

Early Childhood Education Curriculum Application KurPA in Improving Early Childhood Education Learning Management in Cluster 2, Garut City District, Garut Regency.

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ABSTRACT

This study aims to develop and evaluate the effectiveness of the KurPa (Early Childhood Education Curriculum) application in improving Early Childhood Education learning management in Cluster 2, Garut City District. The development method used is the ADDIE model (Analyze, Design, Develop, Implement, Evaluate). While data processing is carried out using a qualitative and quantitative mixed method approach. Qualitative data processing is carried out for feasibility testing through expert testing and collecting interview notes, and documentation. Quantitative data processing for effectiveness testing through a one-way t-test with a significance of 0.05 in a large group of preexperimental one group pretest posttest. The results of the study obtained a sig. (2-tailed) value of 0.000 indicating that $0.000 < 0.05$ which proves that the H1 hypothesis is accepted, namely that there is an increase in learning management with the KurPa Application. Thus, the KurPa application significantly increases teacher efficiency in preparing learning plans, increases parental involvement in the learning process, and provides more effective feedback for teachers and parents. In addition, the KurPa application is also considered user-friendly and easy to use by Early Childhood Education teachers. This study concludes that the KurPa application can be an effective solution in improving Early Childhood Education learning management.

Keywords: KurPa Application, Early Childhood Education Learning Management

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INTRODUCTION

Early childhood education is an effort to develop children's behavior and basic skills optimally. According to Law of the Republic of Indonesia No. 14 of 2005, Article 1 paragraph 1 states that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing and evaluating students in formal education, basic education, and secondary education. Teachers have a very important role in the growth and development of children. The role of teachers is to foster morals and personality that can be imitated by children so that they become individuals with character. According to Mohamad Surya, teachers are the main element in the entire education process, especially at the institutional and instructional levels. Without teachers, education will only be a grandiose slogan. All forms of policies and programs will ultimately be determined by the

performance of those at the forefront, namely teachers. (Istifadah: 2019, 4). However, on the other hand, teachers need to equip themselves with the knowledge and skills needed to be able to create appropriate learning to stimulate children. Amidst the importance of the role of teachers in being able to create appropriate learning for children, one of the demands is to create good learning administration. The things that are the administrative tasks of teachers include making learning plans, choosing learning methods and media, implementing learning and conducting routine assessments both daily in the form of RPPH and semester assessment evaluations. However, so far, these administrative tasks have been very difficult for teachers to do. The shortcuts that teachers often take in fulfilling these administrative tasks are by adapting from the internet or other institutions whose conditions are not in accordance with the school where they teach.

In addition to administrative tasks, in current conditions teachers should also master technology. This can support learning to be more effective. The use of technology in education has become a very important need to improve the quality of education in Indonesia. The technological revolution has changed the way humans work, from communicating, producing, coordinating, and thinking to learning and teaching. In addition, technology can also be used to help improve the efficiency and effectiveness of the management process at various levels of education. The use of technology for learning management provides many benefits, including increasing efficiency, saving time, and improving the quality of education services.

As educators who take part in efforts to improve the quality of education by making practical innovations that can help teachers make it easier to make learning administration in efforts to improve PAUD learning management is by making a technology-based innovation in the form of an application. Today, mobile applications are categorized into several types such as cellphones, smartphones and gadgets that are close to the daily lives of teachers. From these problems, the idea arose for researchers to create an application that makes it easier for PAUD teachers to make learning administration, namely the Early Childhood Education Curriculum Application (KurPa). "KurPa" is an application designed to help make learning plans, assessments and other things related to PAUD learning management based on the Android system and website.

METHOD

The research method used is research and development research or research and development with the stages of ADDIE model development (Analysis, Design, Development, Implementation and Evaluation). Research and development is the process of researching learning needs and then developing products to meet those needs. (Mills & Gay, 2016). Educational research and development is a development model that uses research findings to design new products and procedures, which are then systematically tested in the field, evaluated, and improved to achieve criteria that are feasible and effective and of course of high quality (Gall et al., 2003). The research sample in this study was 20 ECE teachers in Cluster 2, Garut City District, who came from 11 ECE service institutions. The stages in this study include: 1) Conducting Needs Analysis, 2) Creating Application Design, 3) Developing

Android-based applications and websites, 4) expert validation (expert judgment) 5) Conducting small group and large group trials, and 6) processing research data.

