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## The Relationship between Transformational Leadership and Building Partnerships on the Performance of Early Childhood Education Principals

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DOI: 10.15294/ijeces.v12i1.66287

Submitted: 13/02/2023 Revised: 27/03/2023 Accepted: 16/06/2023

### ABSTRACT

It is important to pay attention to the early childhood learning environment at this time, this has something to do with the leadership style of the school principal. Constraints that are still a problem because the initiative of a leader is still low in carrying out dynamic updates and changes in the Early Childhood Education (ECE) environment, so this can have an impact on performance. The purpose of this study was to determine the relationship between transformational leadership and building partnerships on the performance of ECE principals. The methodology uses quantitative data collection methods based on observation and questionnaires. The research sample consisted of 30 ECE principals selected by random sampling with consideration of school qualifications and experience as school principals. The data analysis technique uses inferential statistics with the SPSS-assisted Independent Samples Test. The findings show that transformational leadership and building partnerships have a significant relationship to the performance of ECE principals. The transformational style can delegate tasks or jobs to teachers, and involve teachers in decision making, pay attention to subordinates, and create a sporty and family work environment. Building partnerships can be started with parents and can then be carried out with the community environment to increase electability and synergy of strong cooperative relationships in achieving optimal educational goals.

**Keywords:** Transformational, Partnership, Performance, ECE

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## 1. INTRODUCTION

Education has always been the focus of attention in today's life and in the future (Niccols et al., 2020). Therefore, the importance of efforts to improve the quality of education optimally, and the quality is reflected in the achievements of schools (Aeni et al., 2020). Schools as organizations individually or in groups gather to carry out cooperative relationships in achieving goals (Murray, 2017). In recent years, efforts to improve and improve organizational performance (Yourneli, 2019), especially school organizations, have become something that is very important to do immediately (Gurova, 2018). This is due to demands for the quality of education as a direct consequence of the rapid development of science and technology (Unger & Meiran, 2020). One of the human resources, namely the principal, is the leader and responsible for achieving school goals (Haddad & Ashqar, 2020).

A quality educational process cannot be achieved without the right school organization (Fan & Editors, 2020). Therefore, there is a need for adequate leadership. The leadership must be able to motivate or encourage its staff by inspiring or inspiring their creativity at work (Ali, 2022). Leadership itself is not only at the top of the structure in educational organizations but also covers every level in the organization (Zulkifli, 2021). In this leadership, of course, must get the support of commitment and cooperation from various parties, especially the entire school community. The quality of the principal's leadership greatly influences the success of the school (Yayuk & Sugiyono, 2019).

The principal is always related to leadership. Leadership style is a set of characteristics used by associations to influence subordinates so that organizational goals are achieved (Taucean et al., 2016). Transformational leadership is an effective leadership style for creating a culture that can help achieve organizational goals and one-way processes (Perera et al., 2018). In the opinion of Haddad and Ashqar (2020) there are four components of transformational leadership; 1) Ideal influence; 2) Inspirational motivation; 3) Intellectual motivation; and 4) Individual considerations. Transformational leaders are able to produce change for themselves, systems or society.

The current problem is that the leadership of school principals at the ECE level still looks static, only relying on regulations and programs that have previously been made. This becomes an obstacle to developing a school principal's leadership style for a renewal and change in facing the challenges of the 21st century (Wilson & Narasuman, 2020). In addition to the fact that school principals are still involved in taking learning hours in class, this should not be done anymore. The problems found above are based on the results of preliminary studies in several ECE schools in Serang Banten, these findings can have an impact on relationships in building partnerships and their relation to school principal performance.

At present the development of school partnerships in the Serang Banten ECE environment is still very minimal, because this requires an effective and efficient strategy that must be carried out by the school principal. The need for schools to build partnerships is needed to add relationships that can support optimal educational goals (Stelfox et al., 2021). Cooperation between school principals and partnerships that are built still looks normal, this indicates that both of them still have goals for personal gain. As a result, the performance of school principals in the ECE environment will be hampered and it will be difficult to carry out an update. Therefore, the importance of efforts to minimize the impact that will occur in the ECE learning environment.

