

The Influence of Education and Training on Labor Productivity in Indonesia

Patricius Danes Permana¹, Lady Larasati², Chelsea Maharani Permata Hati³,
Dania Hellin Amrina⁴

Universitas Pembangunan Nasional "Veteran" Yogyakarta^{1, 2, 3, 4}
Jl. SWK Jl. Ring Road Utara No. 104, Ngropoh, Condongcatur, Kec. Depok,
Kabupaten Sleman, Yogyakarta, 55283
Correspondence Email: danialhellin@upnyk.ac.id
ORCID ID: 0009-0003-4944-3996

ARTICLE INFORMATION

Publication information

Research articles

HOW TO CITE

Permana, P. D., Larasati, L., Hati, C. M. P., Amrina, D. H. (2023). The Influence of Education and Training on Labor Productivity in Indonesia. *Journal of International Conference Proceedings*, 6(6), 369-379.

DOI:

<https://doi.org/10.32535/jicp.v6i6.2705>

Copyright @ 2023 owned by Author(s).
Published by JICP



This is an open-access article.
License: Attribution-Noncommercial-Share Alike (CC BY-NC-SA)

Received: 07 October 2023
Accepted: 06 November 2023
Published: 04 December 2023

ABSTRACT

In the reform era, the role of Human Resources (HR) has become increasingly crucial in various institutions, such as government, BUMN, and companies. Education and training are the main steps in efforts to improve the quality and productivity of human resources. Labor productivity is influenced by education and training which can develop knowledge and skills. Good HR management can be an important factor in the operational success of a company. The productivity of labor plays a crucial role in the economic advancement of a region. This research analyzes the influence of education and training on labor productivity in Indonesia. A literature review was employed as the methodology. The findings indicate a positive and substantial correlation between education, training, and labor productivity. The findings of this research can be utilized by the government to comprehend the significance of education and training in initiatives aimed at boosting labor productivity. Allocations in the education sector can be increased, including formal education and skills training. The younger generation can also play an active role and take advantage of available educational and training opportunities to improve their knowledge and skills, such as taking courses, educational programs, or training that are relevant to their fields of interest.

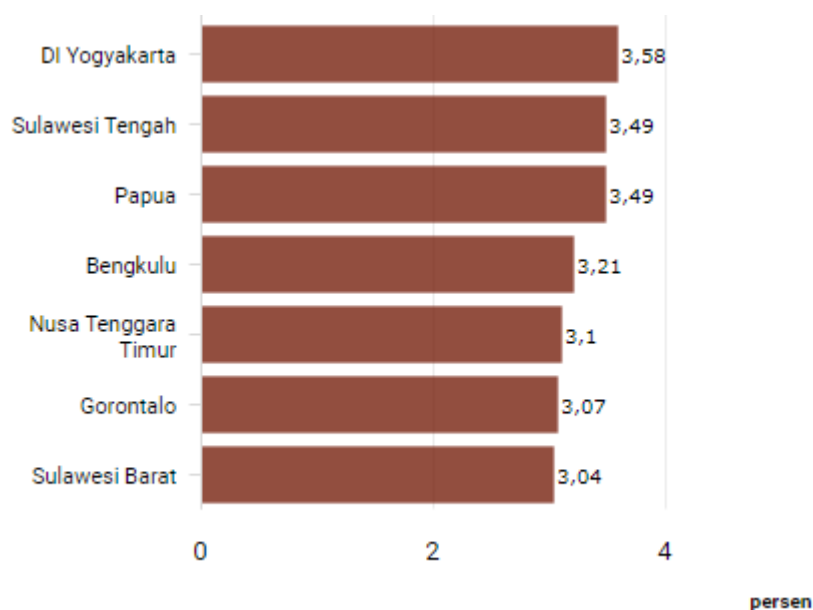
Keywords: Education, Human Resources, Productivity, Training

INTRODUCTION

In the reform era, awareness of the importance of Human Resources (HR) is increasing in all types of institutions, including government, BUMN, and companies. HR has a key role in achieving goals and development. Hence, the success of activities within an institution or organization relies significantly on the human resources role, emphasizing the need for careful consideration of maintenance, development, as well as education and training. Human resources success can be a valuable asset or a threat, depending on how it is managed (Hermanto, 2014).

