

Optimizing Early Childhood Education Management in Enhancing the Quality of Children's Growth

Hega Nurazizah¹, Andika Sapwan²

Educational Administration

Universitas Pendidikan Indonesia

Bandung, Indonesia

heganurazizahstudent@upi.edu, andikasapwan@upi.edu

Abstract

Efforts to foster child growth and development are directed at improving children's physical, mental and psychosocial health through stimulation, detection and early intervention of developmental deviations (SDIDTK) activities with special attention to children under five years old and preschoolers. Fostering children's growth and development is carried out through Posyandu activities, but the level of community participation is still low. As a solution, monitoring children's growth and development is integrated with Early Childhood Education (PAUD) facilities through increasing the knowledge and skills of ECCE Teachers about SDIDTK. The IBM method is training and mentoring SDIDTK for ECCE teachers. The training was carried out for 2 days, followed by mentoring once a month four times. Before and after the training, pretests and post-tests are carried out using questionnaires to determine the level of knowledge. The skills of ECCE teachers in SDIDTK are observed using a checklist before and after mentoring. After being given training and assistance, there was a significant increase in the knowledge and ability of ECCE teachers in implementing SDIDTK. The average teacher knowledge increased by 16.00 points after the training, and the average ECCE teacher skills increased by 16.00 points after mentoring. Training and mentoring can optimize the role of ECCE teachers in implementing SDIDTK so that the quality of growth and development of preschool children improves.

Keywords: Optimization; ECCE education management; Growth and development; Preschoolers

Introduction

It is well known that children are the nation's most valuable asset in the future. Therefore, health development as part of efforts to build a whole person, among others, is carried out through child health efforts carried out as early as possible since the child is still in the womb. It is aimed at maintaining its survival while improving the quality of life of the child (Baidya et al., 2024; Jagota & Kaur, 2024; Pentz & Straus, 2024). Therefore, fostering child growth and development is one of the priority efforts in preparing Indonesian children to become candidates for the next generation of the nation who are healthy, intelligent, cheerful, tough and virtuous.

Considering that the number of toddlers in Indonesia is very large, which is around 8% total population of Indonesia, as a candidate for the next generation of the nation, the quality of toddler growth and development in Indonesia needs serious attention (Dhafin et al., 2024; Rachman et al., 2025; Sholihah et al., 2023). Efforts to foster children's growth and development are directed to improve children's physical, mental and

psychosocial health through the activity "Stimulation, Detection and Early Intervention Growth and Development Deviations (SDIDTK)". These efforts are carried out as early as possible from the womb, with special attention to children under five years old and preschoolers, because this period is a period that is very sensitive to the environment and lasts very short and cannot be repeated, so that this period is referred to as the golden period (golden period), window of opportunity (window of opportunity), and critical period (critical period) (Lestari, 2024; Wu et al., 2025).

Stimulation is an activity to stimulate children's basic abilities so that children grow and develop optimally. Every child needs to receive regular stimulation as early as possible appropriately and continuously at every opportunity, both in the family environment and the school environment and community environment (Cecilia, 2021; Pintado et al., 2022). Lack of stimulation can lead to deviations in the child's growth and development and even persistent disorders (Aini et al., 2020).

Instead, children should get monitoring of their growth and development, whether children can grow and develop according to their age and stage of development. Monitoring activities commonly referred to as early detection of children's growth and development are no less important to find early deviations in children's growth and development (Hirota et al., 2022; Sudarmilah et al., 2021). By early discovery of deviations or problems in children's growth and development, interventions will be easier to carry out and health workers also have "time" in making appropriate action plans so that the results will be maximized (Nasir & Nasir, 2016; Sudarmilah et al., 2021). If deviations are noticed too late, then intervention will be more difficult and this will affect the child's further growth and development.

Meanwhile, the government's efforts in fostering children's growth and development are carried out through Posyandu activities, but the level of community participation in checking their toddlers to Posyandu is still low. Prof. Dr. Ali Khomsan said, based on Riskesdas 2010 data, 50% percent of toddlers in Indonesia do not visit Posyandu regularly, the results of this research also show a tendency to get older a toddler, the rate of visits to Posyandu is decreasing. The results of research conducted by the Ministry of Health in 2010 also showed that posyandu was left at the age of three years and above. Likewise, in Panceng Subdistrict, toddler visits to Posyandu began to decline after children received complete basic immunizations at the age of one year, even though knowing the existence of child growth and development disorders at an early age greatly determines the success of their treatment by health workers. However, in reality, the scope of stimulation, detection and early intervention of children's growth and development (SDIDTK) activities has not yet reached the figure targeted by the government, namely in 2010 90% of children under five and preschoolers must be reached by SDIDTK activities. In addition, the Posyandu Toddler activities carried out still have not touched the aspects of monitoring growth and development as a whole, Posyandu activities are still focused on monitoring growth, namely weight weighing, and health services such as basic immunization, giving vitamin A and deworming to children. This Posyandu activity certainly has not touched on comprehensive monitoring of children's growth and development.