The feasibility test was conducted by two experts, namely the ECE learning curriculum expert and the IT (Information Technology) expert. Both experts stated that the KurPa Application was very feasible to use with minor revisions so that the final draft and the initial draft did not experience significant changes. The second feasibility test was conducted empirically, in which the researcher used the qualitative data processing method of the t-test. Qualitative research findings from interview notes and documentation notes found that the KurPa Application was feasible to use to assist teachers in completing learning administration, both in terms of learning planning, implementation and evaluation.

FINDING AND DISCUSSION

RESULT

Based on the results of the needs analysis through a questionnaire, it can be obtained that PAUD teachers generally still have weaknesses in the competence of developing a curriculum related to the development field they are teaching. Among them, in compiling a learning calendar for a full year using computer applications, the majority of PAUD teachers have never done it. Likewise, in terms of compiling learning plans that are in accordance with the criteria of child development aspects and informing parents online, 85% of teachers have never done it and 15% do it occasionally. Meanwhile, in terms of compiling annual, semester, weekly and daily learning plans in TK/PAUD, 85% of teachers have never used computer technology, laptops or cellphones.

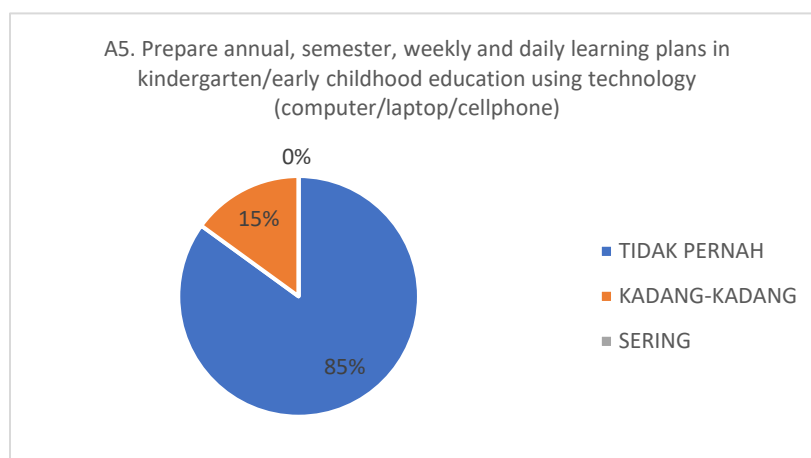


Figure 4.5 Diagram of Questionnaire Results for Statement A5.

Application development is carried out in stages, starting from database preparation, data synchronization, assembling by programmers and testing the application prototype. The prototype trial stage is carried out with a formative evaluation process four times, starting from expert validation, one-to-one trial by 1 teacher, small group trial with 2 teachers, and large group trial involving 20 teachers from 11 different PAUD institutions.

Expert testing on the KurPa Application was carried out by PAUD learning curriculum experts and IT experts as a feasibility test. The KurPA Application was declared very feasible (92%) by PAUD learning curriculum experts.

Table 4.8 Results of Early Childhood Education Curriculum and Learning Evaluation

Assessment Aspects	Average Score
Content	96%
Display	88%
Overall Score Average	92%

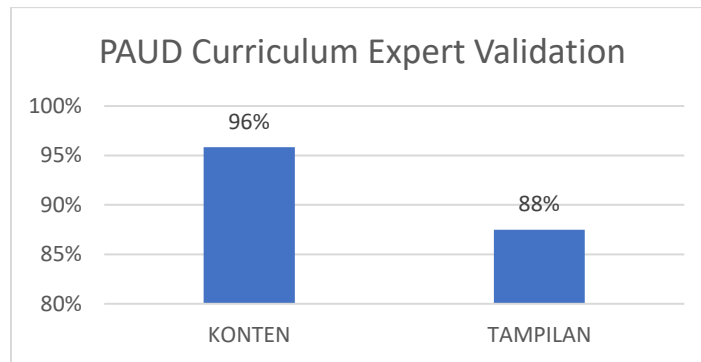


Figure 4.27 Histogram of Average Expert Validation Scores for Early Childhood Education Curriculum and Learning

And based on the results of expert tests by IT experts, it was also declared very feasible (91%). The results of this feasibility test are in line with the research objectives that the KurPa Application is able to facilitate teachers' tasks in managing the curriculum and PAUD learning.

