

## Optimization of Human Resources in the Construction Industry at PT. Superior Pusadega

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**ABSTRACT :** This research discusses efforts to optimize human resources (HR) in the construction industry at PT. Pusadega Superior. Effective HR management is crucial for increasing productivity and reducing risks in construction projects. The main problem identified is how HR optimization strategies influence project performance and job satisfaction. This study offers a new perspective by analyzing a comprehensive approach to HR management in the construction sector, an area that has not been widely explored in previous research. The research employs a qualitative case study method, utilizing qualitative analysis through interviews with project managers and staff, as well as document review related to HR management at PT. Pusadega Superior. The findings reveal that despite having good HR policies, their implementation is often inconsistent, which negatively impacts project performance. The main influencing factors are the quality of training and internal communication. The conclusion of this research is that increasing consistency in the implementation of HR policies and improving training and communication can enhance project performance and job satisfaction. The implication is that PT. Pusadega Superior must invest in better training programs and more effective communication strategies. The key message is that effective HR optimization is critical to the success of construction projects and worker satisfaction.

**Keywords:** HR Optimization, Construction Industry, Project Performance



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## INTRODUCTION

Human resources (HR) are vital assets for the sustainability and success of an organization (Siddiqui & Sahar, 2019). They encompass all individuals who contribute with their skills, knowledge, and abilities to achieving company goals (Tentama, Rahmawati, & Muhopilah, 2019). HR management involves the processes of recruitment, training, development, performance appraisal, and compensation management (Fitra & Sinatra, 2020; Graf, Cignacco, Zimmermann, & Zúñiga, 2016; Osborne & Hammoud, 2017). The objective is to enhance employee productivity, effectiveness, and well-being to ensure optimal performance (AM et al., 2022; Setyadi, Helmi, &

Hidayat, 2022). HR's importance lies in fostering innovation, solving problems, and building a positive work culture (Irvan, 2018). In the construction industry, HR plays a crucial role, given the sector's significance in economic and infrastructure (Hutomo et al., 2020; Nurlaela Sari, Zisca, Widyawati, Astuti, & Melysa, 2023). This industry requires a skilled and experienced workforce to ensure the success of complex and high-risk projects (Jahandar, Abdi, & Jaafari, 2022). In the context of global competition, construction companies must optimize their HR to boost productivity, efficiency, and work quality.

Optimizing HR in the construction industry involves various aspects, from recruitment, training, and competency development to performance management (Anuraga, 2021). The main challenges facing construction companies include a shortage of skilled labor, high employee turnover, and the need to enhance skills in line with technological advancements and new construction methods (Wahyudi, Rozi, & Putry, 2022). Additionally, communication and coordination challenges between teams can hinder project execution (Tariq, 2013). A significant issue is the lack of workers with qualifications and certifications meeting industry standards (Rachid, Toufik, & Mohammed, 2019). This skills gap often leads to project delays and increased costs. This research aims to identify effective HR optimization strategies and explore the factors influencing their success in the construction industry.

Occupational safety and health (K3) is another critical aspect, considering the high risk of work accidents in this sector (Hoboubi, Choobineh, Kamari Ghanavati, Keshavarzi, & Akbar Hosseini, 2017). Implementing HR optimization strategies is crucial for effective and efficient project execution while maintaining quality and safety standards (Hoboubi et al., 2017). These strategies involve using information and communication technology (ICT) to support recruitment and training processes, developing sustainable career development programs, and implementing performance management based on individual results and competencies (Hoboubi et al., 2017; Laberge, Vignet, & Chatigny, 2022). With a comprehensive and integrated approach, construction companies can build solid teams, enhance employee satisfaction, and achieve a competitive advantage.

This research aims to provide insights and practical recommendations for PT. Pusadega Superior in addressing various HR challenges. Technological advancements such as Building Information Modeling (BIM), Artificial Intelligence (AI), and the Internet of Things (IoT) offer new opportunities for HR optimization. These technologies enhance efficiency and accuracy in project planning and execution and provide better tools for HR management, reducing human errors and improving work safety (Wahyudi, 2022). Through case studies and in-depth analysis, this research seeks practical solutions for PT. Pusadega Superior to address skilled labor shortages, high turnover, and skill enhancement demands. The findings are expected to benefit not only PT. Pusadega Superior but also contribute positively to the broader construction industry. Thus, this research focuses on Optimizing Human Resources in the Construction Industry at PT. Pusadega Superior.

