

Occupational Health and Safety Integration in Digital-Based Governance to Support Excellence Campus

Risdianto¹, Wiwi Hartati²

^{1,2}Universitas Muhammadiyah Cirebon, Cirebon, Indonesia

Article Info

Article history:

Received 2026-03-08

Revised 2026-04-18

Accepted 2026-04-27

Keywords:

Digital Governance

Digitalization of OHS

Excellent Campus

Occupational Health and Safety

ABSTRACT

Occupational Safety and Health (OHS) is an essential component of effective university governance. This study aims to examine the implementation of OHS, the utilization of digital governance, and the gap between actual conditions and expectations within the academic community. A quantitative survey was conducted using a 28-item Likert-scale questionnaire administered to 38 student respondents at the University of Muhammadiyah Cirebon. Data were analyzed using descriptive statistics, and the gap was calculated as the difference between the mean scores of expected outcomes and actual conditions across variables. The results indicate that OHS implementation and governance are categorized as good (mean = 3.80), while the utilization of digital OHS systems shows the lowest mean score (3.78), and support for a superior campus records the highest mean score (4.03). A gap of 0.25 was identified, particularly in the digitalization aspect of OHS. These findings suggest the need for strengthening the integration of digital OHS systems to improve safety management in higher education, although the results are limited to the context of the studied institution.

This is an open-access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Risdianto

Faculty of Economics and Business, Universitas Muhammadiyah Cirebon

Email: risdianto@umc.ac.id

1. INTRODUCTION

Occupational Health and Safety (OHS) has become an essential component of governance in higher education institutions, particularly in ensuring a safe, healthy, and productive academic environment [1], [2]. In the university context, OHS is not limited to laboratory or technical activities, but also encompasses all academic and administrative processes involving students, lecturers, and staff [3], [4]. Safety is no longer seen only as an individual responsibility, but has become a collective competence embedded in daily work practice [5]. Along with the advancement of digital technology, universities are increasingly encouraged to integrate OHS management into digital governance systems to enhance efficiency, transparency, and responsiveness in handling risks and incidents [6], [7].

Previous studies on OHS have primarily focused on compliance with safety standards, risk management practices, and safety culture within industrial or organizational settings [6], [8]. While some research has explored digital transformation in safety management, these studies are largely concentrated in sectors such as construction and manufacturing, with limited attention given to higher education environments [9]. Moreover, existing studies tend to examine OHS as a standalone system, rather than as an integrated component of digital governance within universities [7]. Research that combines OHS implementation, digital system utilization, and user-based perception analysis, particularly within the context of higher education, remains relatively scarce. This indicates a clear research gap in understanding how digital-based OHS systems can be effectively integrated into university governance while aligning with user expectations.

In addition, although OHS governance involves all members of the academic community, this study specifically focuses on students as the primary respondents. This choice is based on the consideration that students represent the largest and most active group within the university environment, who directly engage in various academic activities and are frequently exposed to potential risks [4]. Furthermore, students' perspectives are critical in evaluating the effectiveness of OHS implementation, particularly in terms of usability and accessibility of digital systems, which are closely related to user experience. Therefore, analyzing student perceptions provides valuable insights into the practical needs and expectations for improving digital OHS systems.

This study narrows its focus to the context of digital OHS governance in higher education, emphasizing the integration between safety management and digital systems. The discussion examines how OHS is currently implemented, how digital technologies are utilized, and how both are integrated within university governance structures [9]. This proactive approach to safety ensures that potential hazards are addressed before they cause harm, thus supporting a focused and productive academic environment [10]. In particular, this study seeks to identify the gap between actual conditions and expected outcomes, especially in relation to digitalization, which is considered a key factor in supporting the development of a safe and superior campus [11].

Based on these considerations, this study aims to: (1) analyze the existing conditions of OHS implementation in the university environment; (2) examine the governance and utilization of digital systems in managing OHS; (3) evaluate the level of digital integration of OHS and identify the gap between actual conditions and expectations; (4) identify the need for developing a digital OHS system prototype based on user responses; and (5) analyze student perceptions regarding the role of OHS implementation in supporting the realization of a superior campus.