Education and training are measures aimed at enhancing the competence and skills of human resources, enabling them to efficiently harness existing resources, thereby fostering advancement and prosperity. More specifically, education and training also function as an internal institution for employees to increase their productivity and development (Hermanto, 2014). High-quality education will create a successful nation because the quality of a nation in the eyes of the world is influenced by the level of education in that country. Education is one of the characteristics of a quality nation.

Figure 1. Lowest Open Unemployment Rate in February 2023



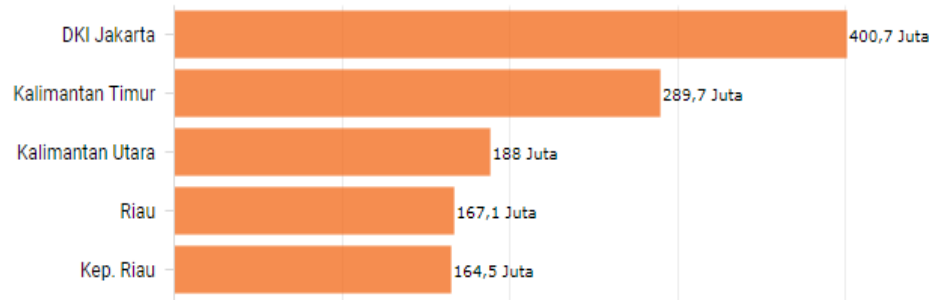
Source: Databoks (Annur, 2023).

According to the data in Figure 1, the open unemployment rate (TPT) in Indonesia, there are seven provinces with the lowest TPT. West Sulawesi is the province with the lowest TPT in February 2023, namely 3.04 percent.

Work productivity is influenced by education and training, which ultimately can increase knowledge and skills. Human resource management must be managed optimally because humans are the main factor in every operational activity of a company. Companies must pay attention to the human resources that drive the production process because the production process can only produce the expected quantity and quality of products. If the workforce has the physical qualities, knowledge, skills, and competencies needed to convert input into production output (Romadon, Syafitri, & Ningrum, 2023).

According to Novran in Isnawati, Herawati, and Kurniawan (2020), the better the human resources you have, the better the results that will be achieved, and vice versa, the lower the human resources, the lower the results achieved. Quality human resources can determine the success of a company, therefore, to be able to control a company, superior human resources are needed which can be obtained from education and training (Apriliana & Nawangsari 2021).

Figure 2. Highest Labor Productivity in 2022



Source: Databoks (Ahdiat, 2023).

Based on the data in Figure 2, DKI Jakarta is the province with the highest labor productivity in 2022, amounting to IDR 400.7 million per worker per year. In second place is East Kalimantan province. The province which is the location of the new national capital (IKN) has a productivity figure of IDR 289.7 million per worker per year. In third place is North Kalimantan which has a productivity figure of IDR 188 million per worker per year. In fourth place is Riau province which has a productivity figure of IDR 167.1 million per worker per year. In fifth place is the Riau Islands province which has a productivity figure of IDR 164.5 million per worker per year (Ahdiat, 2023).

According to the Ministry of Manpower's definition, labor productivity is the ratio between goods/services produced and the labor used, individually or collectively, within a specific timeframe. This ratio reflects the amount of labor's contribution to economic activities. The Ministry of Manpower calculates labor productivity in each province using the formula of gross regional domestic product (GRDP) divided by the number of working people (Satu Data Indonesia, 2023).

The regulations emphasizing the significance of job training can be found in Article 1, paragraph 9 of Law Number 13 of 2003 regarding Employment (UUTK), namely all activities to provide, obtain, improve, and develop work competency, productivity, discipline, attitude, and work ethic. at a certain level of skill and expertise by the level and qualifications of the position or job. The purpose of job training, as outlined in Article 9 of the Manpower Law, is to provide, enhance, and cultivate work competencies with the aim of boosting the skills, productivity, and well-being of the workforce (Susanti, 2014).

