but also the practice of their coaching partners. This paper presents the benefits of peer coaching in improving the competence of PAUD teachers in applying scientific learning.

II. METHODS

In accordance with its function, the type of research used in this research is research and development or Research and Development (R and D). Educational research and development is used to design new products and procedures which are

then systematically tested in the field, evaluated, refined until they meet criteria for effectiveness, quality, or similar standards [12]. The detailed procedure in designing and developing the peer coaching model in this study describes the important steps using the ADDIE framework. Research and development begins with finding needs related to the product to be developed (Analyze), then developing the product based on theory (Design), then validating and testing both internally (Develop) and externally in field trials (Implementation) of products that have been compiled followed by an evaluation (Evaluation), then revised it so that a product was found that was in accordance with the research objectives (Rusdi, 2018).

The research was conducted in PAUD units spread across several sub-districts of Medan city, North Sumatra province. The location of the workshop is at the BP-PAUD Multipurpose Building and North Sumatra Dikmas. The selection of research sites was carried out with the consideration that Medan City is one of the three regions that have the most PAUD units in North Sumatra Province. Meanwhile, field trials were conducted in 9 (nine) PAUD units to 36 PAUD teachers.

III. RESULT AND DISCUSSION

Based on the results of the analysis, it was found that the teacher's need for a CERIA peer coaching model to improve teacher competence in implementing scientific learning. Thus, a peer coaching model and guide are designed so that teachers can practice a peer coaching culture. On the design of the model that has been compiled, internal testing is carried out by distributing instruments to experts and practitioners to test the feasibility of the model from the aspect of the model construct. Qualitative internal testing was carried out through Focus Group Discussion (FGD) activities, FGD participants were education management experts and PAUD practitioners who were considered to have the ability and expertise in the field of improving the competence of PAUD teachers so that they could contribute adequate thoughts.

The results of the implementation of internal validation quantitatively show that the functional relationship between components in the peer coaching model is stated very clearly by 16 people (53%), clear by 14 people (47%). The practicality of the peer coaching model was stated to be very practical by 19 people (63%), practical by 11 people (37%). The efficiency of the peer coaching model to be used was stated to be very efficient by 12 people (40%), efficient by 18 people (60%). The effectiveness of the peer coaching model to be used was stated to be very effective by 17 people (57%), effective by 13 people (43%). The results of internal validation of the model design obtained an average value of 90.4 which means that the model from the opinions of practitioners and experts has been declared very feasible. Qualitatively, the model has been tested by experts and practitioners. There is an addition in terms of the role of the principal and the importance of coaching (coaching) the teacher to apply the model. After internal validation, external validation is carried out, namely to determine

the feasibility of the model after being used in the field. Field trials were conducted on 9 (nine) PAUD units in the city of Medan from purposively selected samples, namely RA Tebu Ireng, TK Pembina II, TK Bharlind School, PAUD Islamiyah Terpadu, TK SOS Taruna, PAUD Qoyyim, PAUD Nadine, PAUD Gloria and PAUD Ganesha with 36 teachers.

Field testing was carried out using the action research method with three cycles, the stages of each cycle are as follows:

1. Planning (planning)

Diagnosing the initial competence of teachers in applying scientific learning using instruments, establishing a peer coaching team consisting of 2 (two) teachers who take turns being coaches and coachees, compiling peer coaching schedules, preparing observation instruments, reflection. Facilitating peer coaching materials both in print and power point about the techniques and strategies to be implemented in implementing peer coaching with a focus on scientific learning

2. Implementation of Action (Acting).

The resource team explained about the peer coaching model and scientific learning materials in coaching activities. The coaching activity aims to introduce the peer coaching model starting from the definition, objectives, benefits, structure, model elements, team organization, scenarios for applying the model to teachers so that they are able to apply the model.