2. THE COMPREHENSIVE THEORETICAL BASIS

2.1 Occupational Health and Safety Implementation in Higher Education

Occupational Health and Safety (OHS) implementation in higher education institutions constitutes a fundamental element in ensuring a safe and conducive academic environment [1], [2]. Within the university context, OHS extends beyond compliance with safety regulations and encompasses systematic efforts to manage risks associated with

academic, administrative, and extracurricular activities [3], [12]. Effective OHS implementation is reflected in the availability of safety facilities, clear procedures, and awareness among the academic community, which collectively form the baseline condition of safety practices [13], [14]. In this study, this aspect is conceptualized as the existing OHS condition. Furthermore, the effectiveness of OHS implementation is strongly influenced by governance structures, including institutional policies, leadership commitment, and organizational coordination [6], [15]. Therefore, OHS governance becomes a critical dimension that determines how safety policies are translated into operational practices within the university setting.

2.2 Digital Governance in Occupational Health and Safety Management

The advancement of digital technology has significantly transformed governance systems in higher education, including OHS management [16], [17]. Digital governance refers to the integration of information and communication technologies to enhance efficiency, transparency, and data-driven decision-making [18], [19]. In the context of OHS, digital governance enables a transition from conventional safety management to more responsive, integrated systems, particularly through real-time monitoring, digital reporting, and risk analysis [20], [21]. This transformation is also supported by emerging technologies such as data analytics and system integration, which improve predictive capabilities and operational efficiency [8], [9].

In this study, digital governance in OHS is operationalized through two key dimensions: digital OHS utilization and digital-based OHS integration. The former reflects the extent to which digital tools are used in safety management processes, while the latter represents the level of interconnection between systems and data across institutional units [22]. The integration of these components is essential to ensure that OHS management is not only efficient but also adaptive to the dynamic and complex nature of risks in higher education environments.

2.3 Campus Excellence as an Outcome of Integrated Occupational Health and Safety and Digital Governance

Campus excellence is increasingly defined as a multidimensional construct that includes not only academic performance but also governance quality, sustainability, and stakeholder well-being [23], [19]. In this context, the implementation of OHS supported by digital governance plays a strategic role in enhancing institutional performance and competitiveness. A well-implemented OHS system contributes to creating a safe and healthy academic environment, which in turn supports learning effectiveness and institutional reputation [13], [15].

In this study, this outcome is represented by the support for campus excellence dimension, which reflects the academic community's perception of OHS's contribution to institutional advancement. Conceptually, campus excellence can be understood as the result of an integrated system in which strong OHS implementation (existing conditions and governance) is enhanced through digital governance (utilization and integration), ultimately leading to improved institutional outcomes [20], [21]. Thus, the three constructs (OHS

implementation, digital governance, and campus excellence) form an interconnected framework that underpins the development of a safe, effective, and competitive university environment.

3. METHOD

This study uses a quantitative approach with a survey method [24]. Data were collected through a five-point Likert questionnaire [25] consisting of 28 question items covering five main variables/dimensions [18]: (1) Existing OHS Conditions, (2) OHS Governance and Supervision, (3) Utilization of OHS Digital Systems, (4) Digital-Based OHS Integration, and (5) Support for Excellent Campuses [20].

The research respondents were 38 active students of Universitas Muhammadiyah Cirebon who were selected using a purposive sampling technique, namely active students who have participated in academic activities for at least one semester and have experience interacting with OHS facilities and support systems in the campus environment, so that they are considered able to provide relevant assessments of the conditions being studied. The selection of students as the only respondents was based on the consideration that they were the main users who most often interacted with the academic environment and the OHS system, so their perceptions in the effectiveness of the implementation and use of the digital OHS system in daily practice were evaluated. Data collection was conducted online via Google Form in 2026. The following distribution of questionnaire items per dimension is shown in Table 1.

Table 1. Distribution of Questionnaire Items by Dimension

No	Dimensions	Item Code	Number of Items
1	Existing Occupational Health and Safety Conditions	P1–P6	6
2	Occupational Health and Safety Governance and Management	P7–P12	6
3	Utilization of Digital Occupational Systems	P13–P18	6
4	Digital-Based Occupational Integration	P19–P23	5
5	Support for Excellent Campuses	P24–P28	5

Data analysis used descriptive statistics in including mean and standard deviation values [21], with interpretation categories based on the Likert scale, as shown in Table 2.