As a solution, child growth and development development is integrated with Early Childhood Education (PAUD) facilities, namely Playgroups and Kindergartens which are now widely followed by toddlers before moving to the elementary school education level. Parents and teachers of ECCE are one of the most important elements to be able to provide proper stimulation and know the deviations in children's growth and development at an early age because the success of children's growth and development at an early age is the basis of the

child's further development, however, there are many obstacles faced by ECCE teachers in carrying out stimulation, detection and early intervention activities for child growth and development.

The problem faced by partners, namely PAUD teachers in Aisyiyah Kindergarten 04 and Aisyiyah Kindergarten 35 Panceng District in SDIDTK activities, is the lack of knowledge and skills of teachers and the lack of adequate tools for SDITK activities.

To improve the knowledge and skills of ECCE teachers in stimulation, early detection and intervention of preschoolers' growth and development is not enough only through counseling but needs to be trained and mentored in a planned and structured manner. Therefore, the right solution to overcome the problems mentioned above is to improve the knowledge and skills of ECCE teachers through training and assistance in carrying out SDIDTK activities and the provision of tools or facilities for SDIDTK.

Training is a form of health education process through training to learning targets who will gain experience so that it can cause behavior changes (Hart et al., 2023; Maltinsky et al., 2025). Training has an important objective to improve knowledge and skills as a criterion for the success of the program as a whole. Training is a function that is continuous in nature and is not only given once in order to develop human resources. Training is emphasized more as a way to improve or increase knowledge and skills (Gultom & Daryanto, 2023). Training is also intended to achieve work efficiency and effectiveness in order to achieve predetermined targets. Several studies have proven that training has a significant effect on increasing knowledge (Gulati, 2020). However, after the training activities, there are interesting things that we need to pay attention to, namely what the teacher or trainees will do and how the mechanism is regulated by the organizers. As is commonly encountered, training that is followed by teachers or others mostly stops at the training itself. The next step depends entirely on the initiative of the participants to do, they will do something after attending the training or choosing not to do anything. They do not do something either because they feel unable to do so or the absence of support for either facilities, infrastructure or social support. For this reason, it is necessary to have assistance in the implementation of activities after training so that they feel that they have really been able to carry it out independently.

The concept of mentoring contains providing support and encouragement by someone who is senior, more experienced to someone who is new to help him adjust. Mentoring is carried out to ensure that professionally teachers do something better and innovative and sustainable as a result of their participation in the training. They are accompanied to ensure that the obstacles and difficulties they face in implementation can be resolved by the presence of a companion who at all times motivates and can help.

The professional assistance provided in mentoring does not have to be in the form of solving the problems faced, in fact, more assistance in the form of empowerment actions through optimizing their professional potential so that they are ultimately able to implement their activities independently (Maipath & Zulu, 2025; Ovalle et al., 2021; Toni et al., 2025).

Mentoring activities in IBM activities are carried out in an informal context, visits are carried out based on an agreed schedule so that the nuances of negativity can be avoided. Such scheduling is made and agreed upon by all parties involved in the mentoring. After that, the companion and the accompanying agreed on the focus of the mentoring to be observed during the visit. During the visit, the companion observed and recorded the facts encountered during the implementation of SDIDTK activities. After that, it continued with a reflection discussion. In this discussion, the companions and those who were accompanied jointly reflected on the results of the activities that had been carried out. The companion is tasked with directing the discussion as well as

possible so that the potential can take place in a relaxed, reflective, informal, and meaningful manner. The companion puts forward his objective assessment of the activities that have been observed. After that, the companion asked the accompanying person to bring up things that were considered successfully implemented in the activity. The disclosure of this success is important so that his confidence is further built. They are accustomed to recognizing the potential, strengths and advantages of their practice. At the end of the reflective discussion, the companion and the accompanying agreed on a follow-up in the future.

Methodology

The method used in science and technology activities for the community (IBM) is training and assistance of SDIDTK for early childhood teachers. The training was carried out for 2 days (the first day was given material and the second day of SDIDTK practice), then assistance was given once a month for 4 months. The outcomes observed were the knowledge and skills of teachers about SDIDTK. Knowledge variables were observed before and after training was given using questionnaires. The skill variables of ECCE teachers in SDIDTK were observed using a checklist, before and after mentoring. The data were analyzed descriptively.