Table 4.6 Results of IT Expert Evaluation and Online Applications

Assessment Aspects	Average Score
Content	100%
Display	81%
Overall Score Average	92%

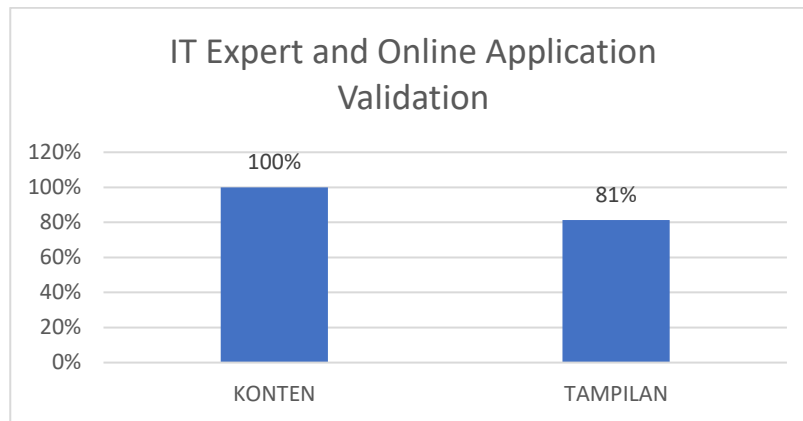


Figure 4.26 Histogram of Average Validation Scores of IT Experts and Online Applications

The observation instrument used by the researcher to see the improvement of learning management with the KurPa application was tested for validity with a one-way test significance level (α) of 0.05, the r-table number of which was 0.5494. In general, the r-count shows an average of 0.6284. The r-count number is greater than the r-table, so the instrument is declared valid. The reliability test was carried out after all instruments were declared valid to see the consistency of the measuring instrument with the Cronbach alpha formula and the categorization of the Guilford reliability coefficient in the book (Riadi, 2016). The results obtained showed a reliability coefficient of 0.688358, which means the interpretation of the Guilford Reliability coefficient is in the high category.

Table 4. 11 Reliability Coefficient Categories

Guilford Reliability Coefficient Category	
$0,81 \leq r_{11} \leq 1,00$	Very High Reliability
$0,61 \leq r_{11} \leq 0,80$	High Reliability
$0,41 \leq r_{11} \leq 0,60$	Moderate Reliability
$0,21 \leq r_{11} \leq 0,40$	Low Reliability
$0,0 \leq r_{11} \leq 0,20$	Very Low Reliability

The results of the statistical calculation of the reliability test with Excel using the Cronbach alpha formula are as follows:

Table 4. 12 Reliability Test Results

Cronbach Alpha Reliability Test Results	
Reliability Coefficient	Interpretation
0,688358	High

Effectiveness Test is conducted as a formative evaluation process to test whether the KurPa application is effective in improving teacher pedagogical competence which influences the improvement of learning management in PAUD Institutions. The researcher also conducted a hypothesis test through the Paired Sample T-test. It can be seen that the sig. (2-tailed) value is 0.000 indicating that 0.000 < 0.05 which proves the H1 hypothesis, namely that there is an improvement in learning management with the KurPa Application. Thus, the results of the qualitative and quantitative data processing above are able to answer the phenomena that have been described in this study.

Table 4.13 t-Test Results

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTest	16.5000	20	2.56495	.57354
	PostTest	29.1000	20	1.02084	.22827

		Paired Samples Test							
		Paired Differences			t	df	Sig. (2-tailed)		
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PreTest - PostTest	12.60000	2.58335	.57765	-13.80904	11.39096	-21.812	19	.0000

The effectiveness test was also conducted with a statistical test of pre-experiment one group pre-test post-test which showed the results of $t_{count} > t_{table}$, which means that the accepted hypothesis is that there is an increase in teacher pedagogical competence with the Kura Application. It can be concluded that the KurPa Application has proven effective in improving the competence of PAUD teachers, especially in developing curriculum related to the development field being taught, utilizing information and communication technology for the benefit of organizing educational development activities and organizing assessment and evaluation of the learning process and outcomes.

Based on the results of the pretest and posttest, there was a change in teacher scores before and after using the KurPa Application. This score comparison shows that the KurPa Application has proven effective in improving teacher competence, especially in developing curriculum related to the development field being taught, utilizing information and communication technology for the benefit of organizing educational development activities, and organizing assessment and evaluation of the learning process and outcomes. The researcher hopes that it can contribute to improving the competence of PAUD teachers which has an impact on improving the learning management system in PAUD Institutions.