Furthermore, after the teacher together with the assigned teammates understand the explanation of the peer coaching model, they will conduct a peer coaching cycle, namely:

a. Reflecting on the scientific learning that has been done so far using the teacher's reflection instrument. After finding the focus to be corrected, convey the results of the reflection with fellow teachers and agree to make observations (Content Focus)

b. The teacher makes observations of fellow teachers according to a predetermined focus. The coach teacher records learning while the coachee teacher teaches as usual (Effective Observation)

c. After the observation activities, the teacher and colleagues reflect together on the results of the observations, finding opportunities to increase competence and improve scientific learning (Reflective Collaboration)

d. Teachers provide feedback that inspires colleagues to improve competence and share knowledge related to scientific approaches (Inspirational feedback)

e. The teacher actively makes improvements and provides reinforcement to colleagues so that learning improvements (Active to Improve and to Reinforce).

3. Observation

Observations were made during the peer coaching process for each teacher, the results were recorded and documented as data and information sources that functioned for further planning materials.

4. Reflection

Reflection activities were carried out to analyze the results of peer coaching and the implementation of improvement in the learning process as well as to develop a plan for improvement in the next cycle, namely recording the results of observations, evaluating the results of observations, analyzing the results of peer coaching and learning outcomes, and correcting weaknesses for the next cycle. The score for the application of the peer coaching model based on the results of observations made to teachers and colleagues in the peer coaching process is depicted in Figure 1.

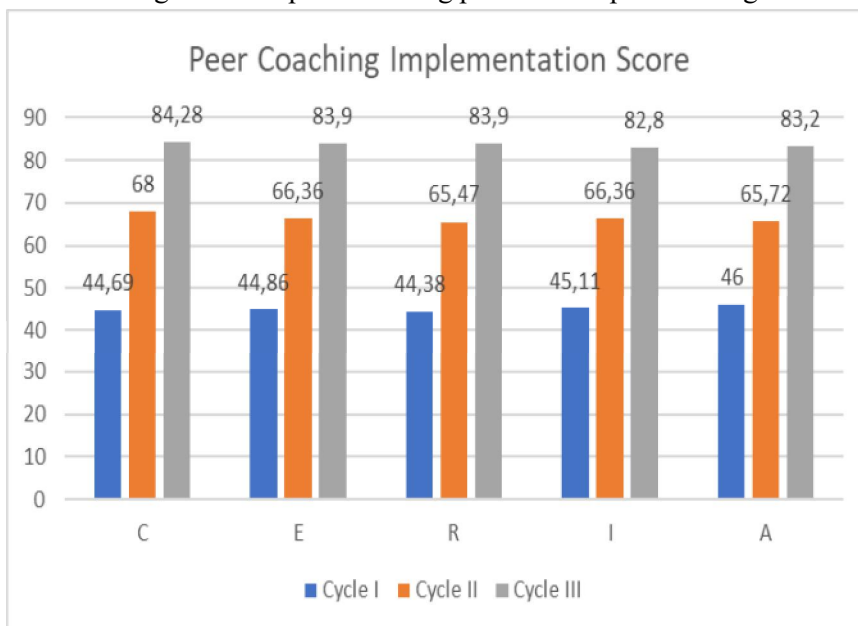


Fig 1. Score of Implementation of Peer Coaching Model Cycles I, II and III

Based on Figure 1 above, it is known that the score for the implementation of peer coaching was carried out for three cycles. For the first cycle, the scores for peer coaching C (Content focus), E (Effective Observation), R (Reflective Collaboration, I (Inspirational Feedback), A (Active to Improve and to Reinforce) were 44.68, 44.86, 44, 38, 45,11 and 46. Because the score did not meet (set at least 75) then cycle II was carried out. The scores for cycle II were 68, 66.36, 65.47, 66.36, 65.72. Because the score did not meet the score a minimum of 75 then cycle III. In the third cycle the average score of all CERIA components is 84.28, 83.9, 83.9, 82.8 and 83.2. In the third cycle the implementation of peer coaching reaches an average of above 80 , it means that the minimum score has been passed so that the cycle stages are stopped. Furthermore, after each peer coaching cycle, competency measurements are taken 3 times, while the results of increasing competence are depicted in Figure 2.

