



Analyzing the Need of Leadership Module in Higher Education: A Survey Research

(Analisis Kebutuhan Modul Kepemimpinan di Perguruan Tinggi: Penelitian Survei)

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Article History Accepted: February 12, 2024 Revised: April 18, 2024 Available Online: April 30, 2024

Abstract: The issue of the quality of student leadership skills in higher education is urgent in this research. Instilling a culture and leadership skills in students is crucial, particularly for future teachers in the context of this research, as it contributes to their character development and future success. This study aims to identify the need for leadership module development and identify problems in the implementation of leadership learning. This research was a survey using 132 university students from the Faculty of Language and Art, State University of Medan. The findings indicated that implementing leadership learning was a moderate problem. Some items, however, indicate a high level of problem. Furthermore, there are no gender differences in the implementation of leadership learning problems or perceptions of student learning experiences. In addition, there is a high demand for leadership modules in universities, and there is no gender difference in the needs or perceptions of these modules based on student learning experiences. Therefore, we should develop the modules to meet the requirements and needs, ensuring the achievement of learning objectives.

Keywords higher education, leadership, module

Abstrak: Masalah terkait kualitas keterampilan kepemimpinan mahasiswa di perguruan tinggi menjadi urgensi dalam penelitian ini. Bagi seorang mahasiswa terkhusus dalam konteks penelitian ini sebagai calon guru di masa depan, perlu ditanamkan budaya dan kecakapan kepemimpinan sebagai upaya pengembangan karakter dan potensi mahasiswa untuk sukses di masa depan. Penelitian ini bertujuan untuk mengidentifikasi kebutuhan pengembangan modul kepemimpinan dan mengidentifikasi permasalahan dalam pelaksanaan pembelajaran kepemimpinan. Penelitian ini merupakan penelitian survei dengan menggunakan sampel 132 mahasiswa Fakultas Bahasa dan Seni Universitas Negeri Medan. Hasil temuan menunjukkan bahwa permasalahan pelaksanaan pembelajaran kepemimpinan berada pada kategori sedang. Namun, beberapa item menunjukkan tingkat permasalahan yang tinggi. Selanjutnya tidak terdapat perbedaan gender dalam penerapan masalah pembelajaran kepemimpinan dan persepsi terhadap pengalaman belajar siswa. Selain itu, tingginya kebutuhan modul kepemimpinan di perguruan tinggi, serta tidak adanya perbedaan gender dalam kebutuhan modul kepemimpinan dan persepsi terhadap kebutuhan modul kepemimpinan berdasarkan pengalaman belajar mahasiswa ditinjau dari gender. Oleh karena itu, modul harus dikembangkan sebagai syarat dan kebutuhan agar tujuan pembelajaran dapat tercapai.

Kata Kunci pendidikan tinggi, kepemimpinan, modul

How to Cite Sinaga, O., Saragi, D., Darwin, & Yuhdi, A. (2024). Analyzing the Need of Leadership Module in Higher Education: A Survey Research. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 10(1), 312-321. <https://doi.org/10.22219/kembara.v10i1.32331>



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INTRODUCTION

In the current global era, various skills are necessary for every individual, including leadership skills (Zeike et al., 2019). Considering the present global demands, the role of leadership in shaping

new capabilities is crucial for the current generation (Leithwood et al., 2020). In the 21st-century workplace, leadership skills are imperative across all fields (Muammar, 2022). Since the late 20th century, research trends have focused on developing students' leadership capabilities, altering leadership paradigms, enhancing community groups, and formalizing the position of educating student leadership (Polatcan, 2023). Schools play a pivotal role in developing leadership for the next generation (Wright et al., 2023). Teachers' leadership influences school effectiveness and improvement (Shen et al., 2020). Schools with a positive climate tend to encourage teachers to engage in leadership development programs (Gningue et al., 2022). Teachers are instrumental in instilling various leadership skills in students. A study reports skills associated with leadership, such as students' understanding, proficiency, and teamwork (Ali et al., 2022). According to another study (Feller et al., 2016), the leadership competency list also includes the development of leadership skills.

However, according to Chatzipanagiotou & Katsarou (2023), the leadership skills is too far for the current needs. Graduates, especially in the fields of languages and arts, still lack mastery in leadership. Sobral & Furtado (2019) stated that the curriculum still focuses on the development of hard skills rather than soft skills, lacking a holistic approach to leadership education and training, and the absence of active learning and teaching methods serve as the basis for this emerging problem. According to research, student leadership differs from present leadership in institutions that lack a focus on students, demonstrating that leadership research does not apply to student leadership (Sobral & Furtado, 2019; Xu et al., 2019). Consequently, the quality of leadership education still falls far below expectations, particularly concerning integrity, effective leadership, and the ability to address complex issues (Cahyono et al., 2023).

