



## Strengths, Weaknesses, Opportunities, and Threats Analysis of Strategies to Improve School Competitiveness in Coastal Areas

Endry Setiawan<sup>1</sup>, Nurlaili<sup>1\*</sup>, Ninik Handayani<sup>1</sup>, Hermansyah<sup>1</sup>, Ranto Setiyono<sup>1</sup>

<sup>1</sup>Department of Education Management, Universitas Mulawarman, Indonesia

\*email Correspondence: [nurlaili@fkip.unmul.ac.id](mailto:nurlaili@fkip.unmul.ac.id)

---

### Abstracts

*The competitiveness of schools in coastal areas often face significant challenges due to geographical isolation, limited resources and environmental threats. This study aims to analyze the strengths, weaknesses, opportunities, and threats (SWOT) of strategies to improve the competitiveness of schools in coastal areas of Berau Regency. Using a mixed-methods approach, this research combines quantitative SWOT analysis with qualitative data from interviews, observations, and document review to provide a comprehensive understanding of the internal and external factors affecting school performance. The results show that schools have strengths such as strategic geographic accessibility, strong relationships with local communities, and effective use of technology. However, weaknesses such as inadequate facilities and limited professional development for teachers, coupled with threats such as environmental degradation and budget constraints, hinder their growth. Positioned in Quadrant I of the SWOT matrix, schools are in a favorable position to adopt growth-oriented strategies by leveraging their strengths to capitalize on opportunities. The study concludes that targeted interventions, such as expanding digital infrastructure and promoting ecosystem-based learning programs, are critical to enhancing competitiveness. These findings provide actionable insights for policymakers and educators to address challenges and optimize educational outcomes in similar coastal regions.*

**Keywords:** Coastal Education, Competitiveness, Ecosystem-Based Learning, SWOT Analysis, School Strategy

---



Copyright ©2024 Taksonomi: Jurnal Penelitian Pendidikan Dasar

### 1. Introduction

The level of competitiveness among educational institutions is an important element in evaluating the quality of education provided to students (Cabus & Cornelisz, 2017; Noailly, Vujić, & Aouragh, 2012). In Indonesia, this competitive environment is not only present in urban schools, but also poses a challenge to schools in remote and rural areas (Subaidi et al., 2023). It is imperative for primary and secondary schools to equip future generations with the necessary skills and knowledge to compete effectively both locally and globally (Ironsi & Bostanci, 2023). It is therefore imperative to examine the elements that make schools competitive, including the resources available, the quality of teaching, and the level of community and government involvement in the school's progress. In many areas, including coastal and rural areas, a large number of educational institutions face significant barriers to improving their competitiveness, particularly in the areas of infrastructure, teacher quality, and access to educational technology (Faiqoh, Suratno, & Asyiah, 2019).

Certain locations, particularly in coastal and rural areas, face challenges that affect the competitiveness of primary and secondary schools (Muhartono, 2024). These include limited access to adequate educational facilities, lack of qualified teachers, and low community participation in educational activities (Prasetio, Anggadwita, & Pasaribu, 2020). In addition, geographical and socio-economic factors also contribute significantly to these problems. Limited accessibility is often a challenge for students, especially those living in remote areas, to attend school. This results in a gap in the quality of education received by students in these areas compared to students in urban areas. While there is a large body of literature examining the factors that influence school competitiveness, most of these studies focus on schools in urban areas or schools that have greater access to educational resources (Gulosino, Olson Beal, Cox, & Beal, 2023; Jabbar, 2015; Krskova & Baumann, 2017; Rudolf & Lee, 2023). With respect to primary and secondary schools in rural and coastal areas, very few studies have examined the impact of geographic and socioeconomic challenges, as well as limited facilities, on the competitiveness of these schools (Chand & Mohan, 2019; Vidyattama, Li, & Miranti, 2019). There is therefore an urgent need for further research into the specific factors affecting the competitiveness of schools in remote areas, including the influence of local government and community policies in supporting the improvement of educational quality.