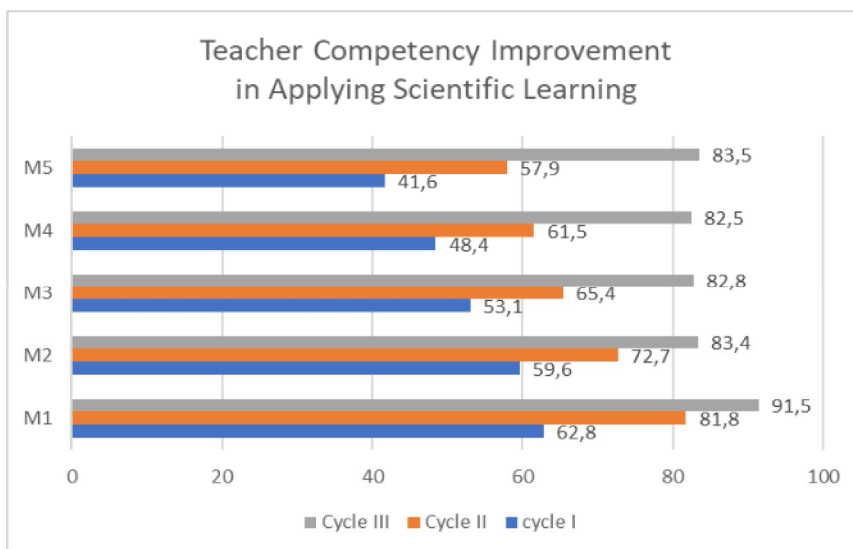


Fig 2. Graph of Teacher Competency Improvement in Applying Scientific Learning

n=36

rr=Average

Information:

M1 = Competence at the observing stage

M2 = Teacher competence at the questioning stage

M3 = Teacher competence at the stage of gathering information

M4 = Teacher competence at the stage of associating

M5 = Teacher competence at the stage of communicating

RR = Average value

n = Respondent

From Figure 2, it is known that the competency test scores always increase after participating in peer coaching for 3 (three) cycles. The indicator (M1) of teacher competence at the observing stage increased from the average value of 62.8, 81.8 to 91.5. The M2 indicator at the questioning stage increased from the average value of 59.6, 72.7 to 83.4. The M3 indicator at the information gathering stage increased from 53.1, 65.4 to 62.8. The M4 indicator, at the associate stage increased from 48.4, 61.5, to 82.5. The M5 indicator, at the communicating stage increased from 41.6, 57.9 to 83.5. Thus, the results of the competency test for 3 (three) cycles showed a significant increase in the average value of the competency test results after the model was tested. This means that the CERIA Peer coaching model can improve teacher competence in implementing scientific learning in the city of Medan. The results of the study prove that the peer coaching model improves the competence of PAUD teachers.

Increased competence can occur because the peer coaching model contains elements of adult learning that are integrated in the learning improvement process

starting from determining focus, effective peer observation (Effective observation), collaborative reflection of observations (Reflective Collaboration), inspiring feedback (Inspirational feedback), and concrete corrective actions that were given reinforcement by fellow teachers and the head of the PAUD unit (active to improve and to reinforce). By providing feedback on the focus identified by the coachee teacher for the lesson, the coach teacher helps the coachee teacher reflect on his actions towards the lesson objectives, the solution for improvement remains with the coachee teacher, but through a series of peer coaching models learning occurs so that the coach teacher, is able to make learning improvements because of the increasing competence inherent in the process of the peer coaching model. These results support the notion that peer coaching and job embedded learning can support individual teacher learning and growth. (Glickman, Gordon and Gordon, 2013). Teachers who do the peer coaching model positively show an increase in competence and this is clearly reflected in the improvement in learning.