Table 2. Likert Scale Interval Categories

Mean Value Range	Category
1.00 – 1.80	Very Bad
1.81 – 2.60	Not good
2.61 – 3.40	Enough
3.41 – 4.20	Good
4.21 – 5.00	Very good

The questionnaire instrument was developed based on a literature review on OHS standards and digital governance in higher education. It was then validated through content validity testing by OHS experts. The instrument's reliability was assessed using Cronbach's Alpha [23], with a threshold of 0.70 as the minimum acceptable reliability standard. Gap analysis is performed by calculating the difference between the average value of the expected

condition (expected) and the actual condition (perceived) in each dimension, with a positive value indicating the need for improvement in the relevant aspect. Although the analysis is descriptive, the results are interpreted comparatively by comparing values across dimensions and between actual and expected conditions to identify priority areas for improvement.

4. RESULTS AND DISCUSSION

4.1 . Results

4.1.1. Existing Conditions of OHS Implementation

Based on the analysis of 38 respondents, the variable for the existing condition of OHS had an average of 3.80 and a standard deviation of 1.19 (good category), indicating that the basic implementation of OHS has been functioning adequately in the campus environment. The existence of safety facilities and emergency procedures indicates that there is a fairly strong system foundation.

However, the relatively high standard deviation indicates inconsistent responses, suggesting that the quality of OHS implementation may differ across units or locations. In practical terms, this shows that although the system is already in place, its implementation is not yet evenly distributed and still depends on the operational context of each area.

4.1.2. Occupational Health and Safety Governance and Management

The governance dimension of the OHS shows an average of 3.80 and a standard deviation of 1.14, indicating that the policy framework and management structure are in place and functioning well. Compared to the existing conditions, the slightly lower variation indicates that the governance aspect is relatively more stable. However, analytically, it is seen that the effectiveness of governance has not fully translated into user engagement. This indicates that there is a gap between the policy level and participatory implementation (user level), so a more inclusive approach is still needed.

4.1.3. Utilization of Digital OHS Systems

The use of the digital OHS system recorded the lowest average score (3.78; SD = 1.18), indicating that this dimension is the weakest among the others. Compared with digital integration, although it is highly rated (see 4.1.4), its utilization rate is still lagging. This indicates a gap between system availability and actual usage, which can be due to limited access, poor usability, or low user adoption. This condition underscores the urgent need to develop a more integrated, user-friendly digital OHS system that can address user needs in real time.

4.1.4. Digital-Based Occupational Health and Safety Integration

The digital-based OHS integration variable had an average of 3.98 and a standard deviation of 1.14, indicating it is close to the very good category. These findings show that respondents have a positive perception of the importance of digital system integration in K3 management in higher education environments. This integration is expected to improve the effectiveness of risk monitoring, incident reporting, and data-driven decision-making. In addition, the integrated system enables better coordination among units and accelerates

response to potential hazards. The high score for this variable also reflects respondents' high expectations for the development of a more comprehensive digital-based OHS system. Therefore, digital integration is a strategic aspect that needs to be developed to support the transformation of OHS governance in higher education.

4.1.5. Support for Excellent Campuses

The support variable for the flagship campus obtained the highest average score of 4.03 with a standard deviation of 1.16, which is in the good category and close to very good. These results show that respondents have a very positive view of OHS implementation's role in supporting the realization of superior campuses. OHS is not only seen as an aspect of safety, but also as an important indicator in improving the quality of educational services, institutional reputation, and competitiveness of universities. This perception shows that the academic community has a high awareness of the importance of a safe and healthy campus environment as part of the standards of leading institutions. Therefore, strengthening the implementation of OHS, especially through the integration of digital systems, is a strategic step in supporting the achievement of a sustainable and globally competitive campus vision.