Surprisingly, the use of modules has shown its effectiveness in learning (Sofyan et al., 2019; Sabil et al., 2023). Employing modules can make students more interested in learning and enhance self-directed learning activities (Hidayat et al., 2022). As a result, the use of modules can enhance self-efficacy, motivation, and significantly improve learning outcomes (Delita et al., 2022), knowledge (Gengatharan et al., 2023), self-regulated learning (Setiani et al., 2020), critical thinking (Kamaruddin et al., 2023; Safi'i et al., 2021), and self-efficacy (Hasbie et al., 2023). This clearly illustrates the application of a modular approach in leadership education. Ardianti et al., (2023) state that students' development depends on the availability of instructional resources. Modules that use multimedia learning technology provide students with rapid feedback, aid in their understanding of topics, and facilitate the learning process. As a result, this study identifies the need for the development of leadership modules and highlights issues with the implementation of leadership education.

Furthermore, prospective teachers focus on child development, psychology, teacher experience, communication techniques, leadership roles, student responsibilities, and the impact of sports on child development (Salman, 2019). Developing leadership skills is crucial for enhancing services and performance (Al Amiri et al., 2019). Leadership involves regular responsibilities that influence behavior and encompass qualities, abilities, knowledge, attitudes, interactions, and decision-making processes. Administrative, professional, and other abilities are highly important for leaders (Petre, 2020). The results of the research showed a strong correlation between skills and leadership behaviors and styles, with the exception of the correlation between autocratic leadership and self-awareness (Al Amiri et al., 2019). We also find a strong correlation between leadership philosophy and student competencies.

Studying the ideas, practices, and school atmosphere of successful school leadership has become the focus of leadership researchers from Belgium and the United States. This suggests the use of initiatives involving learning experiences, worldviews, logical communication, and passion to produce student leaders (Uaikhanova et al., 2022). On the other hand, Moroccan students identify leadership skills as a weakness, underscoring the importance of professional development programs. This study reveals that although students acknowledge self-awareness, feedback, teamwork, stress, and conflict management, they are less conscious of time management and self-inquiry (Hjiej et al., 2023).

The quality of leadership can enhance self-determined learning, instructional responsibility, and academic outcomes (Wade et al., 2023), emphasizing the growth of students' emotional stability (Provorova et al., 2021). Kainer et al., (2019) state that students acquire knowledge and self-belief, altering their

perspective on leadership and emphasizing the values of diversity, professional development, and new insights into leadership. Therefore, for students' engagement and potential realization, educational policymakers and curriculum designers require high-quality, learning-oriented leadership (Suyudi et al., 2022).

Research has explored the difficulties educators face when attempting to improve the education system: coordination, investigation, analysis, implementation, and evaluation. This highlights the importance of leadership in policymaking and school management, as poor management impacts the learning system (Taufik & Istiarsono, 2020). According to the research, relation-oriented behaviors have a negative impact on learning, whereas task-oriented behaviors and high changes in school leadership have a significant positive impact on student performance. Academic achievement increases when school principals actively participate in teaching activities (Botha & Aleme, 2023).

To transform a group, leadership requires the development of various visions and goals, using its power to motivate and guide the group toward success. For a work team to become productive and efficient, this process requires opportunities and developmental conditions focused on both opportunities and constructive conditions (Cáceres-Reche et al., 2021). While creative teaching also has a limited direct impact, the school principal's instructional leadership influences students' self-actualization capacity. Primary instructional leadership and innovative teaching have an impact on self-actualization through student learning satisfaction (Suyudi et al., 2022). Therefore, to enhance education in the classroom and improve the sense of togetherness, schools should provide continuous teacher training (Tranchina & Zambak, 2021).

Several previous studies have tried to analyze the problems of student leadership skills in the higher education environment, such as Reyes et al., (2019); Daley & Baruah (2021); Rosch et al., (2015), and Rosch et al. (2017), which revealed that leadership development used by students in higher education still did not achieve effectiveness in practice, so some of these studies provided a summative review and metaanalysis to identify the state of leadership development programs in higher education specifically in the context of leadership-related skills, motivation to lead, and leader self-efficacy possessed by students. These studies provided the idea of conducting iterative leadership development program evaluation studies to address problems in leadership development programs. Therefore, this study continues the analysis in a more contextual manner in an effort to overcome problems related to the weakness of student leadership skills. The novelty of this study is to identify the problems and needs of leadership learning implementation, which specifically lead to the need for teaching modules that will be used by students in higher education (Putri et al., 2020). This research is expected to contribute to the sustainability of leadership module development for students, as expected from the results of the needs analysis. This research also offers a realistic view of the implementation of leadership learning programs in higher education, allowing for adjustments in the design of leadership skills development programs for students.