## METHOD

### Types of research

This research employs a descriptive qualitative approach. Qualitative research aims to understand participants' perspectives through interactive and flexible strategies and is often used in field studies to examine phenomena in natural contexts (AM & Purnama, 2024; Creswell, 2012). This

method was chosen because it is suitable for exploring complex and diverse issues in the context of human resources (HR) at PT. Pusadega Superior.

### Research Subjects and Objects

The research subjects include leaders, managers, operational managers, foremen, and technical workers at PT. Pusadega Superior. The research object is the HR optimization strategy in the construction industry at PT. Pusadega Superior, focusing on gaining an in-depth understanding of HR optimization methods and approaches in the industrial context. The research population encompasses all human resources in the company, and probability sampling techniques were used to select the sample. The sample consists of 12 permanent employees, with 5 informants representing various levels of position within the company, including leaders, managers, operational managers, foremen, and technical workers. These informants were chosen to provide a comprehensive view from various perspectives within the company.

### Data source

The data in this research consists of primary and secondary data (Creswell, 2022). Primary data was collected directly from the field through in-depth interviews and observations, including interview notes and direct observation results at the project location. Secondary data was obtained from various relevant literature, such as books, journals, and previous research. This secondary data supports the primary information and provides additional context that enriches the understanding of the topic being researched.

### Data collection technique

Data collection involved several complementary methods. Structured interviews were used to obtain clear and focused information, allowing researchers to gather in-depth data from informants regarding HR strategies and challenges faced. Direct observations were conducted to understand social interactions and behavior in the field, providing insight into the implementation of HR strategies in real work contexts. Additionally, a literature study was conducted to obtain supporting data that enriches the understanding of the research topic through books, journals, and related articles. This combination of methods provides a comprehensive and in-depth picture of HR optimization strategies at PT. Pusadega Superior.

### Data analysis technique

Data analysis involved several important stages. Data reduction was carried out by categorizing, summarizing, and focusing on important data to find themes and patterns relevant to the research (Creswell & Clark, 2011). The data was then presented in structured narrative text to facilitate further understanding and analysis (Bogdan & Biklen, 2007). At the conclusion or verification stage, data was analyzed to find meaning by comparing information obtained from various sources and looking for consistent patterns and conclusions.

### Ensuring Validity and Reliability

To ensure the validity and reliability of the research, triangulation techniques were employed. Source triangulation involved using data from various informants to verify the reliability of the information collected. Data collection triangulation compared data obtained through interviews, observations, and literature studies to ensure consistency (John W Creswell, 2012). Time

triangulation involved collecting data at different times to ensure the validity of the information. Theoretical triangulation used different theories to analyze data, providing a more comprehensive understanding of the research topic (Fraenkel & Wallen, 2009). Through this methodology, the research is expected to provide in-depth insights into HR optimization strategies at PT. Pusadega Superior and contribute to the development of the construction industry as a whole.