4.1.6. Summary of Results

Tables 3 and 4 summarize the mean and standard deviation values for each research dimension. Overall, all variables are in the Good category. A key finding is the 0.25 gap between the average actual condition (3.78) and respondents' expectations (4.03), which is particularly evident in the digitalization and integration aspects of the OHS system:

Table 3. Interpretation of Variables

No	Variables / Dimensions	Mean	Category	Interpretation
1	Existing OHS Conditions	3.80	Good	The implementation of OHS is quite good
2	OHS Governance & Governance	3.80	Good	Need to increase participation
3	Utilization of Digital OHS Systems	3.78	Good	Digitalization is not yet optimal
4	Digital-Based OHS Integration	3.98	Good	High support
5	Support for Excellent Campus	4.03	Good	OHS as a strategic factor

Table 4. Mean and Standard Deviation per Dimension

No	Variables / Dimensions	Item	Mean	Std. Dev.	Category
1	Existing OHS Conditions	P1–P6	3.80	1.19	Good
2	OHS Governance & Governance	P7–P12	3.80	1.14	Good
3	Utilization of Digital OHS Systems	P13–P18	3.78	1.18	Good
4	Digital-Based OHS Integration	P19–P23	3.98	1.14	Good
5	Support for Excellent Campuses	P24–P28	4.03	1.16	Good

The variation in average values and standard deviations across dimensions revealed differences in respondents' perceptions, which were analyzed to identify areas that needed strengthening, especially in the context of OHS digital integration. The analysis showed an average gap of 0.25 between the actual condition and respondents' expectations. The largest gap is in the dimension of OHS digital system use (0.25), confirming that this aspect is a top priority for improvement.

The gap between expectations and reality primarily concerns the digitalization and integration of OHS systems. Respondents expressed high expectations for an integrated, technology-based system, but actual conditions have not fully met these expectations. These findings emphasize the need for universities to undertake a more comprehensive digital transformation in OHS management as a crucial strategy for improving governance quality and institutional competitiveness.

Analysis at the item level showed that the highest-scoring indicators were generally related to perceptions of the importance of safety and support for a superior campus. In contrast, the lowest-scoring indicators were related to accessibility of digital systems, ease of use, and frequency of use. These findings reinforce the view that the main challenge lies in operationalizing digital systems.