Results and Discussion

After being given two days of training and mentoring during the month, the following results were obtained:
Teachers' Knowledge of SDIDTK

Table 1. ECCE Teacher Knowledge Levels Before And After Sdidtk Training Is Given.

Knowledge Score	Pretest		Posttest	
	f	%	f	%
50	2	13.33	0	0.00
60	1	6.67	0	0.00
70	4	26.67	0	0.00
80	7	46.67	3	20.00
90	1	6.67	11	73.33
100	0	0.00	1	6.67
Sum	15	100.00	15	100.00

From table 1, it is known that the average teacher's knowledge has increased by 16.00 points after training (average pre-training score of 72.67 and post-training of 88.67) from the highest score of 100. This means that training can significantly increase knowledge. Training is a form of educational process through training to learning targets who will gain experience so that it can cause changes in behavior.

Because training is an educational process, there will be a learning process, and there will be a transfer of knowledge from the provider of learning materials to the training participants. Therefore training has the important objective of improving knowledge and skills as a criterion for the success of the program as a whole. The training material must be planned and structured, the delivery must be clear and use simple language

(adjusted to the level of education of the participants) so that it is easy for participants to understand. The use of media such as power points equipped with animations will increase participants' interest and also facilitate understanding of the material presented.

In this community service, the training material has been well planned and structured, the speaker in delivering the material is more dominant using Indonesian and avoiding medical languages that are difficult for participants to understand. The delivery of the material uses an LCD projector, where the power point has been equipped with animation or images. To help remember the post-training material, researchers provide module books that can be studied independently by participants. Therefore, after being given this SDIDTK training, the knowledge of ECCE teachers is very good, which is an average of 88.67. The results of this IBM are in accordance with the theory proposed that training is emphasized more as a way to improve or increase knowledge and skills. Training is also intended to achieve work efficiency and effectiveness in order to achieve predetermined targets. The previous research proved that there is an influence between knowledge before and after being given training ($p = 0.000$). Likewise with the research conducted by Hida, F.M and Mardiana on the effect of training on the skills of Posyandu cadres, the result is that there are differences in the skills of Posyandu cadres in anthropometric measurements before and after training ($p = 0.0001$).

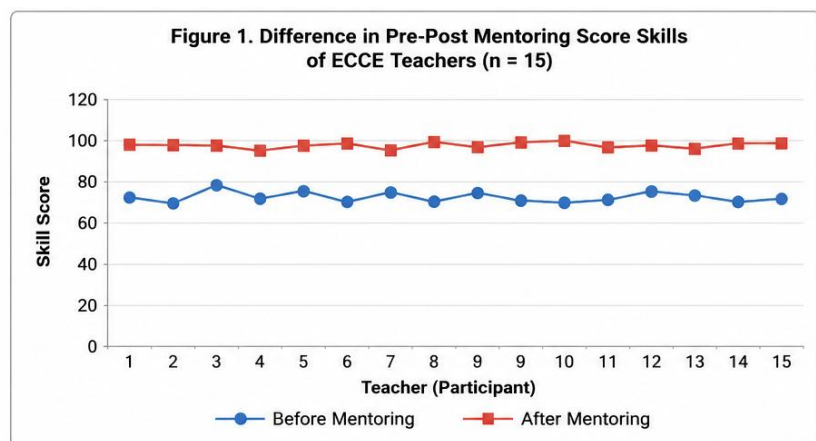


Fig 1. Graph showing the difference in skill scores of early childhood education (PAUD) teachers before and after receiving SDIDTK training and mentoring.

Based on figure 1 above, it can be explained that all (100%) of the teacher's skill score has increased after mentoring. The average score before mentoring was 72.67 and after accompaniment was 88.67 (the average score increase was 16.00). The results of this IBM prove that training and mentoring are able to improve the ability of ECCE teachers in stimulating, detecting, and early intervention in children's growth and development. This is in accordance with the results of previous research who showed that mentoring and training in learning organizations (LO) affect the role of posyandu, especially the performance of cadres. One developmental aspects, namely PPP, hearing power and seeing power.

Mentoring is almost the same as mentoring, which is a process that involves someone who is experienced, professional, expert to provide support, guidance and advice, and share experiences with colleagues who are not yet professionals. In its form, mentoring as a partnership in learning that involves cooperation to face opportunities and challenges and conducting continuous reflection by both parties involved. Mentoring is carried out to ensure that professionally teachers do something better and innovative and sustainable as a result of their participation in the training. They are accompanied to ensure that the obstacles and difficulties they

face in implementation can be resolved by the presence of a companion who at all times motivates and can help. The mentoring process carried out is basically the provision of motivation, comments, and suggestions that are constructive in nature. This process is based on enthusiasm, mutual trust, mutual conformity, and listening skills, openness and mutual respect and is based on a strong desire to share and learn from each other.