One possible solution to overcome the challenges faced by primary and secondary schools in remote areas is increased cooperation between schools, local governments and communities (Chan, 2023). A SWOT analysis allows educational institutions to identify their internal strengths, such as the potential for quality teaching or the existence of excellent programs, as well as weaknesses that need to be improved, such as inadequate facilities or limited funding (Rupérez & García, 2023). In addition, schools can take advantage of opportunities such as government support for educational programs in underprivileged areas or collaboration with local industry to develop curricula that are relevant to the social and economic conditions of the local community. Specific measures that can be implemented include advances in educational technology, additional training for educators, and the development of better infrastructure.

The impetus behind this research is to provide pragmatic and evidence-based solutions to primary and secondary schools in remote and coastal areas facing competitive challenges. The research focused on the importance of understanding the internal and external factors that affect school competitiveness and how an integrated methodology can contribute to improving the quality of education in these areas. In addition, this research aims to deepen the understanding of the role of communities and governments in supporting school development, with the ultimate goal of contributing to closing the education gap between urban and rural areas.

The main objective of this research is to identify and analyze the factors that influence the competitiveness of primary and secondary schools in remote and coastal areas. This research project aims to assess the strengths and weaknesses of educational institutions from an internal perspective, as well as identify opportunities and threats posed by external factors, including government policies, infrastructure, and the socio-economic conditions of the surrounding communities. In addition, the study aims to provide practical recommendations that can be implemented by educational institutions and relevant stakeholders to improve competitiveness. The

recommendations include formulating a locally relevant curriculum, integrating technology, and optimizing pedagogical quality.

## **2. Research methods**

This research uses a descriptive qualitative approach (Cavalcanti & Guerra, 2019), to analyze the competitiveness of primary and secondary schools in Berau Regency. This approach was chosen to provide a more in-depth picture of the internal and external conditions of schools, as well as the various factors that influence their competitiveness. The research involved a number of schools representing different geographical and socio-economic backgrounds and focused on data collection through observation, interviews and document analysis to gain a comprehensive picture of the strengths, weaknesses, opportunities and threats faced by each school.

The data collection process was conducted using several methods, namely participatory observation, in-depth interviews, and document analysis (Maduro, Fernandes, & Alves, 2018; Solihin, Jalaludin, Novita, & Ismail, 2019). Observations were conducted to understand classroom dynamics and student progress, while interviews with staff, teachers, students, and parents were designed to provide further information on issues affecting school competitiveness. Document analysis included a review of school annual reports, accreditation results, and relevant local education policies. Each of the data collected from the three sources was analyzed by coding and categorizing the information to find key themes that describe the internal and external conditions of the school. Data analysis was conducted using a SWOT matrix approach to identify each school's strengths, weaknesses, opportunities, and threats. Data obtained from interviews, observations and documents were analyzed to generate key themes that describe the strategic position of schools in Berau Regency. In analyzing the data, triangulation techniques were used to ensure the validity and reliability of information by comparing data from different sources. In addition, this analysis also used member checking, where respondents were asked to review the interview transcripts to ensure that the data presented was consistent with their experiences and views.

## **3. Results and Discussion**

### **3.1 Results**

This section presents the research findings based on the data collected and analyzed. The findings are described in detail to provide an overview of the internal and external conditions of primary and secondary schools in Berau Regency, particularly in relation to the factors that influence school competitiveness. Each finding presented is supported by appropriate data, whether obtained through in-depth interviews, field observations, or document analysis. In addition, the findings are scientifically discussed by referring to relevant theories to interpret the research findings and provide strategic insights for efforts to improve school competitiveness.

The evaluation of strengths in a SWOT analysis is of significant importance, as it enables the identification of internal factors that can be leveraged to gain a competitive edge. These strengths serve as the foundation for development strategies, particularly in improving the competitiveness of organizations, including educational institutions (Jenčo & Lysá, 2018). In order to provide an overview of the factors that support school competitiveness in the coastal areas of Berau Regency, a summary of the main elements that contribute to school strengths is presented. These factors include aspects of

accessibility, the utilisation of technology, the establishment and maintenance of positive relationships with local communities, and the provision of adequate government support. The following table presents the relative weights, ratings, and contributions of each factor in improving school competitiveness, offering a strategic overview of existing conditions.