Relevant research conducted by Baharun et al. (2021) shows that the problems of school principals and their responsibilities require effective leadership strategies, one of which is applying

a transformational leadership style. Research from Perera et al. (2018) reveals that the transformational leadership style in ECE has not been widely applied. Next Haddad and Ashqar (2020) states that transformational leadership will have an impact on the performance of school principals, teachers, and students. The advantages in transformational leadership make it easier to adapt learning needs to science and technology, more effective supervision and evaluation of teacher performance, and opportunities to build relationships with open school partnerships with a broad. Therefore, from this explanation it can be seen that the position of this research with the previous one lies in the focus of discussing school partnerships on the performance of school principals which has not been widely discussed. So, this will be an update in this research. Thus, the purpose of this study is to determine the relationship between transformational leadership and building partnerships on the performance of ECE principals in Serang, Banten.

## 2. METHOD

The methodology in this study uses quantitative with the aim of providing an interpreted picture through the quantity presented in figures (Mishra et al., 2020). Because the focus in this research is to find out the relationship between transformational leadership and building partnerships on the performance of ECE principals. Methods of data collection by observation to determine field conditions and the need for preliminary studies. In addition, using a questionnaire as an intermediary to obtain data and information related to transformational leadership, partnerships, and the performance of ECE principals.

The population uses a wide range, so the sampling technique is cluster sampling which is intended for broad sample needs (Changwong et al., 2018). This population includes 10 districts in Serang, Banten, which involve the ECE school environment. The sample in this study used random sampling (Amolloh et al., 2018) so that the number of samples used was 30 ECE principals to obtain information and data for research needs. The selection of this sample was based on the consideration that the selected ECE schools already had a partnership relationship, while the principal had qualifications in leading ECE schools as well as experience understanding the ECE learning environment.

Data analysis techniques using inferential statistics (Parlan et al., 2018) with the Independent Samples Test (Gamero et al., 2021), this is shown to determine the relationship between two known variables, namely leadership and partnerships on the performance of ECE principals. The prerequisite test is carried out by testing normality with Shapiro-Wilk (Potochnik et al., 2018) so that the data is normally distributed and homogeneity testing is carried out to find out that the data has the same variance (Wuryaningrum et al., 2020). Data analysis was performed with the help of SPSS version 24.

The data obtained can be collected through a questionnaire, in which the questionnaire is made based on the indicators arranged in the instrument grid. Before being tested, an expert validation test was carried out involving three experts (Almanasreh et al., 2019), namely in the field of ECE education, educational supervision, and educational evaluation. The results of the expert assessment were analyzed using the Aiken formula (Merino-Soto, 2018) which aims to determine the extent to which the statement items have the quality and feasibility to be tested.

### 3. RESULTS AND DISCUSSION

The findings result from the descriptive analysis of the data to show an overview of the research data mapping. The N-Gain value based on the descriptive can be seen in the Mean value of the data being tested (Wahyuni et al., 2017) as the results are presented in the following table.

**Table 1 Group Statistics**

	Variable	N	Mean	Std. Deviation	Std. Error Mean
N-Gain	Transformational Leadership and Partnerships	28	87,965	8,97	1,876
	Performance	28	85,678	8,77	1,567

The known value of the Mean N-Gain is 87.967 or 88% with the from category (Ridha et al., 2018) it can be concluded that transformational leadership and building partnerships is very effective. Next, it is known that the Mean N-Gain value is 85.678 or 85.77% which can be interpreted that the performance of ECE principals is in the effective category. Thus descriptive statistics can be said that seen from the average score descriptively, there is a close relationship between transformational leadership and building partnerships on the performance of ECE principals.

Next, to find out whether there is a relationship between the two variables so that it has meaning and significance, it is carried out by testing through the Independent Samples Test. Previously the data had to go through a prerequisite test in its testing, namely the data had to be normally distributed and homogeneous. The first is to test the normality data, this is done to ensure that the data used is normally distributed.

**Table 2 Tests of Normality**

	Variable	Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
N-Gain	Transformational Leadership and Partnerships	,1780	28	,187
	Performance	,1752	28	,157

The test results presented in Table 2 Tests of Normality show that the normality test uses the Shapiro-Wilk. This is based because the number of samples used is less than 50, so the normality test is with Shapiro-Wilk (Potochnik et al., 2018). To show that the data is normally distributed, it can be seen based on the significant value of Shapiro-Wilk, provided that the significant value above 0.05 is normally distributed (Delİce, 2001). Obtained a significance of 0.187 on transformational leadership and partnership data and 0.157 on performance, both of which have a significance value greater than 0.05. It can be stated that both data are normally distributed.