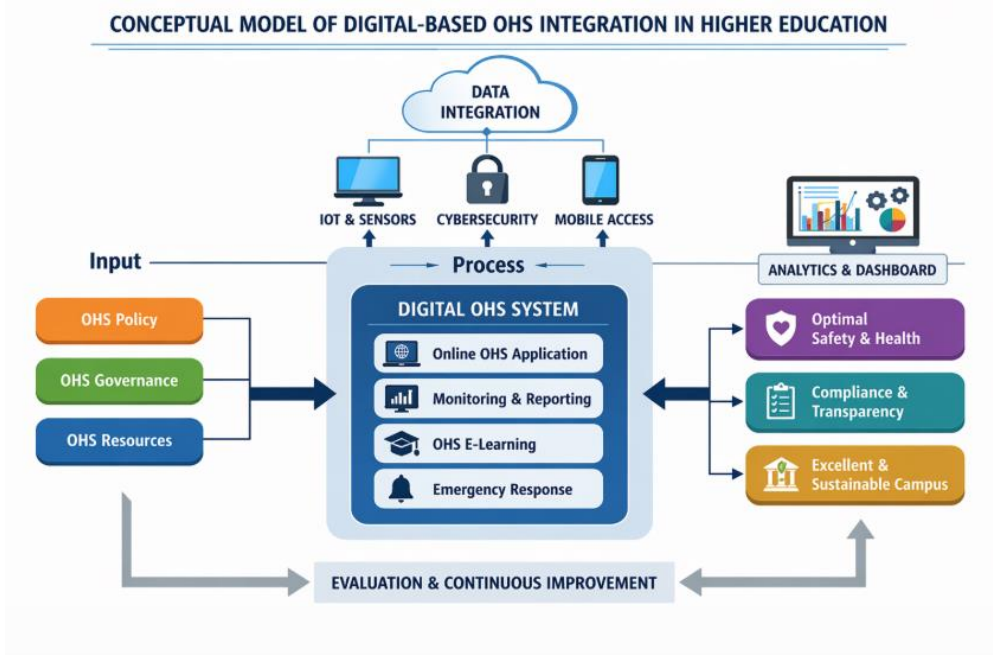


Figure 1. Conceptual Model of Digital-Based OHS Integration in Higher Education

Figure 1 presents a conceptual model of digital-based Occupational Health and Safety (OHS) integration in higher education, structured in an input-process-output flow with a continuous improvement mechanism. The author developed it by synthesizing and adapting concepts from the literature on OHS governance, digital transformation, and systems-based safety management, and applying them to the higher education context. This is built based on the refinement of the desired objectives. In the input section, the system is supported by three main components: OHS Policy, OHS Governance, and OHS Resources [19], indicating that safety implementation depends not only on technology but also on the readiness of institutional policies and governance. These components then flow into the process stage centered on the Digital OHS System, which includes important features such as online applications, monitoring and reporting, e-learning, and emergency response. This integration is strengthened by technological support such as IoT & sensors, cybersecurity, and mobile access within a data integration framework, which confirms that the system is designed to be data-driven and real-time.

In the output section, this model achieves three main outcomes: optimal safety and health, compliance and transparency, and an excellent and sustainable campus [26]. This shows that OHS implementation is not only oriented towards safety but also contributes to improving governance quality and institutional competitiveness. The presence of analytics and dashboards strengthens the data-based decision-making function, while the evaluation and continuous improvement elements emphasize that this system is dynamic and adaptive. Overall, this model describes an ideal, integrated system, but in actual implementation, its success depends heavily on the level of digital readiness, system integration, and the active participation of the academic community in using available technology.

3.2. Discussion

The results of the study show that the implementation of OHS in the university environment has been in the good category, but not fully optimal, especially in digitalization and user participation. This condition indicates that the presence of systems and policies does not automatically guarantee effective implementation at the operational level. Conceptually, this can be explained by the gap between formal compliance and functional adoption, where institutions have fulfilled the structural aspects of OHS, but have not fully succeeded in encouraging active use by the academic community.

In the existing dimension of OHS conditions, even though facilities and procedures are available, variations in student perceptions indicate that understanding of OHS practices is not evenly distributed. These findings are in line with previous research, which emphasizes that the success of OHS implementation is not determined solely by the availability of facilities, but also by the level of safety literacy and the internalization of OHS culture among users. Thus, an education-based approach and the strengthening of a safety culture are key factors in improving implementation consistency.

In terms of governance, the results of the study show that institutional commitment is relatively good, but it has not been fully followed by active student involvement. This indicates that OHS governance remains top-down. These findings are consistent with previous studies showing that overly policy-oriented governance models are often less effective in building a participatory safety culture. Therefore, a more inclusive approach is needed, such as student involvement in training, simulation, and evaluation of the OHS system.

In terms of the use of the digital OHS system, the relatively low score compared to other dimensions indicates that there are obstacles in technology adoption. Institutionally, this condition can be caused by limited infrastructure, lack of system integration, and the absence of a targeted digital strategy in OHS management. In terms of organizational culture, low utilization can also be influenced by resistance to change, low digital literacy, and the perception that digital systems have not provided significant added value for users. These findings are in line with the literature showing that digital transformation in safety management often faces challenges at the implementation stage, even though it has been conceptually recognized as important.

On the other hand, the high score on the digital-based OHS integration dimension indicates that respondents have strong expectations for an integrated, data-driven system.

The difference between high expectations and low actual utilization indicates an implementation gap, where conceptual readiness is not followed by operational readiness. This reinforces the argument that OHS's digital transformation requires not only technology, but also organizational and user readiness.

In the dimension of support for superior campuses, the results show that OHS is seen as a strategic factor in improving institutional quality. These findings are in line with global trends that place OHS as part of sustainable and competitive institutional governance. Thus, strengthening OHS, especially through digitalization, not only has an impact on safety aspects but also on the reputation and performance of institutions as a whole.

Overall, the 0.25-point gap between actual conditions and expectations indicates significant room for improvement, especially in digitalization and system utilization. The practical implications of these findings are the need for universities to: (1) develop an integrated and easy-to-use digital OHS system; (2) improve digital literacy and safety through continuous training; (3) encourage the active participation of students as the main users; and (4) develop policies that are not only regulative, but also encourage the adoption of technology operationally.