**Table 1.** Strength Factors of School Competitiveness in the Coastal Region of Berau Regency

Strengths	Weight	Rating	Weight x Rating
Strategic geographical accessibility on the coast that facilitates access for educators and students	0,15	4	0,59
Local economic potential that can be utilized in practical education	0,15	3	0,44
Good relationships with local communities that support educational programs	0,06	3	0,18
Use of the surrounding environment as a real learning resource through ecosystem-based education programs	0,09	3	0,26
Use of technology to improve learning quality	0,12	4	0,47
Availability of adequate education facilities	0,12	3	0,35
Dedicated and well-qualified teachers	0,12	4	0,47
Active parent participation in supporting their children's education	0,06	3	0,18
Continuous efforts to improve the quality of education	0,06	3	0,18
Financial and regulatory support from local government	0,09	4	0,35
<b>Total</b>	<b>1,00</b>		<b>3,47</b>

Source: Analyze interview data

Table 1 shows that the primary determinant of school competitiveness in the coastal region of Berau Regency is strategic geographical accessibility along the coastline, which facilitates access for educators and students, with a Weight x Rating value of 0.59. This indicates that strategic geographical accessibility is a significant factor in promoting educational success in this region. Furthermore, the provision of local government support in the form of funding and regulations (0.35) and the utilization of technology to enhance the quality of learning (0.47) represent additional crucial elements. These findings suggest that physical access and systemic support play a significant role in determining school competitiveness. This may be attributed to the fact that coastal areas leverage their strategic location to facilitate educational activities and the government's dedication to promoting educational excellence through policies that prioritize quality enhancement.

Compared to other studies, for example, investigations assessing the competitiveness of educational institutions in remote areas, it was found that the utilization of technology and government assistance were often important factors in improving the quality of education (Jenčo & Lysá, 2018). However, the study also observed that local community involvement is frequently underutilized. In contrast, the Berau district demonstrates a notable capacity for collaboration, as evidenced by its positive relationship with local communities (0.18). This discrepancy may be attributed to the ecosystem-based methodology employed in Berau, wherein the surrounding environment serves as a tangible source of learning (0.26), a concept that is less

emphasized in other studies. This observation further highlights the significance of a comprehensive approach that engages multiple stakeholders in enhancing school competitiveness.

In a SWOT analysis, the assessment of weaknesses is of theoretical importance because weaknesses reflect internal aspects that may impede an organization's ability to compete effectively. The identification of these weaknesses provides the insight necessary to develop improvement and mitigation strategies, thus enabling the organization to overcome internal constraints and make more optimal use of opportunities (Ramlan, Omar, Wong, & Sorooshian, 2016). To provide an overview of the weaknesses affecting school competitiveness in the coastal areas of Berau Regency, the following table presents the key weakness factors along with their relative weights, ratings, and contributions to school competitiveness.

**Table 2.** Weaknesses Factors of School Competitiveness in the Coastal Region of Berau Regency

Weaknesses	Weight	Rating	Weight x Rating
Utilization of local economic potential by establishing partnerships with local industries such as fisheries and tourism for practice-based education programs that can improve student skills and educational relevance.	0,50	2	1,00
Development of ecotourism programs that engage students in environmental conservation and natural resource management increasing environmental awareness and providing unique learning experiences.	0,30	2	0,60
Improved access to information and communication technology with government and private sector support enabling students to get quality education and distance learning opportunities especially in remote geographical contexts.	0,20	2	0,40
<b>Total</b>	<b>1,00</b>		<b>2,00</b>

*Source: Analyze interview data*

Table 2 shows that the main weakness affecting the competitiveness of schools in coastal areas of Berau Regency is the low utilization of local economic potential, with the highest weight of 0.50 and a Weight x Rating value of 1.00. This indicates that the collaboration between schools and local industries such as fisheries and tourism has not been optimal in improving the relevance of students' education and skills. In addition, the development of ecotourism programs and access to information and communication technology also have low contributions to school competitiveness, with Weight x Rating values of 0.60 and 0.40, respectively. This phenomenon may be due to limited competent human resources, lack of supporting infrastructure, and low managerial capacity to integrate local potential into school education programs.

Compared with other studies, such as the study conducted by Irwansyah (2020) on the role of ecotourism in education in remote areas, this finding is consistent with the conclusion that the potential of ecotourism is often underutilized in the educational curriculum. However, the study also suggests that with the right policy support and teacher training, ecotourism-based programs can be an effective learning tool. The low use of information technology in Berau is also similar to found that schools in remote

areas often face barriers in accessing technology due to limited infrastructure and funding. (Starks & Reich, 2023) This trend suggests the need for strategic interventions from the government and private sector to improve the capacity of schools to leverage local potential and technology to support more relevant and innovative learning.