METHOD

This research utilized a survey approach to describe respondents' answers (Alharin et al., 2020; Resnik et al., 2019). We designed the survey to assess (1) respondent demographics, (2) issues concerning the implementation of leadership courses, and (3) the need for modules (Kiong et al., 2022). Below, we detail each component of the survey.

1. Respondent demographics: This section included items related to the respondents' name, age, gender, and ethnicity.
2. Issues in the implementation of leadership courses: In this section, the researchers formulated research issues that are central to the problems in implementing leadership courses, including competencies, content, teaching, and assessment.
3. Need for modules:

Experts in evaluation validated the online questionnaire that the researchers used. The questionnaire employed a Likert scale consisting of "strongly agree" (5), "agree" (4), "neutral" (3), "disagree" (2), and "strongly disagree" (1). Researchers distributed the questionnaire using Google Forms to students who had taken leadership courses from the Faculty of Languages and Arts at the State University of Medan, resulting in 132 students completing this research questionnaire.

Table 1
Demographic Characteristics of Respondents (N=132)

	Frequency	Percent	Valid Percent	Cumulative Percent
Age	19	10	.8	7.6
	20	51	3.9	38.6
	21	44	3.3	33.3
	22	27	2.0	20.5
	Total	132	10.0	100.0
Gender	Female	99	7.5	75.0
	Male	33	2.5	25.0
	Total	132	10.0	100.0
Ethnicity	Acch	9	.7	.7
	Batak	27	2.0	2.0
	Java	49	3.7	3.7
	Karo	16	1.2	1.2
	Malay	13	1.0	1.0
	Minang	18	1.4	1.4
	Total	132	100.0	100.0

This research involves four stages: preparation, execution, data analysis, and interpretation. We carry out these stages systematically and in a structured manner. We select these stages to identify the issues of implementing leadership learning and the need for leadership modules. The research procedure is as follows:

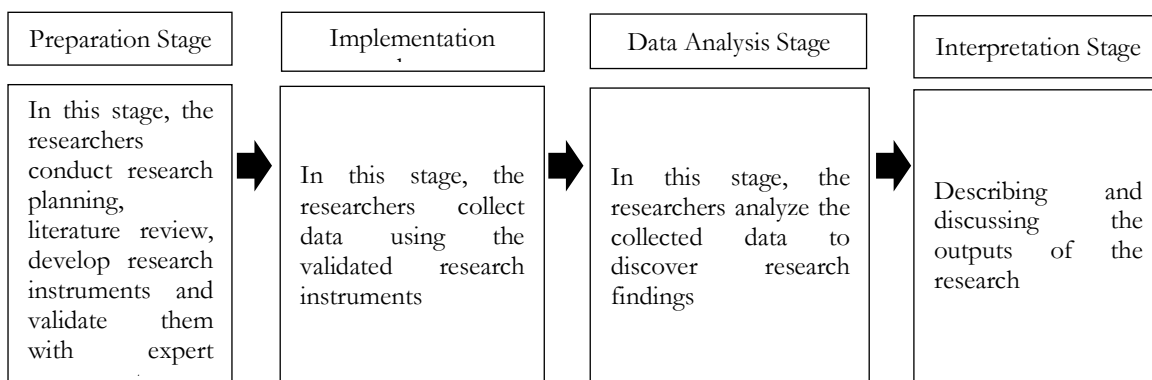


Figure 1
Research Procedure for Module Needs Analysis

Furthermore, the collected data was descriptively and inferentially analyzed using IBM SPSS 22 for Windows. According to Table 2 below, the items concerning the implementation issues of leadership courses and the need for modules were categorized into five levels: high, moderate, and low (Kotschevar & Terrell, 1985).

Table 2
Interpretation of mean scores

No	Mean Score	Category
1	1.00 – 2.33	Low
2	2.34 – 3.67	Moderate
3	3.68 – 5.00	High

RESULTS AND DISCUSSION

The Issues of Leadership Learning Implementation

Table 3 presents the analysis of issues related to the implementation of leadership learning. Overall, the level of implementation issues in leadership learning is moderate (m = 3.58). Although it falls within the moderate range, some question items show higher mean scores, such as item number 2 (m = 3.68), item number 3 (m = 3.71), and item number 10 (m = 3.70). This suggests that if not

addressed early, potential issues in the implementation of leadership learning could have a significant impact.