To strengthen the findings in Table 1, an Independent Samples Test was carried out to indicate a significant relationship between the two variables tested.

**Table 3 Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
N-Gain	Equal variances assumed	,000	,997	16,060	56	,000
	Equal variances not assumed			16,060	46,765	,000

Based on the results presented in Table 3, namely the homogeneity test with Levene's Test for Equality of Variances, this is done to show that the data has the same variance. The significance value of the variance is 0.997 which refers to Equal variances assumed, meaning that a significant variance is assumed to be greater than 0.05 so that the data has a homogeneous variance (Amo-Salas et al., 2014).

Overall, the prerequisite test for data analysis has been fulfilled, then further testing is carried out to find out the significance of the relationship between the two variables through the t-test for Equality of Means in Sig. (2-tailed) is 0.00001 < 0.05. This means that the findings presented in Table 3 indicate that there is a significant relationship between transformational leadership and building partnerships on the performance of ECE principals..

## DISCUSSION

Transformational leadership and building partnerships have a relationship to the performance of ECE principals. This means that transformational leadership is followed by increased performance. The success of the school in implementing all the aspects that have been planned must be supported by transformational leadership which essentially lies in the efficiency and effectiveness of the existence of the school principal. The findings from transformational leadership and partnerships that have a significant relationship to performance reach 88%. This transformational leadership style can encourage the performance of school principals to have a vision, mission and goals, as well as motivate teachers to demonstrate maximum performance.

The results of previous research from Perera et al. (2018) stated that transformational leadership partially has a significant effect on teacher performance. The principal's leadership style has a big role in influencing performance. If the principal who tends to the transformational leadership style is recognized as an effective leadership style. Research from Perera (2015) states that there is a positive and significant influence between transformational leadership style and performance. Transformational leadership applied by ECE principals in building partnerships for performance can delegate tasks or work to teachers, and involve teachers in decision making, care and attention to subordinates, and create a sporty and family work environment. Paying attention to work comfort, mutual respect, mutual trust between leaders and subordinates. The creation of a safe, comfortable working atmosphere makes subordinates not feel burdened with their duties. In line with Haddad and Ashqar (2020) which states that transformational leadership will lead to an increase in performance. In this case the principal can motivate performance in schools and the principal works together with teachers to improve the quality of learning. So that this can inspire, motivate, stimulate subordinates to be innovative and creative, who provide support and attention to their employees. Therefore, transformational leadership influences performance in carrying out their duties and responsibilities,

confidence, competence, supportive school conditions, and communication between leaders and subordinates.

The principal in the ECE environment is a transformational leader when directed at high work motivation, so that he will provide the best for the progress of the organization. Paying attention to a harmonious relationship with students or parents will have an impact on optimal performance. The results of research from (Roohr & Burkander, 2020) state that performance has a positive relationship with the way a person leads an organization. Then in line with Armah et al. research (2018) research which states that a leader needs knowledge and ability to create situations that generate motivation. Encouragement that arises both from within and from outside which is positive will stimulate to improve performance.

#### 4. CONCLUSION

It can be concluded that the relationship between transformational leadership and the implementation of the partnership program in the Serang Banten ECE environment is based on the principle of the principal's performance and its application. Transformational leadership and building partnerships using the principles applied can be in the form of support and cooperation between parents and schools through direct and indirect communication, related connections between families and schools, the community, consultation through guidance and complaints, and collaboration through cooperation in various matter.

Opportunities and challenges for the future where school principals with a transformational leadership style implemented through partnership programs cannot be separated from the support of various parties including the community and government as an important part of the education system including early childhood education.