Moreover, the assessment of potential avenues for growth and advancement is a crucial theoretical undertaking, as these opportunities reflect external factors that can be leveraged to enhance the organization's competitive advantage. By identifying these opportunities, organizations can align their strategies with favorable external conditions, thereby fostering long-term growth and sustainability (Klessova, Engell, & Thomas, 2022). To comprehend the opportunities that schools in the coastal areas of Berau Regency can capitalize on, the following table presents an analysis of pivotal opportunity factors, accompanied by their relative weights, ratings, and contributions to school competitiveness.

**Table 3.** Strength Factors of School Competitiveness in the Coastal Region of Berau Regency

Opportunities	Weight	Rating	Weight x Rating
Limited access to quality education resources, such as textbooks and additional teaching materials	0,12	4	0,47
Inadequate education facilities and infrastructure, including classrooms, libraries and laboratories	0,09	3	0,28
Lack of trained and qualified teaching staff, which may affect the quality of teaching and learning	0,09	4	0,37
Low parental participation and involvement in the education process, which can reduce support for students	0,07	3	0,21
Geographical challenges that hinder student and teacher accessibility, especially in remote and hard-to-reach areas	0,12	3	0,35
Limited access to information and communication technology that can reduce students' learning opportunities	0,12	4	0,47
Local economic instability which can affect funding and support for schools	0,09	4	0,37
Lack of professional development programs for teachers to improve their competencies	0,09	4	0,37
Low levels of literacy and numeracy among students which can affect academic performance	0,12	3	0,35
Lack of support and attention from local governments in improving education quality in coastal areas	0,09	3	0,28
<b>Total</b>	<b>1,00</b>		<b>3,51</b>

Source: Analyze interview data

Table 3 shows that the main opportunities to support the competitiveness of schools in coastal areas of Berau Regency are limited access to quality educational resources, such as textbooks and supplementary teaching materials, and limited access to information and communication technology, which can reduce students' learning opportunities, with a Weight x Rating value of 0.47 each. This confirms that access to learning resources and information technology is a strategic opportunity that can be used to improve the quality of education. However, this opportunity has not been fully realized due to significant geographical barriers (with a Weight x Rating value of 0.35)



that limit teachers' and students' access to educational facilities. This phenomenon is consistent with the theory of educational accessibility, which states that the availability of learning resources and technology is an important factor in improving student learning outcomes, especially in areas with limited infrastructure.

Compared to other research, such as the study, the ability to improve teacher competencies through professional development programs is also a significant factor (Kalim, 2024). Teacher training has been shown to improve the quality of teaching, even in areas with limited access. However, in Berau district, the low attention paid by the local government to education development (with a Weight x Rating value of 0.28) is an additional barrier that slows down the use of this opportunity. Therefore, more effective policy interventions are needed to overcome these barriers and ensure that opportunities are maximized to support the competitiveness of schools in coastal areas.

In the final stages of SWOT measurement, threat measurement plays an important role in SWOT analysis because it helps organizations identify external factors that have the potential to hinder the achievement of strategic goals. By identifying threats early, organizations can develop mitigation strategies to reduce the negative impact that may occur. Unanticipated threats can worsen an organization's internal conditions and reduce its competitiveness (Jahnke & Hoffmann, 2016). To understand the various threats affecting the competitiveness of schools in the coastal areas of Berau Regency, the following table presents an analysis of key threat factors, including their relative weight, assessment, and contribution to school sustainability.

**Table 4.** Strength Factors of School Competitiveness in the Coastal Region of Berau Regency

Threats	Weight	Rating	Weight x Rating
Environmental damage that can negatively impact the learning environment and student health	0,23	2	0,45
Natural disaster risks such as flooding and erosion that can damage school infrastructure and disrupt teaching and learning activities	0,14	2	0,27
Economic disparities that can lead to unequal access to education between students from different backgrounds	0,18	1	0,18
Limited education budgets that may hinder the development of facilities and the quality of teaching	0,23	2	0,45
Population displacement from or to coastal areas that can affect student numbers and school stability	0,23	1	0,23
<b>Total</b>	<b>1,00</b>		<b>1,59</b>

Source: Analyze interview data

Table 4 shows that the main threats affecting the competitiveness of schools in coastal areas of Berau Regency are environmental degradation and limited education budgets, each with a Weight x Rating value of 0.45. Environmental degradation, which affects the learning environment and students' health, is a serious threat, especially in coastal areas that are vulnerable to ecosystem degradation due to human activities and climate change. In addition, limited education budgets hamper the development of facilities and the quality of teaching, creating major challenges for schools to remain competitive. This phenomenon may occur because schools in coastal areas often rely

on limited government budget allocations and are directly affected by adverse environmental conditions.