Table 3
Issues of Leadership Learning Implementation

No	Indicator	N	Mean	SD	Category
1	Students find it difficult to identify the root issues of leadership to develop their competencies	132	3.52	0.624	Moderate
2	Students find it challenging to resolve leadership issues due to limited skills	132	3.68	0.745	High
3	Leadership material is difficult for students to grasp	132	3.71	0.861	High
4	Students find it difficult to create preventive solutions for emerging issues	132	3.52	0.704	Moderate
5	Students obtain low grades in the leadership course	132	3.51	0.682	Moderate
6	The competencies required by students from the leadership course are not yet clear	132	3.60	0.750	Moderate
7	Lecturers lack experience in the leadership course	132	3.52	0.671	Moderate
8	Lecturers encounter difficulties in explaining leadership learning topics.	132	3.51	0.715	Moderate
9	Students require illustrations related to leadership problem-solving	132	3.52	0.659	Moderate
10	Students need leadership course modules that support learning	132	3.70	0.863	High
Average			3,58		Moderate

The research findings also indicated that assessment in item number 5 ($m = 3.51$) and teaching in item number 8 ($m = 3.51$) represent questions with the lowest mean values. This implies a relationship between the lecturers' teaching methods and the grades students achieve. Additionally, there are also items with the same mean value ($m = 3.52$), specifically item number 4 and item number 9, related to leadership learning content. This indicates that students need illustrations as examples for creating preventive solutions to emerging leadership issues.

Meanwhile, Table 4 presents the results of the analysis using an independent sample t-test. The research findings indicate that the sig value of $0.064 > 0.05$, which means there is no significant difference in perception between male and female students regarding the issues of leadership learning implementation.

Table 4
The Results of the T-test Compared the Perceptions of Male and Female Students about Problems in the Implementation of Leadership Learning

Gender	N	Mean	Std. Deviation	F	Sig.	t	Sig (2-tailed)
Female	99	36.07	2.932	.684	.410	1.867	0.064
Male	33	34.97	2.942				

Table 5 shows the values of $F = 3.484$ and $sig = 0.064$. The sig value is greater than the 0.05 significance level ($p < 0.05$). Therefore, we can conclude that students' learning experiences do not significantly influence their perception of issues in the implementation of leadership learning.

Table 5
One-way ANOVA Results Comparing Learning Experience Perceptions

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30.003	1	30.003	3.484	0.064
Within Groups	1119.475	130	8.611		
Total	1149.477	131			

Module Needs

Table 6 displays the level of need for leadership modules among students. Overall, the level of need for leadership modules is high ($m = 4.39$). The research findings indicate that modules with current learning topics have a high demand ($m = 4.51$), followed by modules reinforcing at the end of sections ($m = 4.42$). Furthermore, modules should also include concrete illustrations and clear problem-solving steps ($m = 4.41$). On the other hand, modules should contain systematic and easily understood concepts ($m = 4.34$) and encompass clear and measurable competencies ($m = 4.29$). Therefore, each part of the leadership module should incorporate every analyzed component.

Table 6
Module Needs

No	Indicator	N	Mean	SD	Category
1	The module contains clear and measurable competencies	132	4.29	0.787	High
2	The module contains systematic and easily comprehensible concepts	132	4.34	0.740	High
3	The module contains current learning topics	132	4.51	0.767	High
4	The module has concrete illustrations	132	4.41	0.751	High
5	The module has clear problem-solving stages	132	4.41	0.771	High
6	The module includes reinforcement at the end of the chapter	132	4.42	0.772	High
Average			4.39		High

Meanwhile, Table 7 presents the results of the analysis using an independent sample t-test. The research findings indicate that the sig value of $0.373 > 0.05$, which means there is no significant difference in perception between male and female students regarding the need for leadership modules.

Table 7
The Results of the T-Test Compared the Perceptions of Male and Female Students About the Requirements of The Module

Gender	N	Mean	Std. Deviation	Std. Error Mean	F	Sig.	t	Sig (2-tailed)
Female	99	26.28	2.015	.203	0.694	0.406	0.892	0.374
Male	33	26.64	1.834	.319				

Table 8 shows the values of $F = 0.795$ and $sig = 0.374$. The sig value is greater than the 0.05 significance level ($p < 0.05$). Therefore, based on students' learning experiences, there is no significant difference in the perception of the need for leadership modules.