#### REFERENCES

- Aeni, K., Widhanarto, G. P., & Astuti, T. (2020). Strengthening character education in elementary schools: Learning technology in school culture. *International Journal of Scientific and Technology Research*, 9(2), 898–902.
- Ali, M. (2022). Innovative Leadership Management in Early Children Education. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(4), 3007–3012. <https://doi.org/10.31004/obsesi.v6i4.2198>
- Almanasreh, E., Moles, R., & Chen, T. F. (2019). Evaluation of methods used for estimating content validity. *Research in Social and Administrative Pharmacy*, 15(2), 214–221. <https://doi.org/10.1016/j.sapharm.2018.03.066>
- Amo-Salas, M., Arroyo-Jimenez, M. D. M., Bustos-Escribano, D., Fairén-Jiménez, E., & López-Fidalgo, J. (2014). New indices for refining multiple choice questions. *Journal of Probability and Statistics*, 2014. <https://doi.org/10.1155/2014/240263>
- Amolloh, O. P., Lilian, G. K., & Wanjiru, K. G. (2018). Experiential Learning, Conditional Knowledge and Professional Development at University of Nairobi, Kenya—Focusing on Preparedness for Teaching Practice. *International Education Studies*, 11(7), 125. <https://doi.org/10.5539/ies.v11n7p125>
- Antón-Solanas, I., Coelho, M., Huércanos-Esparza, I., Vanceulebroeck, V., Kalkan, I., Cordeiro, R., Kömürkü, N., Soares-Coelho, T., Hamam-Alcober, N., Dehaes, S., Casa-Nova, A., & Sagarra-Romero, L. (2020). The Teaching and Learning Cultural Competence in a

- Multicultural Environment (CCME<sub>n</sub>) Model. *Nursing Reports*, 10(2), 154–163. <https://doi.org/10.3390/nursrep10020019>
- Ardliana, B., Rusdarti, R., Suminar, T., & Semarang, U. N. (2021). Effect of Principal Leadership, School Culture and Pedagogic Competence Through Work Motivation on Teachers Performance. 10(2), 273–283.
- Armah, R. B., Cofie, P. O., & Okpoti, C. A. (2018). Investigating the effect of van hiele phase-based instruction on pre-service teachers' geometric thinking. *International Journal of Research in Education and Science*, 4(1), 314–330. <https://doi.org/10.21890/ijres.383201>
- Baharun, H., Mundiri, A., Zamroni, Z., & Jannah, F. (2021). Quality Assurance of Education in Senior High School during Covid-19 Pandemic. *AL-ISHLAH: Jurnal Pendidikan*, 13(3), 2203–2212. <https://doi.org/10.35445/alishlah.v13i3.1190>
- Burhanudin, M., Akmaluddin, D., Siburian, P., Nurhayati, N., Zahri Harun, C., Bahrun, B., Nellitawati, N., Kadariah, K., Sunaengsih, C., Anggarani, M., Amalia, M., Nurfatmala, S., Naelin, S. D., Rahman, M. A., Santosa, A. B., Sihotang, H., Wiyono, B. B., Burhanuddin, Maisyaroh, ... Mulyadi, M. (2020). The Influence of Principal's Leadership, Teacher Performance And Internal Quality Assurance System in Improving The Quality of Education in Vocational High School. *Educational Research and Reviews*, 9(2), 305.
- Changwong, K., Sukkamart, A., & Sisan, B. (2018). Critical thinking skill development: Analysis of a new learning management model for Thai high schools. *Journal of International Studies*, 11(2), 37–48. <https://doi.org/10.14254/2071-8330.2018/11-2/3>
- Chiarotto, A., Ostelo, R. W., Boers, M., & Terwee, C. B. (2018). A systematic review highlights the need to investigate the content validity of patient-reported outcome measures for physical functioning in patients with low back pain. *Journal of Clinical Epidemiology*, 95, 73–93. <https://doi.org/10.1016/j.jclinepi.2017.11.005>
- Curtis, A. (2020). Play and the learning environment. *A Curriculum for the Pre-School Child*, 114–130. <https://doi.org/10.4324/9780203131763-14>
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative Learning Environments in Education-A systematic Literature Review. *Thinking Skills and Creativity*, 8(1), 80–91. <https://doi.org/10.1016/j.tsc.2012.07.004>
- DelÍce, A. (2001). The sampling issues in quantitative research. *Educational Sciences: Theory & Practices*, 10(4), 2001–2019.
- Fan, G., & Editors, T. S. P. (2020). Handbook of Education Policy Studies. In *Handbook of Education Policy Studies* (Vol. 1). <https://doi.org/10.1007/978-981-13-8347-2>
- Gamero, M. G., García-Ceberino, J. M., Ibáñez, S. J., & Feu, S. (2021). Analysis of declarative and procedural knowledge according to teaching method and experience in school basketball. *Sustainability (Switzerland)*, 13(11), 1–16. <https://doi.org/10.3390/su13116012>
- Gurova, G. (2018). Soviet, post-Soviet and neo-liberal: Governing Russian schools through quality assurance and evaluation. *Policy Futures in Education*, 16(4), 398–415. <https://doi.org/10.1177/1478210317743648>
- Haddad, L. D., & Ashqar, R. (2020). The Impact of Principal Leadership Style on Teachers' Happiness and Consequently Their Self Efficacy. *Journal of Education and Culture Studies*, 4(4), p10. <https://doi.org/10.22158/jecs.v4n4p10>
- Ismail, S. N., Muhammad, S., Kanesan, A. G., & Ali, R. M. (2019). The influence of teachers' perception and readiness towards the implementation of Critical Thinking Skills (CTS) practice in mathematics. *International Journal of Instruction*, 12(2), 337–352. <https://doi.org/10.29333/iji.2019.12222a>
- Jacobsen, K. H., Sambell, R., Devine, A., & Vale, S. (2018). Food Allergy Readiness and Anaphylaxis Management in Early Childhood Education and Care in Western Australia.