This trend is consistent with research conducted that schools in coastal areas are at higher risk of environmental disruptions such as flooding and erosion, which affect learning activities (Ahrabi-Nejad et al., 2022). The study also found that inequities in education budget allocations in remote areas often worsen the quality of infrastructure and learning processes. Unlike urban areas, which have better access to funding and disaster mitigation, schools in coastal areas face greater constraints. Therefore, strategic interventions such as more equitable budget allocations and environmental protection programs are needed to reduce the impact of these threats and ensure the sustainability of education in coastal areas.

### 3.2 Discussion

Based on the results of a quantitative SWOT analysis study internal factors (Table 1 and Table 2) and external factors (Table 2 and Table 4). The difference between strengths and weaknesses found the value of internal factors is 1.47. and the difference between strengths and weaknesses is 1.92. as for the visualization as Figure 1.

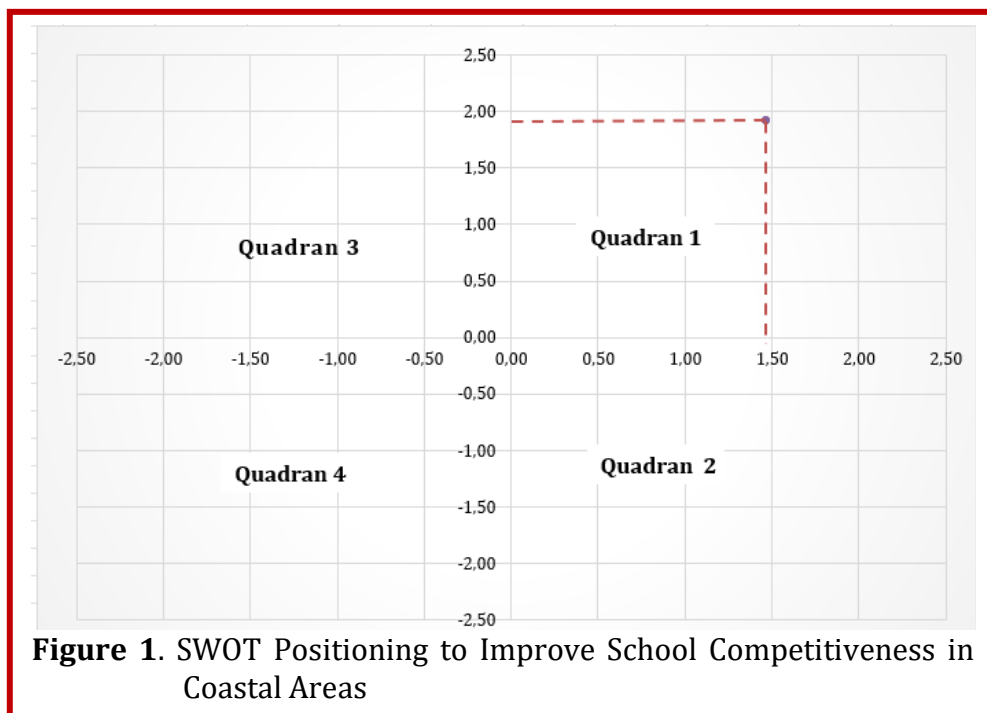


Figure 1 shows that the SWOT position for improving the competitiveness of schools in the coastal area of Berau Regency is in Quadrant I (positive, positive). This position indicates that schools have significant strengths that can be used to capitalize on existing opportunities. A position in Quadrant I reflects an ideal situation for a growth strategy, where the organization can develop a competitive advantage by optimizing internal strengths and external opportunities (Gupta & Basu, 2014). Growth-oriented strategies are more effective when the organization is in a position to proactively exploit opportunities (Zhou & Park, 2020). In the context of education, one study supports this finding by stating that educational institutions in remote areas should capitalise on strengths such as local community involvement and technological



potential to overcome external challenges (Guenther & Osborne, 2020; Sambul, Rumbayan, Kindangen, Sompie, & Cross, 2024).