Teachers combine experiences, carry out learning, collaborative reflection with teachers as well as the learning process, being inspired by fellow teachers is also a learning process, so learning and work are embedded in a series of peer coaching models. Two mutually reinforcing constructs in the relationship between teacher empowerment and professional learning as notions of collegiality and collaboration develop peer coaching [12]. The peer coaching model contains elements of action research, teachers can build, review, and refine a teaching portfolio (along with practice) based on peer-teacher observations that provide feedback on selected artifacts and reasons for including them in the portfolio. The peer coaching model emphasizes teacher competency development through direct learning improvement practices, focused observation on the skills being studied and getting feedback from what has been practiced and based on teacher strengths [13], teacher professional development is effectively enhanced when the teacher team has been encouraged to become a learning community [14].

The peer coaching model is still facilitated by the Head of the PAUD Unit through a process formulated by two or more teachers who agree to work together to grow and develop their professional abilities. The peer coaching model takes time, and will experience success and challenges along the way and will need adjustments along the way, as this is the synergy that comes from the coaching process. The results of this study support the emphasis that the voluntary peer coaching model has the potential to be a powerful professional learning opportunity that creates a culture of improvement in schools [12]. Although teacher time is often limited and teachers are constantly asked to do so, the teachers in this study demonstrated that time spent on peer coaching was beneficial. Teachers indicated they would continue to participate even though they were voluntary, and not compensated, would continue to do so, as there was much to be learned. The peer coaching model strengthens a strong learning community among teachers, which in turn is likely to improve teaching practices and result in better

student learning outcomes. These results support the notion that under the umbrella of peer coaching, a team of teachers can collaboratively design lessons that focus on specific strategies to reach all learners [15].

The peer coaching model puts the teacher in the driver's seat, giving ownership of the work being done, eliminating reliance on outsiders to sustain innovation. The peer coaching model provides teachers with a unique opportunity to solve problems with like-minded peers, increasing the teaching repertoire over time. The teacher said that the peer coaching model process was indeed a necessity because it emphasized collaboration and mutual reflection for improving learning. Peer coaching also promotes teacher professional growth based on teaching practice, teacher learning, teamwork, and teacher confidence, enthusiasm, and autonomy [16]. Teachers get the opportunity to observe each other, share good practices to improve teaching performance [17]. The peer coaching model is proven to develop teaching competencies by using partnerships between colleagues. The term peer in the peer coaching model refers to the relationship between two teachers, colleagues or partners. This makes communication between teachers more symmetrical than mere instructions from one person to another. The peer coaching model process is carried out with empathy and curiosity; related to the desire to develop as a teacher. The unique contribution of the peer coaching model is mutuality and reciprocity supported by the stages of readiness to increase competence inherent in the process, as a staff development dimension for teachers to create quality learning.

IV. CONCLUSION

The findings from the results of the limited trial and extensive trials provide an overview of the peer coaching model that can improve teacher competence in implementing scientific learning. This can be seen from the increasing value of PAUD teacher competence in each trial. This proves that the peer coaching model is effective in increasing the pedagogic competence of PAUD teachers. Improving the competence of early childhood teachers focuses on applying scientific learning starting from the stages of asking, observing, gathering information, associating and communicating.

The "CERIA" peer coaching model provides an attractive alternative to improve the competence of PAUD teachers promoting class quality in a sustainable, cost-effective manner by creating collaborative teaching communities, having measurable outputs at every stage and manifesting in continuous improvement of learning in PAUD and embedded in the work of teachers. Teachers can improve their competence independently and with colleagues because the peer coaching model begins with determining focus resulting from teacher reflection in learning, so that it can help teachers assess strengths and weaknesses in their own learning. Further researchers should conduct further research on the impact of implementing the peer coaching model on teacher performance, so that other researchers are expected to use the results of this study as study material and reference for further research.