A mismatch between the level of abilities possessed by employees in a company can cause a decline in employee performance. The decrease in employee performance may result from the company's neglect of offering suitable education and training initiatives for its staff. Education and training are important aspects of a company because many companies do not survive in business competition. After all, employees do not work effectively. Education and training programs aim to develop and improve employees' abilities in carrying out work tasks and challenges (Endaryono, Juansah, & Nizmah, 2021; Turere, 2013).

This research aims to analyze the determinants of labor productivity using education and training variables in Indonesia using the literature study method. The implications of this research will provide information and also policies for the government.

LITERATURE REVIEW

Education

Developing the human resource capacity of organizations and agencies requires education and training. Providing training is part of the organization's efforts to improve employee skills. Likewise, educational programs or learning missions will contribute to the organization in the future (Siswanto, Firdaus, & Mariana, 2022).

Article 1 of the National Education System emphasizes that education involves a deliberate and organized endeavor aimed at establishing an environment and process for learning. It entails students actively cultivating their potential to attain religious and spiritual strength, self-discipline, personality development, intelligence, noble morals, and the skills required for personal, societal, national, and patriotic needs. From various definitions of education, it can be deduced that education is a purposeful initiative to foster the development of individual potential (Dimas & Simanjuntak, 2017).

Flippo in Hermanto (2014) states that education is defined as something related to increasing general understanding and knowledge about our environment as a whole. Kandou (2013) states that education and training is the process of teaching knowledge, skills and certain attitudes so that employees become more skilled and able to carry out their duties better according to the standard. Education and training are beneficial for employees' long-term careers to help them take on greater responsibilities in the future.

According to Kaswan (2011), it is the process of increasing employee knowledge and skills. Training in an organization/agency begins when a person joins an organization/agency and continues throughout his or her career within that organization, regardless of whether the person is a management or production line employee. Kandou (2013) argues that systematic procedures where employees acquire technical knowledge and skills for a limited purpose. According to Suherman (2018), training and further education are activities carried out by companies to improve and develop attitudes, behavior, and skills so that they are in line with the company's intentions. Education plays a vital role in developing students' knowledge and skills, which in turn create alternative job opportunities (Suryadi & Anggraeni, 2023).

Practice

Job training can prepare workers to prepare their skills, knowledge, and abilities in carrying out work tasks (Fransiskus, 2016). Several experts expressed their opinions about training. Opinion - as follows: The primary objective of training is to enhance short-term performance and competence in specific job roles for employees (Jackson & Schuler, 2000). Training is the process of helping employees develop good habits of thought, behavior, skills, knowledge and attitudes so that they can be more effective in their current or future jobs (Djoa & Arifin, 2022). Training involves imparting specific knowledge and skills in an attitude that makes employees more qualified and able to carry out their duties better by work standards. Training usually refers to the development of job-ready skills as well as fostering the attitudes essential for them to fulfill their duties in accordance with established standards.

According to Elfrianto (2016), there are main reasons why training and development is felt to be increasingly important for every organization. The justification is that training stems from an employee's behavioral response to the organization, aiming to minimize costs. Training is a procedure through which individuals acquire specific capabilities to contribute to organizational objectives. Consequently, this procedure is connected to diverse organizational goals, and the scope of training can be perceived in a narrow or expansive sense. Training is a process of increasing employee knowledge and skills which includes changing attitudes so that employees can do their work more effectively (Kaswan, 2011). Training can take place on the job or in a simulated setting such as a workplace. The training process is focused on job execution and implementation understanding and knowledge in carrying out certain tasks. Generally, the results are What is desired from training is mastery or improvement of skills. Process training is controlled by the owner of the skill being taught or the expert who assists in developing skills through structured experiences (Mangkunegara, 2019).