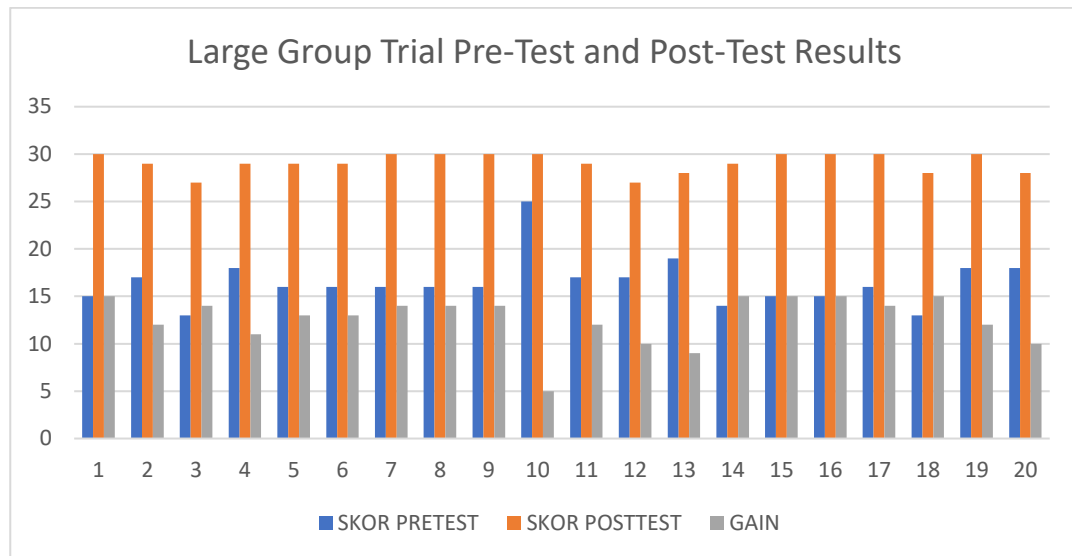


Figure 4.28 Recapitulation Results of Pretest and Posttest of Large Group Trial

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DISCUSSION

Application development is carried out in stages, starting from database preparation, data synchronization, assembling by programmers and testing the application prototype. The prototype testing stage is carried out with a formative evaluation process four times, starting from expert validation, one-to-one testing by 1 teacher, small group testing with 2 teachers, and large group testing involving 20 teachers from 11 different ECE institutions. Expert testing on the KurPa Application was carried out by ECE learning curriculum experts and IT experts as a feasibility test. The KurPA Application was declared very feasible (92%) by ECE learning curriculum experts and by IT experts it was also declared very feasible (91%). The results of this feasibility test are in line with the research objectives that the KurPa Application is able to facilitate teachers' tasks in managing ECE curriculum and learning.

The observation instrument that the researcher used to see the increase in learning management with the KurPa application was tested for validity with a one-way test significance level (α) of 0.05, the r-table number of which was 0.5494. In general, the r-count shows an average of 0.6284. The r-count number is greater than the r-table, so the

instrument is declared valid. The reliability test was carried out after all instruments were declared valid to see the consistency of the measuring instrument with the Cronbach alpha formula and the Guilford reliability coefficient categorization in the book (Riadi, 2016). The results obtained showed a reliability coefficient of 0.688358, which means the interpretation of the Guilford Reliability Coefficient is in the high category.

Effectiveness Test is conducted as a formative evaluation process to test whether the KurPa application is effective in improving teacher pedagogical competence which influences the improvement of learning management in ECE Institutions. The researcher also conducted a hypothesis test through the Paired Sample T-test. It can be seen that the sig. (2-tailed) value is 0.000 indicating that $0.000 < 0.05$ which proves the H1 hypothesis, namely that there is an improvement in learning management with the KurPa Application. Thus, the results of the qualitative and quantitative data processing above are able to answer the phenomena that have been described in this study.

The effectiveness test was also conducted with a statistical test of pre-experiment one group pre-test post-test which showed the results of $t_{count} > t_{table}$, which means that the accepted hypothesis is that there is an increase in teacher pedagogical competence with the Kura Application. It can be concluded that the KurPa Application has proven to be effective in improving the competence of ECE teachers, especially in developing curriculum related to the development field being taught, utilizing information and communication technology for the benefit of organizing educational development activities and organizing assessment and evaluation of the learning process and outcomes.