Professional assistance provided in mentoring is in the form of solving the problems faced, namely improving the ability of ECCE teachers in SDIDTK activities, in addition to that mentoring assistance is also in the form of empowerment actions through optimizing their professional potential so that they are ultimately able to implement SDIDTK activities to their students independently. The mentoring activities carried out are informal, and visits are carried out based on an agreed schedule. During the visit, the companion observes and records the facts encountered during the implementation of the activity.

After the mentoring is completed, it is followed by a reflection discussion which is a crucial stage in the mentoring action. In this discussion, the accompanying companions and teachers jointly reflected on the results of the activities that had been carried out. In the discussion, the companion put forward his objective assessment of the activities that have been observed, the companion put forward one or two things that are the strengths displayed by the teacher during the SDIDTK activities. The strengths conveyed are complemented by the delivery of fact-based reasons from observations in order to arouse self-confidence and avoid the appearance of the impression that the teacher or the accompanied person is observed to look for weaknesses. After that, the companion asked the accompanying teacher to bring up things that were considered successfully implemented in the activity. The disclosure of these successes is important to build his confidence. At the end of the reflective discussion, the accompanying companions and teachers agreed on future follow-ups, namely regarding the implementation of SDIDTK activities in their respective kindergartens.

Conclusion

Science and technology for the community through training and mentoring activities can optimize the role of ECCE teachers in carrying out stimulation, detection and early intervention of preschooler growth and development deviations. This is because the knowledge and ability of teachers in SDIDTK increased significantly after training and mentoring activities. This optimization of the role of ECCE teachers will increase the scope of SDIDTK activities for children under five and preschoolers. Thus, deviations in the growth and development of preschool children will be detected early in order to get the right intervention so that it will have an impact on improving the quality of growth and development of preschool children. Therefore, it is recommended that health workers improve and expand SDIDTK training and mentoring activities to ECCE teachers so that ECCE teachers are able to implement SDIDTK activities in their respective educational facilities continuously.

References

- Aini, F. N., Rahmawati, R., & Fitria, N. (2020). Description of parents knowledge about smooth fine motor ability in Pos Paud Mawar Merah, Kedaung, Sawangan, Depok. *ACM International Conference Proceeding Series*. <https://doi.org/10.1145/3452144.3452288>
- Baidya, A., Chandra, S., Dey, P. K., & Ghosh, D. N. (2024). Predictive Modeling of Maternal Child Health

- Challenges Through Machine Learning Analysis. In G. D., D. S., C. R. J.M., & D. D. (Eds.), *Lecture Notes in Networks and Systems: Vol. 1045 LNNS* (pp. 455–467). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-981-97-4799-3_34
- Cecilia, C. V. M. (2021). Early stimulation and development of language skills: Neuroeducation in initial education in Ecuador. *Revista de Ciencias Sociales*, 27(4), 309–326. <https://doi.org/10.31876/rcs.v27i4.37257>
- Dhafin, A. T., Fauzi, R., & Azzahra, Z. F. (2024). Development of Tracking Features and Recommendation for Mother's Nutrition in the Genting Mobile Application to Prevent Stunting Using Vision Transformer (Case Study: PKK Bandung City). *2024 International Conference on Intelligent Cybernetics Technology and Applications, ICICYTA 2024*, 111–116. <https://doi.org/10.1109/ICICYTA64807.2024.10913053>
- Gulati, K. (2020). Exploring the training methods for effective employee's performance in IT organisations in India: A SEM approach. *International Journal of Public Sector Performance Management*, 6(5), 664–675. <https://doi.org/10.1504/IJPSPM.2020.110137>
- Gultom, S., & Daryanto, E. (2023). Management of Continuous Professional Development through Competency-Based Training Model for Junior High School Teachers. *Emerging Science Journal*, 7(1), 190–206. <https://doi.org/10.28991/ESJ-2023-07-01-014>
- Hart, J., Byrne-Davis, L., Maltinsky, W., & Bull, E. (2023). Developing CPD to Change Behaviour. In *Training to Change Practice: Behavioural Science to Develop Effective Health Professional Education* (pp. 38–69). Wiley. <https://doi.org/10.1002/9781119833505.ch4>
- Hirota, T., Nishimura, T., Mikami, M., Saito, M., & Nakamura, K. (2022). The Role of the Maternal and Child Health Handbook in Developmental Surveillance: The Exploration of Milestone Attainment Trajectories. *Frontiers in Psychiatry*, 13. <https://doi.org/10.3389/fpsy.2022.902158>
- Jagota, R., & Kaur, A. P. (2024). Child Offender Under Juvenile Justice Act, 2022: A Comparative Study to Evolve Restorative Justice. In *Comparative law: Unraveling Global Legal Systems* (pp. 253–275). Springer Nature. https://doi.org/10.1007/978-981-97-7815-7_16
- Lestari, T. (2024). Early Detection and Intervention of Preschool-Aged Children Using Android-Based Monitoring during the COVID-19 Pandemic in Central Java. *Jurnal Keperawatan Indonesia*, 27(3), 158–164. <https://doi.org/10.7454/jki.v27i3.1250>
- Maipath, M., & Zulu, F.-Q. B. (2025). Fostering a culture of mentoring to enhance self-directed learning in a professional learning community: An action research. *South African Journal of Education*, 48. <https://doi.org/10.15700/saje.v45ns1a2684>
- Maltinsky, W., Swanson, V., Tanyan, K., & Hotham, S. (2025). An Evaluation of Health Behavior Change Training for Health and Care Professionals in St. Helena. *Healthcare (Switzerland)*, 13(4). <https://doi.org/10.3390/healthcare13040435>
- Nasir, L. S., & Nasir, A. (2016). Selected problems of infancy and childhood. In *Family Medicine: Principles and Practice* (pp. 287–294). Springer International Publishing. https://doi.org/10.1007/978-3-319-04414-9_21