Table 8
One-way ANOVA Results Comparing Learning Experience Perceptions Regarding the Need for Modules, Gender Reviews are Conducted

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.093	1	3.093	0.795	0.374
Within Groups	505.717	130	3.890		
Total	508.811	131			

This research analyzed the need for leadership modules in higher education. According to the research findings, implementation issues in leadership learning are moderate. Although they fell within the moderate range, some question items showed high mean scores. This suggests that if not addressed early, potential issues in the implementation of leadership learning could have a significant impact. Therefore, the impact of this research allows for the development of quality modules to facilitate more effective student learning. The modules are systematically structured, encompassing content, methods, and evaluation tools (Gómez-Pablos et al., 2017).

According to the statistical test results, there is no difference in the implementation issues of leadership learning by gender. Gender is not a determinant in the implementation issues of leadership learning. Every student faces similar issues in the leadership course. Furthermore, the research findings also indicate no difference in students' learning experience perceptions.

Furthermore, the research findings indicated a high need for leadership modules in higher education. These findings are in line with Nastiti et al., (2018), which state that the learning materials have yet to empower students' generic knowledge despite prior research attempting to contribute without demonstrating significant contributions. The study's outcomes also align with research indicating a need for modules related to the implementation of education and driver safety training due to a lack of training time, teaching materials, and implementation (Komalasari et al., 2020). Hence, it shows that modules have become an alternative solution to every learning problem.

According to the statistical test results, there is no difference in the need for leadership modules by gender. Gender is not a determinant of the need for leadership modules. Furthermore, the research findings show that there is no significant difference in the perception of the need for leadership modules based on students' learning experiences when reviewed by gender. We anticipate this phase will lead to a shift in perspective regarding the field under study. Students must reflect on their experiences during the concrete experience phase and process the knowledge they have learned through group discussions, comparisons, and connections between experiences (Bradford, 2019).

CONCLUSION

The needs analysis indicated that the issues related to the implementation of leadership learning fall into the moderate category. However, certain items demonstrated a high level of problematic areas. Additionally, there was no difference in the implementation issues of leadership learning and students' learning experience perceptions based on gender. Moreover, there is a high need for leadership modules in higher education, and there is no gender-based difference in the need for leadership modules or the perception of the need for leadership modules based on students' learning experiences when reviewed by gender. This study suggests that equipping students with leadership skills is crucial. Students are the holders of the educational leadership baton and agents of change in the future education world. Ultimately, students graduating with leadership skills can meet the demands of the global world. Therefore, this research expects a follow-up investigation of the survey regarding the needs analysis of the leadership module, to develop a leadership module in accordance with the problems and needs of students in higher education.

DECLARATIONS

Author contribution	: Osberth Sinaga led and offered all research activities. Daulat Saragi, Darwin, and Achmad Yuhdi collaborated together to collect data in the field until the process of analyzing research results. With their support, this research could be carried out well and this journal article was prepared appropriately.
Funding statement	: This research was funded by UNIMED PNBPN through the 2024 research program organized by LPPM UNIMED
Conflict of interest	: Four authors declare that they have no competing interests.
Ethics Approval	: The authors agree to have this article be published in KEMBARA since 2024.
Additional information	: No additional information is available for this paper.

REFERENCE

- Al Amiri, N., Daradkeh, F., & Al Al Kaabi, A. (2019). Leadership Styles and Competence Among Generation Z Emirati Nursing Students. *International Journal of Learning, Teaching and Educational Research*, 18(9), 23-45. <https://doi.org/10.26803/ijlter.18.9.2>
- Alharin, A., Doan, T. N., & Sartipi, M. (2020). Reinforcement learning interpretation methods: A survey. *IEEE Access*, 8, 171058-171077. <https://doi.org/10.1109/ACCESS.2020.3023394>
- Ali, R., Alnaimi, S. J., Abdulrhim, S., & Mraiche, F. (2022). Developing leadership skills in pharmacy education. *Medical Science Educator*, 32(2), 533-538. <https://doi.org/10.1007/s40670-022-01532-x>