Based on the results of the pretest and posttest, there was a change in teacher scores before and after using the KurPa Application. This score comparison shows that the KurPa Application has proven effective in improving teacher competence, especially in developing curriculum related to the development field being taught, utilizing information and communication technology for the benefit of organizing educational development activities, and conducting assessments and evaluations of learning processes and outcomes. The researcher hopes that it can contribute to improving the competence of ECE teachers which will affect the improvement of the learning management system in ECE Institutions.

CONCLUSION

In general, the development of the KurPa application is declared feasible through the feasibility test process. Research and development or research and development to develop the KurPa application that is able to improve ECE learning management can be a guideline for ECE teachers in compiling curriculum and managing learning. In preliminary research through observation, it was revealed that ECE teachers generally have difficulty compiling technology-based learning plans. Generally, teachers choose to copy paste in compiling the curriculum. Teachers also feel the need to improve pedagogical competence, especially in planning and conducting online technology-based learning assessments that support authentic assessments of each child, both daily, monthly and semester assessments. ECE institutions also feel the lack of technological facilities that support the implementation of data-based management. Generally, ECE institutions do not yet have a

database and online-based assessments. The main use of the KurPa application development is to assist in the implementation of ECE learning management administration through a practical and effective application system.

REFERENCES

- Arbi, Imam Hanafi, Munzir Hitami, H. (2018). Universitas islam negeri sunan kalijaga yogyakarta. *Profetika, Jurnal Studi Islam*, 20(0274), 11–15.
- Arifudin, O. (2016). *Konsep Paud*.
- Aryani, N. (2015). Konsep Pendidikan Anak Usia Dini Dalam Perspektif Pendidikan Islam. *POTENSIA: Jurnal Kependidikan Islam*, 1(2), 213–227. <http://ejournal.uin-suska.ac.id/index.php/potensia/article/view/3187>
- Azwardi. (2015). Manajemen pembelajaran paud. *Manajer Pendidikan*, 9(1), 108–114
- Branch, R. M. (2009). *Instructional Design: The ADDIE Approach*. Springer. Damanik Rabukit.
- (2019). Hubungan Kompetensi Guru Dengan Kinerja Guru. *Jurnal Serunai Administrasi Pendidikan*, 8(2), 4–5.
- Damanik Rabukit. (2019). Hubungan Kompetensi Guru Dengan Kinerja Guru. *Jurnal Serunai Administrasi Pendidikan*, 8(2), 4–5.
- Etivali, A. U. Al. (2019). Pendidikan Pada Anak Usia Dini. *Jurnal :Penelitian Medan Agama*, 10(2), 212–237.
- Gall, M. D., Gall, J. P., & L, B. (2003). *Educational Research: An Introduction*. In *Qualitative Voices in Educational Research* (7th ed.). Pearson Education. <https://doi.org/10.4324/9781003008064-1>
- Herawati, N. I. (2003). Pengembangan Model Kurikulum Pendidikan Anak Usia Dini. *Jurnal Pendidikan Usia Dini*, 1(1), 1–17.
- Ineu, N. (2003). Pengembangan Model Kurikulum Pendidikan Anak Usia Dini. *Jurnal Pendidikan Usia Dini*, 1(1978), 1–17.
- Islam, U., Raden, N., Lampung, I., & Lampung, B. (2019). MANAJEMEN PEMBELAJARAN PENDIDIKAN ANAK USIA DINI Universitas Islam Negeri Raden Intan Lampung , Bandar Lampung , Indonesia agar terciptanya proses belajar mengajar yang efektif dan efisien , dapat terciptanya. *AL ATHFAAL: Jurnal Ilmiah Pendidikan Anak Uisa Dini*, 2(1), 69–78.
- Ismail, M. I. (2010). Kinerja Dan Kompetensi Guru Dalam Pembelajaran. *Lentera Pendidikan : Jurnal Ilmu Tarbiyah Dan Keguruan*, 13(1), 44–63. <https://doi.org/10.24252/lp.2010v13n1a4>
- Jamal Ma'mur Asmani, *Panduan Praktis Manajemen Mutu Guru PAUD*
- Jwalita, Y. (2011). Boardgame Untuk Anak Usia Empat Dan Lima Tahun. In *Universitas Multimedia Nusantara. Universitas Multimedia Nusantara*.
- Kusumawati, D. (2016). Supervisi akademik kepala sekolah terhadap manajemen pembelajaran PAUD (Studi Kasus di PAUD Tunas Bangsa Langensari Ungaran). *Satya Widya*, 32(1), 41–48. <https://ejournal.uksw.edu/satyawidya/article/view/629>