V. ACKNOWLEDGMENTS

The author expresses his deepest gratitude to all the teams involved in this research, PAUD teachers and principals who have implemented the model to improve their competence as well as resource persons from Medan State University and Widya prada of BP-PAUD and Dikmas North Sumatra.

REFERENCES

- [1] Kemendikbud. Standar Pendidikan Anak Usia Dini. In: Kementerian Pendidikan dan Kebudayaan. Jakarta Indonesia: Kementerian Pendidikan dan Kebudayaan; 2014. p. 1–15.
- [2] BP-PAUD. Laporan Pemetaan Mutu. BP-PAUD dan Dikmas Sumatera Utara. Medan; 2019.
- [3] Huguet A, Marsh JA, Farrell CC. SPECIAL ISSUE Politics, Policies, and Practices of Coaching and Mentoring Programs education policy analysis archives A peer-reviewed, independent, open access, *multilingual journal Building Teachers' Data-use Capacity: Insights from Strong and Developing*. 2014;1–31. Available from: <http://epaa.asu.edu/ojs/>
- [4] Joyce BR, Showers B. Student achievement through staff development [Internet]. 3rd Editon. Fullan MiG, editor. Alexandria USA: Longman, Inc. Cover; 2002. 217 p. Available from: <http://books.google.com/books?hl=en&lr=&id=MtBj2sJXHGWc&pgis=1>
- [5] DiBella DKS, Williams DKG, Glover DLC. Improving Pre-Service Teachers' Readiness to Integrate Technology with Cross-Curricular Adaptations. *J Educ Hum Dev*. 2015;4(2(1)):84–97.
- [6] Morgan, M. and Rochford S. CoachMentor_LitReview_Final_14.03.17 [Internet]. 2017. Available from: https://www.effectiveservices.org/downloads/CoachMentor_LitReview_Final_14.03.17.pdf
- [7] Zepeda SJ. Peer Coaching. *Instr Superv*. 2020;245–60.
- [8] Yee LW. Peer Coaching for Improvement of Teaching and Learning. *J Interdiscip Res Educ*. 2016;6(1):64–70.
- [9] Jarvis R, Dempsey K, Gutierrez G, Lewis D, Rouleau K, Stone B. Peer coaching that works: The power of reflection and feedback in teacher triad teams [Internet]. Denver; 2017. Available from: https://www.mcrel.org/wp-content/uploads/2017/09/McREL_WhitePaper_InstructionalCoaching_Sept2017_web1.pdf
- [10] Gutierrez SB, Kim H. Peer Coaching in a Research-Based Teachers' Professional Learning Method for Lifelong Learning: A Perspective. 2018;64:214–21.
- [11]. O'Keefe B. Primetime for Coaching: Improving Instructional Caching in Early Childhood Education. 2017;(February).
- [12] Sugiyono. Metode Penelitian Pendidikan. Ketiga. Bandung: Alfabeta; 2019. 908 p.
- [13] Haberland S. Something Always Works: A Self-Study of Strengths-based Coaching in Supervision. *J Educ Superv [Internet]*. 2019;2(1):38–57. Available from: <https://doi.org/10.31045/jes.2.1.3>
- [14] Chen C-C. Facilitation of Teachers' Professional Development through Principals'

- Instructional Supervision and Teachers' Knowledge-Management Behaviors. intechopen. 2018;
- [15] Glickman DC, Gordon PS, Gordon-Ross M. The Basic Guide to Supervision and Instructional Leadership (2nd ed.). Third. Library of Congress Cataloging-in-Publication Data. 2013.
- [16] Amal A, Alabdulhadib M, Alrwaished N. Impact of peer coaching strategy on pre-service teachers' professional development growth in Kuwait. *Int J Educ Res [Internet]*. 2017;86(December):36–49. Available from: <http://dx.doi.org/10.1016/j.ijer.2017.07.011>
- [17] Koça A. the Benefits of Peer Coaching Method for Teachers ' Classroom Effectiveness (Case of International Light College , Madagascar). *Int Educ Sci Res J*. 2016;42–5.