## RESULTS AND DISCUSSION

### Internal Training Safe Work Security Education

Internal training regarding safe work safety at work sites is a crucial element in the occupational safety and health (K3) management system. In this study, R1, R2, R3, R4, R5, and R6 explained that this training involved several important aspects aimed at minimizing the risk of accidents and work-related illnesses. This training provides an in-depth understanding of job site conditions, which helps workers recognize potential hazards and implement effective preventive measures. A fundamental aspect of this training is an understanding of job site conditions, which includes assessing risks related to factors such as height, noise and hazardous materials (Parent-Lamarque, Marchand, & Saade, 2021). Knowing these conditions allows workers to prepare and adapt their work methods according to the potential hazards that exist. Notification of potential job hazards is also an integral part of training. Information about potential hazards, such as hazardous chemicals, operating machinery, or ergonomic risks, helps workers identify and mitigate risks before they become problems. Effective communication regarding potential hazards should be carried out regularly, including through information boards and regular meetings (Agu, 2016). Rescue and first aid actions are a vital component of training, where workers must be skilled in responding to emergency situations, including handling work accidents and providing first aid. This training should cover procedures for dealing with common injuries, resuscitation techniques, and use of emergency medical equipment (Wu & Li, 2018). The ability to act quickly and appropriately in emergency situations can save lives and reduce the impact of accidents. In addition, the use of personal protective equipment (PPE) is an important aspect of job safety training. Training should include an understanding of the types of PPE required for various types of work, how to use them correctly, and the care and maintenance of the equipment. Workers who are equipped with knowledge about the proper use of PPE tend to be safer and have a lower risk of work accidents. The main goal of this training is to ensure that each worker has the knowledge and skills necessary to work safely. With good training, workers not only understand potential risks but are also able to implement emergency prevention and response measures effectively, thereby increasing their readiness to face emergency situations and reducing the possibility of accidents.

### Training on Safe Work Practices at Height

Training on safe work practices at height is an important element in a company's safety policy, especially for work carried out at heights above 1.80 meters. All respondents, namely R1, R2, R3, R4, R5, and R6, agreed that this training is an integral part of the company's safety policy. This training reflects the company's commitment to work safety in high-risk areas and serves to ensure that workers working at height have the knowledge and skills necessary to face greater risks.

This training involves various important aspects, from understanding the risks associated with working at height to implementing proper safety procedures. Workers are trained to use appropriate personal protective equipment (PPE), such as harnesses and safety ropes, as well as

specific techniques to minimize the risk of falls. In addition, this training also includes knowledge of relevant safety regulations and ways to carry out routine inspections of the equipment used. The implementation of effective training is expected to reduce the number of accidents that occur at height and increase workers' awareness of the dangers that may arise (Bennell et al., 2020). This training also reflects the company's responsibility in providing a safe work environment and complying with applicable safety standards (Landry, Jacobs, & Newton, 2014). Thus, training on safe working practices at height plays an important role in creating a strong safety culture and ensuring the safety and well-being of workers in high-risk areas.

### Daily Coaching

Daily coaching in the workplace is an important practice implemented consistently by all respondents in this study. This practice involves several key elements aimed at ensuring worker safety and compliance with safety standards. R1 and R3 explained that daily coaching was carried out through regular meetings before starting work. This meeting functions as a means to provide direction and reminders regarding potential dangers that may be encountered during work. In this way, workers are provided with up-to-date information regarding risks that may arise and are reminded to always be alert to these dangers. R2 and R5 added that daily coaching also includes a toolbox meeting, which is a short discussion session about safety before work begins. This toolbox meeting serves to discuss specific safety issues that may be encountered in the day's work and to ensure that all workers understand and follow applicable safety procedures. Apart from that, the implementation of an occupational safety and health management system (SMK3) is also part of daily coaching (Brockner et al., 2006; Figgins, Smith, Knight, & Greenlees, 2019). This system is designed to manage and monitor compliance with safety procedures, as well as to ensure that workers follow safe work practices. With structured and systematic daily coaching, companies can increase safety awareness in the workplace, reduce the risk of accidents, and ensure that workers always comply with established safety standards (Bialek & Hagen, 2022). This coaching also helps create a strong safety culture in the workplace and ensures that all team members have the knowledge and skills necessary to work safely.

### Workforce Recruitment Process

The labor recruitment process in companies, as outlined by R1, R2, R3, R4, and R6, involves a series of important steps to ensure that the prospective workers accepted are not only qualified but also in good health. This process begins with an interview which functions to evaluate the suitability of prospective workers with the position offered and the company culture. These interviews allow companies to assess a potential worker's skills, experience, and personality. Apart from interviews, medical examinations are an integral part of the recruitment process. R2 and R6 emphasize that the health examination aims to ensure that prospective workers are in adequate physical condition to carry out the tasks required in the job. This is important to reduce the risk of a mismatch between workers' physical abilities and job demands, which can affect work productivity and safety. Apart from that, R2 and R6 also noted that the recruitment process includes a competency test (Aronsson et al., 2017). This test is designed to assess the technical skills and abilities of job candidates in fields relevant to the job being applied for. Competency testing helps ensure that job candidates not only have the necessary knowledge but also the practical skills to carry out tasks efficiently and effectively.