- Mills, G. E., & Gay, L. R. (2016). *Educational Research Competencies For Analysis And Application* (11th ed.). Pearson.
- Mulia, P. S., & Kurniati, E. (2023). Partisipasi Orang Tua dalam Pendidikan Anak Usia Dini di Wilayah Pedesaan Indonesia. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(3), 3663–3674. <https://doi.org/10.31004/obsesi.v7i3.4628>
- Ngiu, Z., Djafri, N., & Arwildayanto, A. (2021). Strategi Guru dalam Pembelajaran Holistik pada Pendidikan Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(3), 1429–1438. <https://doi.org/10.31004/obsesi.v6i3.1798>
- Orang, T., Gangguan, D., & Odgi, J. (2019). Universitas Islam Negeri Sunan Kalijaga (01.04.2019). 19–99.
- Richey, R. C., Klein, J. D., & TRACEY, M. W. (2011). The Instructional Design Knowledge Base: Theory, Research, and Practice. In Routledge (Ed.), *Communications of the ACM* (Vol. 4, Issue 7). <https://doi.org/10.1145/366622.366650>
- Rochayadi, I. (2014). Upaya Meningkatkan Kompetensi Guru Paud Melalui Pendidikan Dan Pelatihan Guru Di Paud Bougenville Kecamatan Sukajadi Kota Bandung. *Jurnal EMPOWERMENT*, 4(2252), 1–10.
- Rohman, H. (2020). Pengaruh Kompetensi Guru Terhadap Kinerja Guru. *Jurnal MADINASIKA Manajemen Dan Keguruan*, 1(2), 92–102. <https://ejournalunma.ac.id/index.php/madinaska>
- Roza, D., Nurhafizah, N., & Yaswinda, Y. (2019). Urgensi Profesionalisme Guru Pendidikan Anak Usia Dini dalam Penyelenggaraan Perlindungan Anak. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 4(1), 277. <https://doi.org/10.31004/obsesi.v4i1.325>
- Safitri, A., Kabiba, K., Nasir, N., & Nurlina, N. (2020). Manajemen Pembelajaran bagi Anak Usia Dini dalam Meningkatkan Kualitas Pembelajaran. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 5(2), 1209–1220. <https://doi.org/10.31004/obsesi.v5i2.811>
- Shofia, M., & Dadan, S. (2021). Media Pembelajaran untuk Anak Usia Dini di Pendidikan Anak Usia Dini. *Jurnal Pendidikan Tambusai*, 05(01), 1560–1561.
- Sugiyono. (2014). *Metode Penelitian : Quantitatif, Kualitatif, dan R&D*. ALFABETA.
- Utami (2021) Artikel ini telah tayang di Kompas.com dengan judul "Kurikulum: Pengertian, Fungsi, Tujuan, dan Komponennya", Klik untuk baca: <https://www.kompas.com/skola/read/2021/07/02/101008069/kurikulum-pengertian-fungsi-tujuan-dan-komponennya?page=all>.
- Uzlah, U., & Suryana, D. (2022). Kompetensi Guru PAUD Mengimplementasikan Kurikulum 2013. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(5), 3921–3930. <https://doi.org/10.31004/obsesi.v6i5.2177>
- Wiranata, I. G. L. A. (2019). Mengoptimalkan Perkembangan Anak Usia Dini Melalui Kegiatan Parenting. *Pratama Widya : Jurnal Pendidikan Anak Usia Dini*, 4(1), 48. <https://doi.org/10.25078/pw.v4i1.1068>
- Yuli Supriani, O. A. (2023). Partisipasi Orang Tua dalam Pendidikan Anak Usia Dini. *Jurnal Pendidikan Anak Usia Dini*, 1(1), 101.

Yunita, Y., & Puridawaty, B. (2024). The Improvement in Listening Skills of Children Aged 5-6 Years in Guidance for Kids Kindergarten Using the Ged Application. *Journal of Scientific Research, Education, and Technology (JSRET)*, 3(2), 718–724. <https://doi.org/10.58526/jsret.v3i2.403>