Enhancing the human resource capabilities of an organization or agency necessitates education and training. Offering training is a component of the organization's initiatives to enhance the proficiency of its staff. Similarly, educational programs or learning missions will add value to the agency in the long run (Hamalik, 2013). Training can also be said to be a program implemented to help employees, both groups and individuals, to increase employee knowledge and skills in carrying out a particular job, so that employees can increase work productivity in the company. Continuing education changes the work organization of employees in such a way that it has an impact on the growth of work productivity, and the training carried out is mostly short-term (Siswanto, Firdaus, & Mariana, 2022).

Thus, it can be said that training is a program implemented to help employees, both groups and individuals, to increase employee knowledge and skills in carrying out a particular job, so that employees can increase work productivity in the company. In-service training is expected to change the way employees work so that it has an impact on increasing work productivity, and the training carried out is mostly short-term (Siswanto, Firdaus, & Mariana, 2022).

Kaswan (2011) and Lestari & Sriathi (2013) assert that training is a method aimed at enhancing the skills and knowledge of employees. It constitutes a brief educational procedure that demands structured and systematic guidelines to ensure non-managerial staff acquire knowledge for specific purposes and acquire technical skills. (Larasati, 2018; Wijaya, 2023). Training is a practical undertaking aimed at ensuring proficiency, capabilities, and excellence. Training is a crucial need for the organizations to have focus on (Alazmi, Rouhaldeen, Alsarraf, Septisuwendani, & Henao, 2019).

Productivity

Productivity is nothing but science, technology, and management. Productivity also includes a philosophy and mental attitude that is always motivated towards self-development towards a better quality of life tomorrow. Productivity is also defined as the level of efficiency in producing goods and services, productivity expresses how to make good use of resources in producing goods. Every organization, whether in the form of a company or otherwise, will always strive so that members or workers involved in organizational activities can provide achievements in the form of high work productivity to realize the stated goals. has been established. The simple definition of productivity is the relationship between the quality produced and the amount of work done to achieve that result. Meanwhile, in general, productivity is the ratio between satisfaction of needs and sacrifices made (Dimas & Simanjuntak, 2017).

Productivity is a measuring tool for companies to assess the work performance achieved by their company's workforce. The concept of productivity in question refers to the quantity of goods and services that can be produced by a worker per hour. Productivity is a comparison of the effectiveness of producing output with the efficiency of using input sources (Manullang, 2020). The productivity ratio is a value measured during a construction project, it can be separated as a portion of labor energy, money materials, methods & tools. The outcome of a construction project hinges on the efficiency of resource management (Djoa & Arifin, 2022).

BPS characterizes labor productivity as the capacity of labor to generate goods and services, expressed as the relationship between output and the labor input that is compensated (Badan Pusat Statistik Kabupaten Situbondo [BPS Kab. Situbondo], n.d.).

Relationship Between Productivity, Education, and Training

The relationship between general education, training, and labor productivity is highly interconnected and mutually supportive. Productivity concerns the mental attitude and behavior of employees or the employees themselves. From the explanation above we can see that productivity is the ratio of input and output achieved at a certain point in time by using available resources efficiently (Fransiskus, 2016).

The test results show that there is a significant influence of simultaneous variables of job training, physical work environment, and motivation on employee work productivity at PT Taspen (Persero) Branch Office Denpasar (Lestari & Sriathi, 2013).

The F test shows that simultaneously the variables Education and Training have a significant effect on work productivity. Results from the significance t-test show that the variables Education and Training partially influence work productivity. This implies that there exists a tangible connection between education and training in work productivity. (Djoa & Arifin, 2022).

Drawing conclusions from the research findings and discourse, it can be summarized as follows: Both education and training variables collectively exhibit a positive and substantial impact on work productivity. When examined individually, the education variable demonstrates a positive yet statistically insignificant influence on work productivity. In the interim, when examining the training variable independently, it demonstrates a noteworthy and positive impact on productivity (Dimas & Simanjuntak, 2017). Training has a beneficial and significant influence on the job performance of employees in the Bappeda office in Makassar City. Likewise, education produces a positive and considerable impact on the work efficiency of staff members in the Makassar city Bappeda office. The collective impact of training and education shapes the overall performance of employees in the Bappeda office in Makassar city (Siswanto, Firdaus, & Mariana, 2022). Based on the results of the analysis that has been carried out, it can be said that accepting the alternative hypothesis, there is a positive and significant influence. Data sources were obtained using two methods, namely, library research and field research. The results of this research show that there is an influence of education and training on productivity (Fransiskus, 2016).