The goal of the entire recruitment process is to ensure that only job candidates who meet strict criteria are accepted. By involving interviews, medical examinations, and competency tests,

companies can ensure that the prospective workers selected not only match the job requirements but can also contribute positively to safety, performance, and company culture. This thorough recruitment process plays an important role in building a competent and healthy team, which in turn can improve the company's overall performance and success.

### **Code of Ethics for Safety at Project Sites**

A safety code of ethics at the project site is a crucial aspect in maintaining the safety of both individuals and the work environment, as identified by all respondents. This code of conduct is designed to ensure that safety standards are strictly adhered to and that potential risks are identified and properly addressed. All respondents, including R1, R2, R3, R4, R5, and R6, agreed that this code of ethics has the main objective of maintaining safety and health in the project environment. This code of ethics emphasizes that every worker must be aware of the potential dangers that exist and must avoid activities that could harm themselves or others. This includes safe work practices, use of appropriate personal protective equipment, and maintaining a work area that is free from potential risks. Apart from that, this code of ethics also requires workers to report potential dangers discovered during work. This is important to create a safer work environment and prevent accidents. By having an obligation to report hazards, companies can take the necessary precautions before problems escalate into serious incidents.

Consistent and effective implementation of a safety code of conduct at the project site not only protects individual safety but also contributes to the sustainability of the project itself. By maintaining high safety standards and encouraging open communication about hazards, companies can reduce the risk of accidents and environmental damage, and increase safety awareness among workers. This code of ethics, therefore, plays an important role in creating a strong safety culture and ensuring that all parties are involved in maintaining safety in the workplace.

### **Work Safety Documents**

Work safety documents are a vital element in the workplace safety management system, as identified by all respondents in this study. R1, R2, R3, R4, R5, and R6 all mentioned that their companies maintain various work safety documents that include safety manuals, work instruction procedures, pocketbooks, and bulletins. These documents play an important role in ensuring that every worker has access to clear and structured guidance regarding the safety practices that must be followed. Safety manuals, for example, provide comprehensive guidance on safety procedures that should be applied in various situations. Work instruction procedures describe the steps that must be followed to perform certain tasks safely. Booklets typically contain quick summaries of important safety information, while bulletins are often used to inform workers about periodic updates or changes to safety policies.

The presence of these documents is crucial in creating a safe work environment and minimizing the risk of accidents. By providing detailed and easily accessible information, occupational safety documents help workers understand and comply with applicable safety standards. It also allows companies to ensure that all employees receive consistent and reliable safety information, regardless of when or where they work. Furthermore, these documents serve as useful references in training and development, as well as in safety audit and evaluation processes. By having well-structured documents, companies can ensure that all aspects of work safety have been considered and accommodated, as well as supporting efforts to maintain a safe and productive work environment.

### Management Policy and Commitment

Management policies and commitment at construction work sites are crucial aspects that were consistently explained by all respondents in this study. R1, R2, R3, R4, R5, and R6 emphasize that management policies include protecting worker safety, work environment security, and relations with the surrounding environment. The company's management shows a deep commitment to worker safety and welfare, which is a key component of the company's Occupational Safety and Health (K3) Program (Laberge et al., 2022). This policy not only aims to protect workers from potential risks and dangers, but also ensures that the work environment is managed in a way that does not have a negative impact on the surrounding environment.

Management's commitment to occupational safety and health policies includes systematic efforts to eliminate deviations from established safety standards. This involves controlling losses, especially those related to human and environmental aspects (Hoboubi et al., 2017). Management strives to create an effective system for identifying, evaluating and controlling risks, as well as ensuring that all safety procedures and practices are strictly followed (Romanova & Kudinska, 2016). With clear policies and strong commitment from management, companies not only ensure that safety standards are met, but also build a positive safety culture throughout the organization (Nunkoo, Teeroovengadum, Ringle, & Sunnassee, 2020). This includes the implementation of ongoing training, monitoring and evaluation to maintain a high level of compliance with safety policies (Wedadjati & Helmi, 2022). Overall, clear management policies and commitment are an important foundation in maintaining safety on construction work sites. This policy helps create a safe and supportive work environment, while mitigating risks and ensuring that all aspects of occupational safety and health are well managed.