One strategy is to increase the use of technology in learning. The integrating technology into learning in remote areas can improve student learning outcomes and expand access to education (Pastor et al., 2020). This is relevant to the opportunities shown in Table 3, such as increased access to digital educational resources. In addition, technology can help bridge the geographical gap, which is often a major challenge in coastal areas. The use of technology is also supported by government policies that prioritize the digitization of education (Gapsalamov, Bochkareva, Akhmetshin, & Vasilev, 2020). Thus, schools in Berau Regency can leverage this strength to find innovative solutions to geographical challenges.

Another strategy that can be implemented is to strengthen collaboration with local communities through ecosystem-based programs. Collaboration between schools and local communities can create learning that is contextualized and relevant to the needs of students in a particular area. The ecotourism-based programs can improve students' skills while strengthening the relationship between schools and local communities. On the other hand, local community involvement can help reduce threats such as population instability and economic inequality that often occur in coastal areas (Curtis, Curtis, & Hemmerling, 2018). Thus, programs such as ecotourism are not only locally relevant, but can also increase the school's regional competitiveness.

Finally, to optimize their position in Quadrant I, schools must address internal weaknesses such as limited educational facilities. The availability of adequate educational facilities is an important foundation to support the success of growth strategies. In addition, advocating for local governments to increase education budget allocations can be an important step to overcome this limitation. In the context of coastal areas, the investments in education infrastructure can have a long-term impact on improving the competitiveness of schools (Belmonte, Bove, D'Inverno, & Modica, 2020). With an integrated approach of strengthening strengths, capitalizing on opportunities, and managing weaknesses, schools in coastal areas of Berau district can create a more resilient and relevant competitiveness.

#### **4. Conclusion**

This study demonstrates that the competitiveness of schools in coastal areas of Berau Regency is significantly influenced by a number of internal factors, including their strategic geographical accessibility, strong ties with local communities, and the use of technology to enhance education. These strengths serve as a foundation for capitalizing on external opportunities, including increased access to digital learning resources and the integration of ecosystem-based education programs. The positioning of the SWOT analysis in Quadrant I indicates that schools in this region are well-positioned to adopt growth-oriented strategies, maximizing strengths and opportunities while addressing challenges such as limited facilities, environmental risks, and budget constraints.

The findings offer promising prospects for the development of educational strategies in similar contexts. By prioritizing sustainable educational initiatives, such as expanding digital infrastructure and strengthening partnerships with local industries, schools can foster more dynamic and adaptive learning environments. Furthermore, integrating ecosystem-based programs into the curriculum can enhance the relevance

of education while addressing local community needs. These insights provide a pathway for strengthening the competitiveness of schools in coastal and remote areas, ensuring more equitable access to quality education and contributing to long-term regional development.