However, based on the results of other research that has been conducted, show that education has no positive and insignificant effect on employee work productivity (Suprpto, 2016). Based on the discussion above, the conclusions obtained in this research are as follows: Training does not have a significant effect on employee productivity. This person was trained by PT Subaindo Cahaya Polintraco is a training program that is generally given and understood by employees, most of whom have worked for more than 5 years (Firdiyanti, 2017). The findings of the research indicate

that alterations in education yield a positive and noteworthy impact on productivity. Conversely, modifications in vocational training do not exhibit a significant influence on productivity. However, both education and vocational training collectively exert a positive influence on a substantial number of workers. In summary, the research results suggest that vocational training does not hold a significant sway on productivity.

The research findings indicate that the employee's level of education does not exert a notable impact on performance (Perdana, 2019). In other words, an enhancement in employee performance is not correlated with their educational level. Indeed, the level of employee education does not guarantee their performance at PT Bank BRI Manado branch (Mandang, Lumanauw, & Walangitan, 2017). Education and training (diktat) do not have a real impact on increasing operational efficiency. This is because employees are not interested in participating in training because training is not a benchmark for work progress that can improve employee performance (Riana, Handriani, & Efni, 2017). The role of training, development, and education is crucial in influencing the mindset, conduct, and effectiveness of employees during periods of change (Viterouli, Belias, Koustelios, & Tsigilis, 2023).

RESEARCH METHOD

This study will primarily investigate how education and training impact productivity. The method used in this research is a literature study to collect theories and concepts in the form of scientific literature and books (Fransiskus, 2016). Literature reviews encompass examinations of theoretical works and other sources relevant to norms, values, and culture evolving within the studied social context. The aim is to gather theories and concepts presented in scientific literature and books (Sugiyono, 2013). Research and Education are the independent variables in this research, while Labor Productivity is the dependent variable in this research.

RESULTS

Training can increase workforce productivity. Education and training for employees show that training has a significant influence on employee work productivity. Therefore, it can be concluded that with effective training, a person can train his talents in such a way that he can develop his talents better in working according to his abilities.

The training will have a direct impact on improving employee performance, thereby influencing the overall performance of the organization/agency. The significant effect of training is evident in its role in molding the effectiveness and efficiency of an organization by helping employees enhance their performance. If a training program can be implemented well by an organization/agency, then the organization, various work groups, and employees will gain many benefits. Therefore, if the training carried out is by needs and achieves goals, it will be possible to increase workforce productivity which will then be much better than before.

The followings are the main findings found.

Effect of Education

Employees with higher education tend to show higher levels of productivity compared to employees with less education. The reason is that with education a person can have broad knowledge and deep understanding, education that is relevant to the field of work will influence employees to be able to contribute more to their work. Education can also shape employees in problem-solving and critical thinking which can be a provision for work.

Effect of Training

Effective training, whether received within the company or outside the company, will have a positive correlation if the training is carried out appropriately and is significant to what is needed by employees which can develop soft skills/hard skills and abilities. The training provided by the company to employees should also be responded to positively by employees because training is created to support employee performance. If the training has been responded to positively and the company has received the best possible training, high work productivity will be created.

Education and Training Synergy

Two good entities, if combined and used simultaneously, will produce a strong synergy in increasing work productivity. Employees with high formal education and receiving training by the company's criteria can use the abilities they have to contribute more to every job they do so that it will produce high labor productivity.