### Job Safety and Job Instructions

Job safety instructions in the project environment are a vital element that was thoroughly explained by all respondents in this study. R1, R2, R3, R4, R5, and R6 identified that this instruction involved several key components, including the implementation of work procedures, use of work permits, and socialization of the Occupational Safety and Health (K3) program. Implementing proper work procedures is a major part of work safety instructions. Each procedure is designed to address potential hazards and ensure that work is performed in accordance with established safety standards (Smith, 2015). It includes detailed steps that workers must follow to reduce the risk of accidents and ensure that each activity is carried out in a safe manner.

The use of work permits is also an important aspect of safety instructions. Work permits are required for activities considered high risk, and this process helps ensure that all work is carried out with appropriate approvals and with adequate supervision (Saks, 2022). The work permit serves as a tool to control and verify that all safety requirements have been met before work begins. Socializing the K3 program to all workers is an important step in ensuring that they understand and comply with safety procedures (Contreras & Brown, 2019). This includes the use of safety banners and signs placed in work areas to attract workers' attention and remind them of the safety procedures that must be followed. This outreach aims to increase workers' awareness of the importance of work safety and encourage them to comply with safety standards in every aspect of their work.

Work safety instructions aim to ensure that every job is carried out in accordance with established and approved safety procedures. With clear instructions and effective implementation, companies can reduce the risk of accidents, increase worker safety, and create a safer work environment

(Lambert, Keena, Haynes, May, & Leone, 2020). This approach helps ensure that safety is a top priority and that all workers have a thorough understanding of how to carry out their duties in a safe and procedural manner.

### CONCLUSION

Based on the results of interviews and observations, it can be concluded that PT. Pusadega Unggul has made significant strides in optimizing human resources in the construction industry through the implementation of various occupational safety and health (K3) programs. The company has demonstrated its commitment to improving workers' skills and awareness of work safety through comprehensive internal training programs, including understanding work site conditions and the use of personal protective equipment. Daily training and a rigorous recruitment process ensure that workers have the necessary abilities and health conditions to carry out their duties safely. The presence of a security code of ethics, safety manuals, work instruction procedures, pocket books, and work safety bulletins further reflects the company's efforts to create a safe and orderly work environment. Management policies and a strong commitment to worker safety and good relations with the surrounding environment bolster the implementation of K3 standards in all construction projects.

However, this research identifies several limitations, such as the lack of regular evaluation and feedback from workers, which can affect the relevance and effectiveness of K3 policies. Additionally, while internal training has been conducted, there is a need to increase the frequency and quality of training and adopt the latest technology in occupational safety. The research also highlights the necessity for stronger promotion of a safety culture and improved communication between management and workers.

This research contributes to the existing body of knowledge by providing insights into effective HR optimization strategies in the construction industry, specifically through the lens of occupational safety and health programs. It highlights the importance of comprehensive training programs, rigorous recruitment processes, and strong management commitment to safety. From a practical perspective, the findings offer valuable recommendations for construction companies aiming to enhance worker safety and project performance.

The study has several limitations. First, the lack of regular evaluation and feedback from workers may limit the effectiveness and relevance of K3 policies. Second, the study focuses on internal training without extensively exploring external training and technological advancements. Future research should address these limitations by including more frequent evaluations and feedback mechanisms. Additionally, exploring the integration of advanced technologies, such as mobile apps for hazard reporting, drones for workplace inspections, and smart personal protective equipment, could provide deeper insights into enhancing occupational safety. To increase the effectiveness of the K3 program, PT. Pusadega Unggul should conduct regular evaluations and involve workers in the evaluation process to identify areas needing improvement and ensure that K3 policies remain relevant. Increasing the frequency and quality of training by involving external experts and adopting the latest technology, including advanced safety techniques and work accident case studies, is recommended. Building and promoting a safety culture through awards programs, internal campaigns, and heightened awareness of the importance of occupational safety is crucial. Improved communication between management and workers regarding K3 policies and procedures through regular meetings, information boards, and digital communication media is necessary. Ensuring the availability and maintenance of safety support facilities, such as personal



protective equipment and first aid stations, must be a priority. Finally, involving all stakeholders, including subcontractors and suppliers, in the company's OSH program can help ensure safety throughout the supply chain.