This research has several limitations that need to be considered. First, the relatively small number of respondents and the presence of only one institution can limit the generalizability of the findings. Second, the focus on students as the main respondents has not fully represented the perspectives of the entire academic community, including lecturers and education staff. Third, the approach used is descriptive, so it has not been able to test the causal relationship between variables in depth.

5. CONCLUSION

This research produced several important findings: the implementation of OHS in higher education has been structurally sound but not yet fully effective at the operational level, especially in the utilization and integration of digital systems. The main findings confirm a gap between conceptual readiness and actual implementation, with the digitalization aspect of OHS not being utilized to its full potential, even though it is seen as having a strategic role in supporting institutional excellence. Thus, the contribution of this research lies in affirming the importance of digital-based OHS integration as a key element in strengthening adaptive and sustainable higher education governance.

Based on these findings, universities need to develop an integrated, user-oriented digital OHS system that includes incident reporting features, risk monitoring, early warning systems, and digital learning support. In addition, increasing digital literacy and the active involvement of the academic community are important factors in ensuring the effectiveness of the system's implementation in practice.

This study was limited to a relatively small number of respondents, so the results could not be generalized widely. Therefore, further research is recommended to involve a more diverse sample and use a more comprehensive analytical approach to test the effectiveness of digital-based OHS implementation in more depth.

ACKNOWLEDGEMENTS

The author would like to thank the Research Grant Batch IX and Universitas Muhammadiyah Cirebon for supporting this research, as well as all student respondents who participated in data collection.

REFERENCES

- [1] N. Nelfita, D. A. Lubis, and R. H. Wijaya, "Analysis of the Impact of Implementation of Occupational Safety and Health Programs on Productivity: Literature Analysis," vol. 4, no. 3, pp. 543–550, 2024.
- [2] K. A. Mahendra, "Evaluasi Implementasi Keselamatan dan Kesehatan Kerja (K3) di Laboratorium Jalan Raya Universitas Lampung," vol. 4, no. 5, pp. 1440–1453, 2025, doi: 10.55123/insologi.v4i5.6596.
- [3] Y. Angriani and I. Halid, "Peningkatan Kesadaran Budaya Keselamatan dan Kesehatan Kerja (K3) pada Mahasiswa melalui Edukasi dan Simulasi," vol. 5, no. 01, pp. 72–77, 2026.
- [4] N. Kursunoglu, S. Onder, and M. Onder, "The Evaluation of Personal Protective Equipment Usage Habit of Mining Employees Using Structural Equation Modeling," *Safety and Health at Work*, vol. 13, no. 2, pp. 180–186, Jun. 2022, doi: 10.1016/j.shaw.2022.03.004.
- [5] H. Susanto, I. C. A. Phoek, and A. P. Tjilen, "Menuju Tata Kelola Universitas yang Adaptif dan Berbasis Bukti: Mengoptimalkan Sistem Administrasi untuk Keunggulan Akademik".
- [6] M. Héry, M. Malenfer, S. Devel, and C. Levert, "Evolution of working conditions under the impact of ICTs," *Journal of Safety Research*, vol. 77, pp. 268–276, Jun. 2021, doi: 10.1016/j.jsr.2021.03.009.
- [7] I. Wasilu, Makhfudi, and S. Taroreh, "Pengukuran Kinerja dan Akuntabilitas Publik Dalam Implementasi LAKIP (Studi Kasus di Pemerintah Manado)," *jlbk*, vol. 2, no. 2, pp. 53–65, Dec. 2025, doi: 10.57207/w5qf1h05.
- [8] A. Neal, M. A. Griffin, and P. M. Hart, "The impact of organizational climate on safety climate and individual behavior," *Safety Science*, vol. 34, no. 1–3, pp. 99–109, Feb. 2000, doi: 10.1016/S0925-7535(00)00008-4.
- [9] P. Lindhout and G. Reniers, "Recent Cyber-Physical-System developments and their safety & security management risk factors," *PSS*, vol. 1, Jul. 2025, doi: 10.59490/pss.1.2025.8097.
- [10] N. Muttaqin, "Membangun Wawasan Keselamatan dan Kesehatan Kerja di Institusi Pendidikan Tinggi: Pengembangan Small Private Online Course (SPOC) untuk Staff Administrasi," 2024.
- [11] D. B. Tessema, "Pillars of Organizational Transformation and Sustainability: Leadership, Learning, Culture, and Knowledge Management as Key Success Factors in Environmental Public Health," *HEM*, vol. 6, no. 1, pp. 1–21, Mar. 2025, doi: 10.61093/hem.2025.1-01.
- [12] N. Kursunoglu, S. Onder, and M. Onder, "The Evaluation of Personal Protective Equipment Usage Habit of Mining Employees Using Structural Equation Modeling," *Safety and Health at Work*, vol. 13, no. 2, pp. 180–186, 2022, doi: 10.1016/j.shaw.2022.03.004.
- [13] L. Nørreklit, L. Jack, and H. Nørreklit, "Moving towards digital governance of university scholars: instigating a post-truth university culture," *J Manag Gov*, vol. 23, no. 4, pp. 869–899, Dec. 2019, doi: 10.1007/s10997-019-09489-7.
- [14] M. M. Arjoon and K. F. Pun, "Assessing the Performance of Safety and Quality Practices in Higher Education Settings: A Case Study".
- [15] F. Lateh, F. Fatkuroji, and A. Lateh, "Digital Transformation as Revitalization of Work Culture in Good Institutional Governance at FITK Walisongo Semarang, Indonesia and Southern Thailand," *QUALITY*, vol. 13, no. 1, p. 57, Jul. 2025, doi: 10.21043/quality.v13i1.31157.
- [16] Q. Hwang, M. Yao, S. Li, F. Wang, Z. Li, and T. Liu, "Research on occupational health and safety management in the context of big data," *Front. Public Health*, vol. 12, p. 1514996, Dec. 2024, doi: 10.3389/fpubh.2024.1514996.
- [17] N. A. Ananda and O. Reviandani, "Analysis Of The Effectiveness Of Company Letter Registration And Data Collection In The Occupational Health And Safety Supervision Sector Of The Manpower And Transmigration Service Of East Java Province," vol. 23, no. 3, 2025.
- [18] K. Zaman, "Paci fi c Science Review B: Humanities and Social Sciences Quality guidelines for good governance in higher education across the globe," *Pacific Science Review A: Natural Science and Engineering*, vol. 1, no. 1, pp. 1–7, 2016, doi: 10.1016/j.psr.2016.01.001.
- [19] D. Lo, "2012 International Symposium on Safety Science and Technology OHS Stewardship - Integration of OHS in Corporate Governance," vol. 45, no. 8, pp. 174–179, 2012, doi: 10.1016/j.proeng.2012.08.139.
- [20] R. W. Perdana, E. R. Indrayatie, and A. R. Maulana, "Strategies for Improving Occupational Safety Culture at PT PLN Indonesia Power Generation Business Unit in the South Kalimantan and Central Kalimantan Work Areas," vol. 22, pp. 1348–1369, 2026.