- Ovalle, O., Estepa, C., Hoyos, M., Diaz, C., Jaramillo, S., Rada, A., & Pastor, P. (2021). Development of a Mentoring Program as a Strategy for the Empowerment of Young Professionals in the Strengthening of Their Soft Skills. *SPE Annual Technical Conference Proceedings*. <https://doi.org/10.2118/206217-MS>
- Pentz, T., & Straus, M. C. (2024). Children and Youth and Horticultural Therapy Practice. In *Horticulture as Therapy: Principles and Practice* (pp. 199–230). CRC Press. <https://doi.org/10.1201/9781003578420-10>
- Pintado, R. N. Z., Cueva, H. L. M., Arcos, S. N. L., & Jurado, D. M. B. (2022). Early stimulation as a neurological program in language skills and abilities in early childhood children in Ecuador. *Retos*, 44, 252–263. <https://doi.org/10.47197/RETOS.V44I0.88830>
- Rachman, F. A., Nurhadi Suharsono, T., Laluma, R. H., Irawati, Y., Kristianti, L., & Sugiarto, B. (2025). Stunting Risk Classification in Toddlers Based on Nutritional Data Using Random Forest Classifier. *Proceeding of 2025 19th International Conference on Telecommunication Systems, Services, and Applications, TSSA 2025*. <https://doi.org/10.1109/TSSA68467.2025.11303777>
- Sholihah, F. A., Susilowati, E., & Hudaya, I. (2023). Factors That Affect The Development of Toddler: Scoping Review. *Media Publikasi Promosi Kesehatan Indonesia*, 6(12), 2381–2389. <https://doi.org/10.56338/mppki.v6i12.4111>
- Sudarmilah, E., Saputra, D. B., Arbain, A. F. B., & Murtiyasa, B. (2021). Web-Based System for Growth and Development Monitoring Early Childhood. In A.-S. S.Z.S.I., M. W.A.W., & J. J. (Eds.), *Journal of Physics: Conference Series* (Vol. 1874, Issue 1). IOP Publishing Ltd. <https://doi.org/10.1088/1742-6596/1874/1/012024>
- Toni, M., Mehta, A. K., Aradhya, S. G. B., Chandel, P. S., Kamalakkannan, M. K., & Selvakumar, P. (2025). Mentoring and Coaching in Staff Development. In *Innovative Approaches to Staff Development in Transnational Higher Education* (pp. 1–25). IGI Global. <https://doi.org/10.4018/9798369391020.ch001>
- Wu, M. Y.-H., Chien, C.-Y., Huang, S.-Y., Chen, H.-C., & Huang, S.-J. (2025). The Effects of Social-Emotional Learning Program for Preschool Children on Prosocial Behaviors and Problem Behaviors. *Bulletin of Educational Psychology*, 56(4), 773–802. [https://doi.org/10.6251/BEP.202506_56\(4\).0001](https://doi.org/10.6251/BEP.202506_56(4).0001)