### REFERENCES

- Agu, O. L. (2016). Work engagement, organizational commitment, self efficacy and organizational growth : A literature review. *Information Impact: Journal of Information and Knowledge Management*, 6(1), 14–29. Retrieved from <https://www.ajol.info/index.php/ijikm/article/view/144583>
- AM, M. A., Helmi, S., Kassymova, G. K., Retnawati, H., Hadi, S., & Istiyono, E. (2022). Effect of job satisfaction on service quality mediated by lecturer performance at state universities. *Materials of International Practical Internet Conference "Challenges of Science,"* (V), 62–71. <https://doi.org/10.31643/2022.08>
- AM, M. A., & Purnama, E. (2024). Exploring Innovative Approaches and Evaluation Techniques in Physics Education at Madrasah Aliyah Negeri. *Proceedings of the 6th International Conference on Current Issues in Education (ICCIE) 2023, Advances in Social Science, Education and Humanities Research*, 20–29. Atlantis Press SARL. [https://doi.org/10.2991/978-2-38476-245-3\\_4](https://doi.org/10.2991/978-2-38476-245-3_4)
- Anuraga, D. F. (2021). Optimalisasi Aplikasi Sistem Manajemen Kinerja (Smk) Online Dalam Rangka Mewujudkan Sumber Daya Manusia (Sdm) Polda Jatim Yang Presisi Di Era Police 4.0. *Greenomika*, 3(2), 106–114. <https://doi.org/10.55732/unu.gnk.2021.03.2.7>
- Aronsson, G., Theorell, T., Grape, T., Hammarström, A., Hogstedt, C., Marteinsdottir, I., ... Hall, C. (2017). A systematic review including meta-analysis of work environment and burnout symptoms. *BMC Public Health*, 17(1), 1–13. <https://doi.org/10.1186/s12889-017-4153-7>
- Bennell, C., Blaskovits, B., Jenkins, B., Semple, T., Khanizadeh, A. J., Brown, A. S., & Jones, N. J. (2020). Promising practices for de-escalation and use-of-force training in the police setting: A narrative review. *Policing*, 44(3), 377–404. <https://doi.org/10.1108/PIJPSM-06-2020-0092>
- Bialek, T. K., & Hagen, M. S. (2022). Cohort-based leadership development for high-potential employees: A model for programmatic design. *Human Resource Development Quarterly*, 33(4), 361–382. <https://doi.org/10.1002/hrdq.21459>
- Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theories and methods*. Boston: Pearson.
- Brockner, J., Flynn, F. J., Dolan, R. J., Ostfield, A., Pace, D., & Ziskin, I. V. (2006). Commentary on “radical HRM innovation and competitive advantage: The Moneyball story.” *Human Resource Management*, 45(1), 127–145. <https://doi.org/10.1002/hrm>
- Contreras, L. F., & Brown, E. T. (2019). Slope reliability and back analysis of failure with geotechnical parameters estimated using Bayesian inference. *Journal of Rock Mechanics and Geotechnical Engineering*, 11(3), 628–643. <https://doi.org/10.1016/j.jrmge.2018.11.008>
- Creswell, J. W., & Clark, V. L. P. (2011). Choosing a mixed methods design. In *Designing and Conducting Mixed Methods Research* (pp. 53–106). California: Sage Publications, Inc.
- Creswell, Jhon W. (2012). Research design. Pendekatan kualitatif. In *Pustaka Pelajar*.
- Creswell, John W. (2012). Educational research: Planning, conducting, and evaluating quantitative