- [21] E. H. Livingston, "The Mean and Standard Deviation : What Does It All Mean ?," vol. 123, pp. 117–123, 2004, doi: 10.1016/j.jss.2004.02.008.
- [22] N. Sa'adi, S. Abd Gapor, F. Tamrulan, and A. A. Mohamad Bohari, "Towards a Sustainable Campus: A Review of Plans, Policies, and Guidelines on Sustainability in Malaysian Public Higher Education Institutions," *JDBE*, vol. sp, no. VI, pp. 01–22, Sep. 2025, doi: 10.22452/jdbe.spVI.1.
- [23] M. A. Bujang, E. D. Omar, and N. A. Baharum, "Original Article A Review on Sample Size Determination for Cronbach ' s Alpha Test : A Simple Guide for Researchers," vol. 25, no. 6, pp. 85–99, 2018.
- [24] Y. E. Gul, "№ 4(106) апрель , 2023 г .," vol. 4, no. 106, 2023.
- [25] A. I. Journal *et al.*, "Organizational Cultures," vol. 21, no. 2.
- [26] N. Sa, S. A. Gapor, F. Tamrulan, and A. A. Mohamad, "Towards a Sustainable Campus : A Review of Plans , Policies , and Guidelines on Sustainability in Malaysian Public Higher Education Institutions College of Built Environment , Universiti Teknologi MARA Cawangan Sarawak , Kampus," no. Vi, 2025.
-