- Australasian Journal of Early Childhood, 43(4), 43–47.  
<https://doi.org/10.23965/AJEC.43.4.05>
- Jin, J., Vandenplas, C., & Loosveldt, G. (2019). The Evaluation of Statistical Process Control Methods to Monitor Interview Duration During Survey Data Collection. *SAGE Open*, 9(2).  
<https://doi.org/10.1177/2158244019854652>
- Johnson, L., & Campbell-Stephens, R. (2010). Investing in Diversity in London Schools: Leadership Preparation for Black and Global Majority Educators. *Urban Education*, 45(6), 840–870.  
<https://doi.org/10.1177/0042085910384353>
- Kucirkova, N., & Flewitt, R. (2020). Understanding parents' conflicting beliefs about children's digital book reading. *Journal of Early Childhood Literacy*, 4036.  
<https://doi.org/10.1177/1468798420930361>
- Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., & Folkvord, F. (2017). Maximizing Opportunities and Minimizing Risks for Children Online: The Role of Digital Skills in Emerging Strategies of Parental Mediation. *Journal of Communication*, 67(1), 82–105. <https://doi.org/10.1111/jcom.12277>
- Long, C. S., Thean, L. Y., Ismail, W. K. W., & Jusoh, A. (2012). Leadership styles and employees' turnover intention: Exploratory study of academic staff in a Malaysian college. *World Applied Sciences Journal*, 19(4), 575–581.  
<https://doi.org/10.5829/idosi.wasj.2012.19.04.155>
- Martin, R. H. (2017). Military, University, and Police Agency Command and Staff Colleges in the United States. *Journal of Education and Training Studies*, 5(2), 215.  
<https://doi.org/10.11114/jets.v5i2.2180>
- Merino-Soto, C. (2018). Confidence interval for difference between coefficients of content validity (Aiken's V): A SPSS syntax. *Anales de Psicología*, 34(3), 587–590.  
<https://doi.org/10.6018/analesps.34.3.283481>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Murray, T. S. (2017). Functional literacy and numeracy: Definitions and options for measurement for the SDG Target 4.6. DataAngel Policy Research Incorporated, October, 43.  
[www.dataangel.caGAML4/REF/15GAML4/REF/15](http://www.dataangel.caGAML4/REF/15GAML4/REF/15)
- Niccols, A., Cunningham, C., Pettingill, P., Bohaychuk, D., & Duku, E. (2020). Toddler mental health: The Brief Child and Family Intake and Outcomes System. *International Journal of Behavioral Development*, 44(6), 557–564. <https://doi.org/10.1177/0165025419880618>
- Parlan, P., Ibnu, S., Rahayu, S., & Suharti, S. (2018). Effects of the metacognitive learning strategy on the quality of prospective chemistry teacher's scientific explanations. *International Journal of Instruction*, 11(4), 673–688. <https://doi.org/10.12973/iji.2018.11442a>
- Perera, C. J. (2015). Principal leadership practices and teacher collegiality in Malaysian high performing schools.
- Perera, C. J., Sumintono, B., & Jiang, N. (2018). The Psychometric Validation Of The Principal Practices Questionnaire Based On Item Response Theory. *International Online Journal of Educational Leadership*, 2(1), 21–38. <https://doi.org/10.22452/iojel.vol2no1.3>
- Potochnik, A., Colombo, M., Wright, C., Potochnik, A., Colombo, M., & Wright, C. (2018). Statistics and Probability. *Recipes for Science*, Table 2, 167–206.  
<https://doi.org/10.4324/9781315686875-6>
- Pulis, A. (2018). Mixed methods research on the role of pupils as assessors in quality assurance of schools in Malta. *Management in Education*, 32(1), 40–47.  
<https://doi.org/10.1177/0892020617748152>