DISCUSSION

The discussion highlights the need to bridge the gap between education and the future job market by adapting education systems to align with changing demands. It also emphasizes the role of training in building a skilled workforce that can meet the challenges of tomorrow. The presented information provides results and discussions on the positive impact of education and training on workforce productivity, demonstrating the importance of both factors and their potential synergy in enhancing employee performance and overall organizational effectiveness.

CONCLUSION

Education and training are important factors that influence labor productivity. Education can improve skills, abilities and knowledge, while training can help develop more specific skills and improve worker performance. Labor productivity is an important factor in regional economic growth. Increasing labor productivity will increase the competitiveness of the regional economy. The findings of this research indicate a positive and important correlation between education, training, and labor productivity. This underlines the importance of investing in education and training as a strategic approach to increasing workforce productivity. However, it is important to acknowledge that there is disparate research, which suggests that education may not consistently increase employee productivity. Therefore, ongoing research and evaluation is essential to better understand the complex relationship between education, training, and workforce productivity. Labor productivity has a direct impact on economic growth. For example, DKI Jakarta, which has a high level of labor productivity, tends to have a larger GRDP. The Employment Law in Indonesia regulates the importance of job training in an effort to increase workforce competency. Therefore, the key to achieving good results in an organization is quality human resource management, education and training help create quality human resources and the provision of job training is an investment that can have a positive impact on improving employee performance. Employees who are competent and skilled in their work contribute to the company's productivity.

Based on the theories and concepts in the form of scientific literature and books that have been collected, the following conclusions can be drawn: (1) Increase Education Funding: The government and related organizations must be able to increase investment in the education sector, including education and skills training. This can of course be achieved with a larger budget allocation and better education programs; (2) Providing Education and Training Programs: Governments and companies must work together to provide education and training programs that meet industry needs. These programs

should be designed to help workers develop skills and knowledge that meet job market demands; (3) Increasing Public Awareness: The public needs to realize the importance of education and training in increasing their productivity, taking part fairly and participating in programs that have been provided by the government and other related organizations; (4) Preparation of Effective Training Programs: Organizations and companies must be able to design effective training programs, which focus on developing the necessary skills and provide sufficient motivation to be able to apply them in the workplace.

Further research is needed to understand other factors that influence labor productivity. With deeper understanding, more effective strategies can be developed. It is hoped that these suggestions will help governments, companies, and individuals create an environment that supports increased workforce productivity through better education and training. With a more skilled and educated workforce, Indonesia will be able to face future economic and industrial challenges.

ACKNOWLEDGEMENT

N/A

DECLARATION OF CONFLICTING INTERESTS

The authors declared no potential conflicts of interest.

REFERENCES

- Ahdiat, A. (2023, April 6). Ini Provinsi dengan Produktivitas Tenaga Kerja Tertinggi pada 2022. *Databoks*. Retrieved from [https://databoks.katadata.co.id/datapublish/2023/04/06/ini-provinsi-dengan-produktivitas-tenaga-kerja-tertinggi-pada-2022#:~:text=Berdasarkan%20data%20Kementerian%20Ketenagakerjaan%20\(Kemnaker,tenaga%20kerja%20tertinggi%20pada%202022.](https://databoks.katadata.co.id/datapublish/2023/04/06/ini-provinsi-dengan-produktivitas-tenaga-kerja-tertinggi-pada-2022#:~:text=Berdasarkan%20data%20Kementerian%20Ketenagakerjaan%20(Kemnaker,tenaga%20kerja%20tertinggi%20pada%202022.)
- Alazmi, S., Rouhaldeen, Y., Alsarraf, A., Septisuwendani, A., & Henao, S. Y. T. (2019). Career hunters: Business analysis and implementation of training programs for the companies and job-seeking customers. *Journal of The Community Development in Asia*, 2(2), 3-11. doi:10.32535/jcda.v2i2.512.
- Annur, C. M (2023, May 5). Ini Provinsi dengan Tingkat Pengangguran Tertinggi Awal 2023. *Databoks*. Retrieved from <https://databoks.katadata.co.id/datapublish/2023/05/05/ini-provinsi-dengan-tingkat-pengangguran-tertinggi-awal-2023>
- Apriliana, S. D., & Nawangsari, E. R. (2021). Pelatihan dan pengembangan sumber daya manusia (SDM) berbasis kompetensi. *Forum Ekonomi*, 23(4), 804-812. doi:10.30872/jfor.v23i4.10155
- Badan Pusat Statistik Kabupaten Situbondo (BPS Kab. Situbondo). (n.d.). Industry. *BPS Kabupaten Situbondo*. <https://situbondokab.bps.go.id/subject/9/industri.html>
- Dimas, P., & Simanjuntak, D. (2017). Pengaruh pendidikan dan pelatihan terhadap produktivitas kerja pada kantor cabang dinas pendidikan Kecamatan Kualuh Hulu Labuhanbatu Utara. *ECOBISMA: Jurnal Ekonomi, Bisnis dan Manajemen*, 4(2), 64-76. doi:10.36987/ecobi.v4i2.88
- Djoa, D. D., & Arifin, Z. (2022). Pengaruh kompensasi, pendidikan dan pelatihan terhadap produktivitas kerja di PT Fermentech Indonesia. *Journal of Management and Industrial Engineering*, 1(1), 12-23.
- Elfrianto, E. (2016). Manajemen pelatihan sumber daya manusia dalam meningkatkan mutu lulusan. *EduTech: Jurnal Ilmu Pendidikan Dan Ilmu Sosial*, 2(2), 46-58. doi:10.30596/edutech.v2i2.596