- and qualitative research. In *Pearson*. Boston: PEARSON.
- Creswell, John W. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches* (Six). California: SAGE Publications.
- Figgins, S. G., Smith, M. J., Knight, C. J., & Greenlees, I. A. (2019). A grounded theory of inspirational coach leadership. *Scandinavian Journal of Medicine and Science in Sports*, 29(11), 1827–1840. <https://doi.org/10.1111/sms.13513>
- Fitra, H. A., & Sinatra, F. (2020). The effect of industry 4.0 on the development of micro, small and medium enterprises (MSMEs) Banana Chips in Bandar Lampung. *Jurnal Wilayah Dan Lingkungan*, 8(2), 177–186. <https://doi.org/10.14710/jwl.8.2.177-186>
- Fraenkel, J. R., & Wallen, N. E. (2009). How to design research in education and evaluate. In *McGraw-Hill Higher Education*. Boston.
- Graf, E., Cignacco, E., Zimmermann, K., & Zúñiga, F. (2016). Affective organizational commitment in Swiss nursing homes: A cross-sectional Study. *Gerontologist*, 56(6), 1124–1137. <https://doi.org/10.1093/geront/gnv053>
- Hoboubi, N., Choobineh, A., Kamari Ghanavati, F., Keshavarzi, S., & Akbar Hosseini, A. (2017). The impact of job stress and job satisfaction on workforce productivity in an iranian petrochemical industry. *Safety and Health at Work*, 8(1), 67–71. <https://doi.org/10.1016/j.shaw.2016.07.002>
- Hutomo, A., Marditama, T., Limakrisna, N., Sentosa, I., Lee, J., & Yew, K. (2020). Green Human Resource Management, Customer Environmental Collaboration and the Enablers of Green Employee Empowerment: Enhancing an Environmental Performance. *Dinasti International Journal of Economics, Finance & Accounting (DIJEFA)*, 1(2), 358–372. <https://doi.org/10.38035/DIJEFA>
- Irvan, A. (2018). Analisis pengaruh pelatihan dan kompensasi terhadap kinerja dengan kepuasan sebagai variabel intervening di Hotel Grand Inna Malioboro (Universitas Islam Indonesia; Vol. 53). Universitas Islam Indonesia. Retrieved from <http://www.tfd.org.tw/opencms/english/about/background.html>  
<http://dx.doi.org/10.1016/j.cirp.2016.06.001>  
<http://dx.doi.org/10.1016/j.powtec.2016.12.055>  
<https://doi.org/10.1016/j.ijfatigue.2019.02.006>  
<https://doi.org/10.1016/j.matlet.2019.04.024>
- Jaandar, O., Abdi, E., & Jaafari, A. (2022). Assessment of slope failure susceptibility along road networks in a forested region, northern Iran. *Physics and Chemistry of the Earth*, 128(October), 103272. <https://doi.org/10.1016/j.pce.2022.103272>
- Laberge, M., Vignet, M., & Chatigny, C. (2022). Development of a reflective learning method to support health and safety of adolescents with learning difficulties enrolled in a pre-work practicum. *Ergonomics*. <https://doi.org/10.1080/00140139.2022.2099017>
- Lambert, E. G., Keena, L. D., Haynes, S. H., May, D., & Leone, M. C. (2020). Predictors of job stress among southern correctional staff. *Criminal Justice Policy Review*, 31(2), 309–331. <https://doi.org/10.1177/0887403419829211>
- Landry, A., Jacobs, S., & Newton, G. (2014). Effective use of peer assessment in a graduate level writing assignment: A case study. *International Journal of Higher Education*, 4(1), 38–51. <https://doi.org/10.5430/ijhe.v4n1p38>
- Nunkoo, R., Teeroovengadum, V., Ringle, C. M., & Sunnassee, V. (2020). Service quality and