- Quinzio-Zafran, A. M., & Wilkins, E. A. (2020). Culturally Responsive Teaching. The New Teacher's Guide to Overcoming Common Challenges, 30–50. <https://doi.org/10.4324/9781003105008-3>
- Ridha, M. R., Komaro, M., & Ariyano, A. (2018). Penerapan Media Pembelajaran Audio Visual Sebagai Upaya Meningkatkan Hasil Belajar Materi Pengujian Logam Pada Siswa Smk. *Journal of Mechanical Engineering Education*, 5(1), 60. <https://doi.org/10.17509/jmee.v5i1.12620>
- Roohr, K. C., & Burkander, K. (2020). Exploring Critical Thinking as an Outcome for Students Enrolled in Community Colleges. *Community College Review*, 48(3), 330–351. <https://doi.org/10.1177/0091552120923402>
- Stelfox, M., Martin-Cereceda, M., Vahed, K., Hudgins, J., Köhnc, S., Iqbal, U., Shameel, I., Hancock, J. M., & Sweet, M. (2021). The Olive Ridley Project (ORP): A successful example of how to engage researchers, conservation practitioners and civil society. *Research for All*, 5(2). <https://doi.org/10.14324/rfa.05.2.17>
- Tas, Y., Subaşı, M., & Yerdelen, S. (2019). The role of motivation between perceived teacher support and student engagement in science class. *Educational Studies*, 45(5), 582–592. <https://doi.org/10.1080/03055698.2018.1509778>
- Taucean, I. M., Tamasila, M., & Negru-Strauti, G. (2016). Study on Management Styles and Managerial Power Types for a Large Organization. *Procedia - Social and Behavioral Sciences*, 221, 66–75. <https://doi.org/10.1016/j.sbspro.2016.05.091>
- Unger, S., & Meiran, W. (2020). Student Attitudes Towards Online Education during the COVID-19 Viral Outbreak of 2020: Distance Learning in a Time of Social Distance. *International Journal of Technology in Education and Science*, 4(4), 256–266. <https://doi.org/10.46328/ijtes.v4i4.107>
- Wahyuni, S., Indrawati, I., Sudarti, S., & Suana, W. (2017). Developing science process skills and problem-solving abilities based on outdoor learning in junior high school. *Jurnal Pendidikan IPA Indonesia*, 6(1), 165–169. <https://doi.org/10.15294/jpii.v6i1.6849>
- Wang, Y., Lavonen, J., & Tirri, K. (2019). An assessment of how scientific literacy-related aims are actualised in the National Primary Science curricula in China and Finland. *International Journal of Science Education*. <https://doi.org/10.1080/09500693.2019.1612120>
- Wilson, D. M., & Narasuman, S. (2020). Investigating teachers' implementation and strategies on higher order thinking skills in school based assessment instruments. *Asian Journal of University Education*, 16(1), 70–84. <https://doi.org/10.24191/ajue.v16i1.8991>
- Wuryaningrum, R., Bektiarso, S., & Suyitno, I. (2020). The effects of knowledge-transforming text on elementary students' declarative, procedural knowledge, and motivation in environmental learning. *International Journal of Instruction*, 13(1), 567–586. <https://doi.org/10.29333/iji.2020.13137a>
- Yayuk, S., & Sugiyono, S. (2019). Pengaruh kepemimpinan kepala sekolah dan biaya pendidikan terhadap kualitas proses belajar mengajar dan dampaknya dengan kompetensi lulusan SMK di Kabupaten Gunungkidul. *Jurnal Akuntabilitas Manajemen Pendidikan*, 7(1), 84–96. <https://doi.org/10.21831/amp.v7i1.23758>
- Yourneli, R. (2019). The Influence of Principal Leadership and Organizational Culture on the Teachers' Performance. 295(ICETeP 2018), 88–90. <https://doi.org/10.2991/icetep-18.2019.21>
- Zulkifli. (2021). The Influence of School Leadership and Teacher Professionalism on Learning Innovation at SMP Negeri 32 Oku. *Proceedings of the International Conference on Education Universitas PGRI Palembang (INCoEPP 2021)*, 565(INCoEPP), 1136–1141. <https://doi.org/10.2991/assehr.k.210716.226>