## References

- Ahrabi-Nejad, S., Collini, R. C., Miller-Way, T., Patch, S. M., Rellinger, A., Sempier, T., ... Sparks, E. (2022). Fostering science-to-civics literacy through the development and assessment of a sea-level rise curriculum. *Continental Shelf Research*, 241. <https://doi.org/10.1016/j.csr.2022.104731>
- Belmonte, A., Bove, V., D'Inverno, G., & Modica, M. (2020). School infrastructure spending and educational outcomes: Evidence from the 2012 earthquake in Northern Italy. *Economics of Education Review*, 75. <https://doi.org/10.1016/j.econedurev.2019.101951>
- Cabus, S., & Cornelisz, I. (2017). Competition, student sorting and performance gains in local education markets: The Dutch secondary sector. *European Journal of Education*, 52(3), 365–386. <https://doi.org/10.1111/ejed.12221>
- Cavalcanti, L. M. R., & Guerra, M. D. G. G. V. (2019). Institutional diagnosis of the federal university of paraíba from SWOT analysis. *Meta: Avaliacao*, 11(33), 694–718. <https://doi.org/10.22347/2175-2753v11i33.2184>
- Chan, P. H. (2023). Exploration on the Process of the Support-Service Counseling Mechanism in Promoting Education Reform in Rural Areas: A Case of Indigenous Area and Offshore Island Preschool Programs in Kaohsiung. *Journal of Research in Education Sciences*, 68(3), 95–139.
- Chand, D., & Mohan, P. (2019). Impact of school locality on teaching and learning: A qualitative inquiry. *Waikato Journal of Education*, 24(2), 65–72. <https://doi.org/10.15663/wje.v24i2.672>
- Curtis, J. W., Curtis, A., & Hemmerling, S. A. (2018). Revealing the invisible environments of risk and resiliency in vulnerable communities through geospatial techniques. In *Tsunamis: Detection, Risk Assessment and Crisis Management* (pp. 245–273). GIS Health and Hazards Lab, Department of Geography, Kent State University, Kent, OH, United States: Nova Science Publishers, Inc. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85058548367&partnerID=40&md5=8e51414853e2c6cb80877b9904d00258>
- Faiqoh, E. N., Suratno, & Asyiah, I. N. (2019). Pattern of interaction problem based learning with self regulated learning on coffee plant area. In D. null (Ed.), *Journal of Physics: Conference Series* (Vol. 1211). Department of Science Education, University of Jember, Indonesia: Institute of Physics Publishing. <https://doi.org/10.1088/1742-6596/1211/1/012095>
- Gapsalamov, A. R., Bochkareva, T. N., Akhmetshin, E. M., & Vasilev, V. L. (2020). “Digital era”: Impact on the economy and the education system (country analysis). *Utopia y Praxis Latinoamericana*, 25(Extra10), 170–186. <https://doi.org/10.5281/zenodo.4155437>
- Guenther, J., & Osborne, S. (2020). Red Dirt Education Leaders “Caught in the Middle”: Priorities for Local and Nonlocal Leaders in Remote Schools. *Australian Journal of*

- Indigenous Education*, 49(1), 57–69. <https://doi.org/10.1017/jie.2018.17>
- Gulosino, C., Olson Beal, H. K., Cox, S., & Beal, B. D. (2023). An Investigation of Teachers' Perceptions of School Competitiveness and Organizational Work Environment in a Rural Area. *Journal of School Choice*, 17(4), 497–523. <https://doi.org/10.1080/15582159.2023.2186852>
- Gupta, R., & Basu, S. (2014). Influence of Dimensions of Strategic Orientation on the Growth of Small Firms and Resources as Moderating Variables. *Management and Labour Studies*, 39(4), 461–476. <https://doi.org/10.1177/0258042X15578019>
- Ironsi, C. S., & Bostanci, H. B. (2023). Applying modified TATE framework in equipping learners with action competence on future skills: Towards learners' future-readiness. *Asia Pacific Journal of Education*, 43(3), 775–789. <https://doi.org/10.1080/02188791.2023.2231650>
- Jabbar, H. (2015). Competitive Networks and School Leaders' Perceptions: The Formation of an Education Marketplace in Post-Katrina New Orleans. *American Educational Research Journal*, 52(6), 1093–1131. <https://doi.org/10.3102/0002831215604046>
- Jahnke, H., & Hoffmann, K. (2016). Organised after-school activities at the intersection between education and municipalities in rural areas. In *Education, Space and Urban Planning: Education as a Component of the City* (pp. 339–347). Interdisciplinary Institute for Environmental, Social and Human Studies - Geography Department, Europa-University Flensburg, Auf dem Campus 1, Flensburg, 24943, Germany: Springer International Publishing. [https://doi.org/10.1007/978-3-319-38999-8\\_33](https://doi.org/10.1007/978-3-319-38999-8_33)
- Jenčo, M., & Lysá, Ľ. (2018). Evaluation of a work team strategy by using the SWOT analysis. *Quality - Access to Success*, 19(165), 39–44. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85050766606&partnerID=40&md5=fe39b8208f00b88bcf97cf85b9b4cd20>
- Kalim, U. (2024). Evaluating teacher competencies in Pakistan's public schools: Enhancing the impact of professional development programs. *Evaluation and Program Planning*, 106. <https://doi.org/10.1016/j.evalprogplan.2024.102467>
- Klessova, S., Engell, S., & Thomas, C. (2022). Assessment of the advancement of market-upstream innovations and of the performance of research and innovation projects. *Technovation*, 116. <https://doi.org/10.1016/j.technovation.2022.102495>
- Krskova, H., & Baumann, C. (2017). School discipline, investment, competitiveness and mediating educational performance. *International Journal of Educational Management*, 31(3), 293–319. <https://doi.org/10.1108/IJEM-05-2016-0099>
- Maduro, S., Fernandes, P. O., & Alves, A. (2018). Management design as a strategic lever to add value to corporate reputation competitiveness in higher education institutions. *Competitiveness Review*, 28(1), 75–97. <https://doi.org/10.1108/CR-04-2017-0029>
- Muhartono, D. S. (2024). Achieving Sustainable Quality Education Targets: a Case Study in East Java, Indonesia. *Revista de Gestao Social e Ambiental*, 18(3). <https://doi.org/10.24857/RGSA.V18N3-123>