- Ardianti, S. D., Wanabuliandari, S., & Tanghal, A. B. (2023). Implementation the ethnoscience-based smart module to improve students' patriotism. *Jurnal Pendidikan IPA Indonesia*, 12(2), 293-300. <https://doi.org/10.15294/jpii.v12i2.43789>
- Botha, R. N., & Aleme, S. G. (2023). Principals' Leadership Orientation and Students' Academic Performance in Secondary Schools of Gedeo Zone, Ethiopia. *International Journal of Learning, Teaching and Educational Research*, 22(7), 30-51. <https://doi.org/10.26803/ijlter.22.7.2>
- Bradford, D. L. (2019). Ethical Issues in Experiential Learning. *Journal of Management Education*, 43(1), 89-98. <https://doi.org/10.1177/1052562918807500>
- Cáceres-Reche, M. P., López-Gómez, M., Sadio-Ramos, F. J., Berral-Ortiz, B., & Martínez-Domingo, J. A. (2021). Student Leadership At The University: An Explanatory Model. *Education sciences*, 11(11), 703-714. <https://doi.org/10.3390/educsci11110703>
- Cahyono, A. S., Tuhuteru, L., Julina, S., Suherlan, S., & Ausat, A. M. A. (2023). Building a Generation of Qualified Leaders: Leadership Education Strategies in Schools. *Journal on Education*, 5(4), 12974-12979. Retrieved from <https://www.jonedu.org/index.php/joe/article/view/2289>
- Chatzipanagiotou, P., & Katsarou, E. (2023). Crisis Management, School Leadership in Disruptive Times and the Recovery of Schools in the Post Covid-19 Era: A Systematic Literature Review. *Education Sciences*, 13(2), 118-130. <https://doi.org/10.3390/educsci13020118>
- Daley, J., & Baruah, B. (2021). Leadership Skills Development Among Engineering Students in Higher Education—an Analysis of the Russell Group Universities in the UK. *European Journal of Engineering Education*, 46(4), 528-556. <https://doi.org/10.1080/03043797.2020.1832049>
- Delita, F., Berutu, N., & Nofrion, N. (2022). Online Learning: The Effects of Using e-Modules on Self-Efficacy, Motivation and Learning Outcomes. *Turkish Online Journal of Distance Education*, 23(4), 93-107. <https://doi.org/10.17718/tojde.1182760>
- Feller, T. T., Doucette, W. R., & Witry, M. J. (2016). Assessing Opportunities for Student Pharmacist Leadership Development at Schools of Pharmacy in the United States. *American journal of pharmaceutical education*, 80(5), 79-90. <https://doi.org/10.5688/ajpe80579>
- Gengatharan, K., Rahmat, A., Ab Malik, Z., & Abd Malek, N. F. (2023). The Effectiveness of Health Education Assessment Module for Lower Primary Students in Classroom-Based Assessment. *Annals of Applied Sport Science*, 11(1), 20-35. <https://doi.org/10.52547/aassjournal.1088>
- Gningue, S. M., Peach, R., Jarrah, A. M., & Wardat, Y. (2022). The Relationship Between Teacher Leadership and School Climate: Findings from A Teacher-Leadership Project. *Education Sciences*, 12(11), 749-760. <https://doi.org/10.3390/educsci12110749>
- Gómez-Pablos, V. B., del Pozo, M. M., & Muñoz-Repiso, A. G. V. (2017). Project-Based Learning (PBL) Through the Incorporation of Digital Technologies: An Evaluation Based on the Experience of Serving Teachers. *Computers in human behavior*, 68, 501-512. <https://doi.org/10.1016/j.chb.2016.11.056>
- Hasbie, M., Abdullah, A., Rusmansyah, R., Aufa, M. N., Fitri, M. A., Saputra, M. A., & Hairunnisa, H. (2023). Development of Science Module on the Topic of Interaction of Living Things and the Environment Using the Scientific Critical Thinking (SCT) Model to Improve Critical Thinking Ability and Self-Efficacy. *Jurnal Penelitian Pendidikan IPA*, 9(3), 1348-1351. <https://doi.org/10.29303/jppipa.v9i3.2458>
- Hidayat, W., Rohaeti, E. E., Ginanjar, A., & Putri, R. I. I. (2022). An ePub Learning Module and Students' Mathematical Reasoning Ability: A Development Study. *Journal on Mathematics Education*, 13(1), 103-118. <https://doi.org/10.22342/jme.v13i1.pp103-118>
- Hjiej, G., Touissi, Y., Chouhab, O., Hssein, J., Hajjioui, A., Bentata, Y., & Fourtassi, M. (2023). Knowledge, Attitudes, and Practice of Leadership Skills Among Undergraduate Medical Students. *Acta Bio Medica: Atenei Parmensis*, 94(1), 123-136. <https://doi.org/10.23750/abm.v94i1.13461>
- Kainer, K. A., López Binnqüist, C., Dain, J. L., Contreras Jaimes, B., Negreros Castillo, P., Gonzalez Basulto, R., & Melchor Contreras, F. (2019). Leading by Listening, Learning by Doing:

- Modeling Democratic Approaches to Conservation Leadership in Graduate Education. *Journal of Environmental Studies and Sciences*, 9, 206-217. <https://doi.org/10.1007/s13412-019-00542-3>
- Kamaruddin, A., Patmasari, A., Agussatriana, Whanchit, W., Suriaman, A., & Nadrun. (2023). The Effect of IBL (Inquiry-Based Learning) Model on EFL Students' Critical Thinking Skills. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 9(1), 15–23. <https://doi.org/10.22219/kembara.v9i1.22766>
- Kiong, T. T., Rusly, N. S. M., Abd Hamid, R. I., Swaran, S. C. K., & Hanapi, Z. (2022). Inventive Problem-Solving in Project-Based Learning on Design and Technology: A Needs Analysis for Module Development. *Asian Journal of University Education*, 18(1), 271-278. <https://doi.org/10.24191/ajue.v18i1.17196>
- Komalasari, L., Muslim, S., & Winarsih, M. (2020). Needs Analysis of The Traffic Safety Training Hyper Content Module at The Ministry of Transportation. *Journal of Education Research and Evaluation*, 4(4), 422-427. <https://doi.org/10.23887/jere.v4i4.29371>
- Kotschevar, L., & Terrell, M. (1985). *Food Service Planning: Layout and Equipment*. John Wiley, & Sons, Inc. Print.
- Leithwood, K., Sun, J., & Schumacker, R. (2020). How School Leadership Influences Student Learning: A test of “The Four Paths Model”. *Educational Administration Quarterly*, 56(4), 570-599. <https://doi.org/10.1177/0013161X19878772>
- Muammar, O. (2022). Exploring Students' Perceptions of Leadership Skills in Higher Education: An Impact Study of the Leadership Training Program. *Gifted Education International*, 38(2), 295-308. <https://doi.org/10.1177/02614294211055987>
- Nastiti, D., Rahardjo, S. B., VH, E. S., & Perdana, R. (2018). The Need Analysis of Module Development Based on Search, Solve, Create, and Share to Increase Generic Science Skills in Chemistry. *Jurnal Pendidikan IPA Indonesia*, 7(4), 428-434. <https://doi.org/10.15294/jpii.v7i4.12393>
- Petre, G. (2020, December). Developing Students' Leadership Skills Through Cooperative Learning: An Action Research Case Study. In *International Forum* 23(2), 20-37.
- Polatcan, M. (2023). The Influence of Leadership Self-Efficacy on College Students' Leadership Practice: The Mediating Role of Motivation to Lead. *International Journal of Educational Leadership and Management*, 11(2), 138-166. <https://doi.org/10.17583/ijelm.9551>
- Provorova, Y. M., Ivakhnenko, T. P., Oliinyk, N. A., Tamarkina, O. L., & Atroshchenko, T. O. (2021). Development of the Emotional Stability Seen As a Personal Leadership Quality Using the Acmeological Approach in The Master's Students. *European Journal of Educational Research*, 10(1), 23-35. <https://doi.org/10.12973/EU-JER.10.1.275>
- Putri, D. P., Ferdianto, F., & Fauji, S. H. (2020). Designing a Digital Teaching Module Based on Mathematical Communication in Relation and Function. *Journal on Mathematics Education*, 11(2), 223-236. <https://doi.org/10.22342/jme.11.2.7320.223-236>
- Resnik, L., Ekerholm, S., Borgia, M., & Clark, M. A. (2019). A National Study of Veterans With Major Upper Limb Amputation: Survey Methods, Participants, and Summary Findings. *PLoS ONE*, 14(3), 12-29. <https://doi.org/10.1371/journal.pone.0213578>
- Reyes, D. L., Dinh, J., Lacerenza, C. N., Marlow, S. L., Joseph, D. L., & Salas, E. (2019). The State of Higher Education Leadership Development Program Evaluation: A Meta-Analysis, Critical Review, and Recommendations. *Leadership Quarterly*, 30(5), 101311. <https://doi.org/10.1016/j.leaqua.2019.101311>
- Rosch, D. M., Collier, D., & Thompson, S. E. (2015). An Exploration of Students' Motivation to Lead: An Analysis by Race, Gender, and Student Leadership Behaviors. *Journal of College Student Development*, 56(3), 286-291. <https://doi.org/10.1353/csd.2015.0031>
- Rosch, D., Ogolsky, B., & Stephens, C. M. (2017). Trajectories of Student Leadership Development Through Training: An Analysis by Gender, Race, and Prior Exposure. *Journal of College Student Development*, 58(8), 1184-1200. <https://doi.org/10.1353/csd.2017.0093>