- customer satisfaction: The moderating effects of hotel star rating. *International Journal of Hospitality Management*, 91(11), 1–15. <https://doi.org/10.1016/j.ijhm.2019.102414>
- Nurlaela Sari, D., Zisca, R., Widyawati, W., Astuti, Y., & Melysa, M. (2023). Pemberdayaan Masyarakat dalam Pencegahan Stunting. *JPKMI (Jurnal Pengabdian Kepada Masyarakat Indonesia)*, 4(1), 85–94. <https://doi.org/10.36596/jpkmi.v4i1.552>
- Osborne, S., & Hammoud, M. S. (2017). Effective employee engagement in the workplace. *International Journal of Applied Management and Technology*, 16(1), 50–67. <https://doi.org/10.5590/ijamt.2017.16.1.04>
- Parent-Lamarche, A., Marchand, A., & Saade, S. (2021). How do work organization conditions affect job performance? The mediating role of workers' well-being. *Journal of Workplace Behavioral Health*, 36(1), 48–76. <https://doi.org/10.1080/15555240.2021.1872382>
- Rachid, Z., Toufik, B., & Mohammed, B. (2019). Causes of schedule delays in construction projects in Algeria. *International Journal of Construction Management*, 19(5), 371–381. <https://doi.org/10.1080/15623599.2018.1435234>
- Romanova, I., & Kudinska, M. (2016). Banking and fintech: A challenge or opportunity? *Contemporary Studies in Economic and Financial Analysis*, 98, 21–35. <https://doi.org/10.1108/S1569-375920160000098002>
- Saks, A. M. (2022). Caring human resources management and employee engagement. *Human Resource Management Review*, 32(3), 100835. <https://doi.org/10.1016/j.hrnr.2021.100835>
- Setyadi, B., Helmi, S., & Hidayat, A. (2022). The influence of employee performance on customer loyalty is mediated by service quality and customer satisfaction. *Journal of Positive School Psychology*, 6(9), 5091–5102. Retrieved from <https://journalppw.com/index.php/jpsp/article/view/13488/8744>
- Siddiqui, D. A., & Sahar, N. (2019). The impact of training & development and communication on employee engagement -a study of banking sector. *Business Management and Strategy*, 10(1), 23. <https://doi.org/10.5296/bms.v10i1.14592>
- Smith, C. L. (2015). How coaching helps leadership resilience: The leadership perspective. *International Coaching Psychology Review*, 10(1), 1–19. Retrieved from [http://hbr.org/2008/03/is-yours-a-learning-organization/ar/1%0Ahttp://www.psychology.org.au/Assets/Files/ICPR-10\\_1.pdf#page=22%0Ahttp://dx.doi.org/10.1016/j.hrnr.2010.07.001%0Ahttps://doi.org/10.1007/s40685-019-0085-7](http://hbr.org/2008/03/is-yours-a-learning-organization/ar/1%0Ahttp://www.psychology.org.au/Assets/Files/ICPR-10_1.pdf#page=22%0Ahttp://dx.doi.org/10.1016/j.hrnr.2010.07.001%0Ahttps://doi.org/10.1007/s40685-019-0085-7)
- Tariq, M. U. (2013). A six sigma based risk management framework for handling undesired effects associated with delays in project completion. *International Journal of Lean Six Sigma*, 4(3), 265–279. <https://doi.org/10.1108/IJLSS-05-2013-0028>
- Tentama, F., Rahmawati, P. A., & Muhopilah, P. (2019). The effect and implications of work stress and workload on job satisfaction. *International Journal of Scientific and Technology Research*, 8(11), 2498–2502.
- Wahyudi, W. (2022). Five components of work motivation in the achievement of lecturer performance. *Scientific Journal of Reflection: Economic, Accounting, Management and Business*, 5(2), 466–473. <https://doi.org/10.37481/sjr.v5i2.528>
- Wahyudi, W., Rozi, A., & Putry, M. (2022). Kompetensi dan kinerja karyawan: Peran moderasi iklim organisasional. *Jurnal Manajemen Maranatha*, 21(2), 165–176.

<https://doi.org/10.28932/jmm.v21i2.4671>

Wedadjati, R. S., & Helmi, S. (2022). Evaluasi Kepuasan Karyawan Berbasis Herzberg's Two Factors Motivation Theory. *Mbia*, 21(3), 246–262. <https://doi.org/10.33557/mbia.v21i3.1777>

Wu, Y. L., & Li, E. Y. (2018). Marketing mix, customer value, and customer loyalty in social commerce: A stimulus-organism-response perspective. *Internet Research*, 28(1), 74–104. <https://doi.org/10.1108/IntR-08-2016-0250>