- Noailly, J., Vujić, S., & Aouragh, A. (2012). The effects of competition on the quality of primary schools in the Netherlands. *Environment and Planning A*, 44(9), 2153–2170. <https://doi.org/10.1068/a449>
- Pastor, R., Tobarra, L., Robles-Gómez, A., Cano, J., Hammad, B., Al-Zoubi, A., ... Castro, M. (2020). Renewable energy remote online laboratories in Jordan universities: Tools for training students in Jordan. *Renewable Energy*, 149, 749–759. <https://doi.org/10.1016/j.renene.2019.12.100>
- Prasetio, A., Anggadwita, G., & Pasaribu, R. D. (2020). Digital learning challenge in Indonesia. In *IT and the Development of Digital Skills and Competences in Education* (pp. 56–71). School of Economics and Business, Telkom University, Indonesia: IGI Global. <https://doi.org/10.4018/978-1-7998-4972-8.ch004>
- Ramlan, R., Omar, S. S., Wong, J. Y., & Sorooshian, S. (2016). SME SWOT ranking for strategic planning using Analytic Hierarchy Process (AHP). *Information (Japan)*, 19(10), 4755–4760.
- Rudolf, R., & Lee, J. (2023). School climate, academic performance, and adolescent well-being in Korea: The roles of competition and cooperation. *Child Indicators Research*, 16(3), 917–940. <https://doi.org/10.1007/s12187-022-10005-x>
- Rupérez, F. L., & García, I. G. (2023). A quantitative SWOT analysis for Spanish education. *Revista de Educacion*, 401, 219–250. <https://doi.org/10.4438/1988-592X-RE-2023-401-590>
- Sambul, A., Rumbayan, M., Kindangen, J. I., Sompie, S. R. U., & Cross, J. (2024). Wireless Education Delivery System for Remote Island Communities Utilizing Maritime Data Carriers. *Proceedings of the IEEE International Conference on Computer Communication and the Internet, ICCCI*, (2024), 223–226. University of Sam Ratulangi, Dept. of Electrical Engineering, Manado, Indonesia: Institute of Electrical and Electronics Engineers Inc.
- Solihin, M., Jalaludin, Novita, M., & Ismail, M. S. (2019). Swot Analysis on the Transformation of Islamic Higher Education. *Jurnal Pendidikan Islam*, 5(2), 159–174. <https://doi.org/10.15575/jpi.v5i2.3107>
- Starks, A. C., & Reich, S. M. (2023). “What about special ed?”: Barriers and enablers for teaching with technology in special education. *Computers and Education*, 193. <https://doi.org/10.1016/j.compedu.2022.104665>
- Subaidi, S., Komariah, A., Tantowi, A., Munasir, M., Sabban, I., Hartini, N., ... Barowi, B. (2023). Visionary leadership in improving the quality and competitiveness of private Islamic primary schools. *Journal of Governance and Regulation*, 12(2), 66–76. <https://doi.org/10.22495/jgrv12i2art6>
- Vidyattama, Y., Li, J., & Miranti, R. (2019). Measuring Spatial Distributions of Secondary Education Achievement in Australia. *Applied Spatial Analysis and Policy*, 12(3), 493–514. <https://doi.org/10.1007/s12061-018-9252-z>
- Zhou, N., & Park, S. H. (2020). Growth or profit? Strategic orientations and long-term performance in China. *Strategic Management Journal*, 41(11), 2050–2071. <https://doi.org/10.1002/smj.3193>