- Sabil, H., Kurniawan, D. A., Perdana, R., Rivani, P. A., & Widodo, R. I. (2023). The Character of Students' Love for Their Homeland on Electronic Modules Assisted by Assemblr Edu in Learning. *International Journal of Elementary Education*, 7(2), 335–341. <https://doi.org/10.23887/ijee.v7i2.57915>
- Safi'i, I., Tarmini, W., & Wahdini, L. . (2021). Critical Thinking in Evaluation Instruments at BSE Indonesian Language. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 7(2), 232–240. <https://doi.org/10.22219/kembara.v7i2.17300>
- Salman, M. N. (2019). What Is the Place of Conferences in the Training of Educators: A Case Study of Faculty of Education, METU. *Online Submission*, 7(5), 1155-1165. <https://doi.org/10.13189/ujer.2019.070501>
- Setiani, S., & Wijaya, E. (2020, December). The Relationship Between Self-Regulated Learning with Student Engagement in College Students who Have Many Roles. In *The 2nd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2020)* (pp. 307-312). Atlantis Press. <https://doi.org/10.2991/assehr.k.201209.045>
- Shen, J., Wu, H., Reeves, P., Zheng, Y., Ryan, L., & Anderson, D. (2020). The Association Between Teacher Leadership and Student Achievement: A Meta-Analysis. *Educational Research Review*, 31, 100357. <https://doi.org/10.1016/j.edurev.2020.100357>
- Sobral, F., & Furtado, L. (2019). Post-Heroic Leadership: Current Trends and Challenges in Leadership Education. *Revista de Administração de Empresas*, 59(3), 209-214. <https://doi.org/10.1590/S0034-759020190306>
- Sofyan, D., & Jayanti, F. G. (2019). The Correlation Between Reading Self-Efficacy and Reading Comprehension. *Journal of English Education and Teaching*, 3(1), 1-13. <https://doi.org/10.33369/jcet.3.1.1-13>
- Suyudi, M., Rahmatullah, A. S., Rachmawati, Y., & Hariyati, N. (2022). The Effect of Instructional Leadership and Creative Teaching on Student Actualization: Student Satisfaction as a Mediator Variable. *International Journal of Instruction*, 15(1), 113-134. <https://doi.org/10.29333/iji.2022.1517a>
- Taufik, A., & Istiarsono, Z. (2020). Perspectives on the Challenges of Leadership in Schools to Improve Student Learning Systems. *International Journal of Evaluation and Research in Education*, 9(3), 600-606. <https://doi.org/10.11591/ijere.v9i3.20485>
- Tranchina, D., & Zambak, V. S. (2021). SWAT Team: A Student Leadership Club to Support Student School Connectedness and Teacher Technology Use. *Journal of Higher Education Theory and Practice*, 21(12), 124-134. <https://doi.org/10.33423/jhetp.v21i12.4705>
- Uaikhanova, M., Zeinulina, A., Pshembayev, M., & Anesova, A. (2022). Developing Leadership Skills in University Students. *Cogent Education*, 9(1), 2143035. <https://doi.org/10.1080/2331186X.2022.2143035>
- Wade, L., Beauchamp, M. R., Nathan, N., Smith, J. J., Leahy, A. A., Kennedy, S. G., ... & Lubans, D. R. (2023). Investigating the Direct and Indirect Effects of a School-Based Leadership Program for Primary School Students: Rationale and Study Protocol for the 'Learning to Lead' Cluster Randomised Controlled Trial. *Plos One*, 18(1), e0279661. <https://doi.org/10.1371/journal.pone.0279661>
- Wright, E., Lee, M., Walker, A., Bryant, D., Choi, S., & Hassan, K. (2023). Developing the Next Generation of Leaders: A Global Study of Student Leadership. *Educational Studies*, 1-21. <https://doi.org/10.1080/03055698.2023.2216331>
- Xu, S., Wang, Y. C., & Wen, H. (2019). A Case Study for Student Leadership Development: A Goal Setting Perspective. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 24(2), 168-177. <https://doi.org/10.1016/j.jhlste.2019.03.001>
- Zeike, S., Bradbury, K., Lindert, L., & Pfaff, H. (2019). Digital Leadership Skills and Associations with Psychological Well-Being. *International Journal of Environmental Research and Public Health*, 16(14), 2628. <https://doi.org/10.3390/ijerph16142628>