- Endaryono, B. T., Juansah, A. J., & Nizmah, N. (2021). Pengaruh pendidikan dan pelatihan terhadap peningkatan produktivitas kerja karyawan-karyawati PT Panasonic Gobel Indonesia Jakarta Timur. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 3(1), 88-101. doi:10.47467/alkharaj.v3i1.190
- Firdiyanti, E. (2017). Pengaruh pelatihan dan motivasi terhadap produktivitas kerja karyawan. *Jurnal Ilmu Manajemen*, 5(4), 1-7.
- Fransiskus, V. (2016). Pengaruh pendidikan dan pelatihan dengan produktivitas pegawai pada Kantor Dinas Pekerjaan Umum Provinsi Kalimantan Timur. *Jurnal Ilmu Pemerintahan*, 4(4), 1475–14788.
- Hamalik, O. (2013). *Proses Belajar Mengajar* (15th ed.). Jakarta: Bumi Aksara.
- Hermanto, B. (2014). Pengaruh pendidikan dan pelatihan terhadap produktivitas kerja karyawan pada PT. PLN (Persero) UPJ Ambunten. *PERFORMANCE: Jurnal Bisnis & Akuntansi*, 4(1), 31-38.
- Isnawati, T., Herawati, J., & Kurniawan, I. S. (2020). Pengaruh pendidikan dan pelatihan terhadap produktivitas kerja karyawan bagian produksi pada CV Danagung D'briquettes. *Jurnal Penelitian Ipteks*, 5(2), 210-215. doi:10.32528/ipteks.v5i2.3659
- Jackson, S. E., & Schuler, R. S. (2000). *Managing Human Resources: A Partnership Perspective*. Ohio: Western College Publishing.
- Kandou, E. E. (2013). Pengaruh pelatihan dan pengembangan karyawan terhadap produktivitas kerja karyawan (studi pada PT. Air Manado). *Acta Diurna Komunikasi*, 2(3).
- Kaswan, M. M. (2011). *Pelatihan dan Pengembangan untuk Meningkatkan Kinerja SDM*. Bandung: CV Alfabeta.
- Larasati, S. (2018). *Manajemen Sumber Daya Manusia*. Sleman: Deepublish Publisher.
- Lestari, P. A., & Sriathi, A. A. A. (2013). Pengaruh pelatihan kerja, lingkungan kerja fisik serta motivasi terhadap produktivitas kerja pegawai pada PT. TASPEN (PERSERO) Kantor Cabang Denpasar. *E-Jurnal Manajemen Universitas Udayana*, 1071-1084.
- Mandang, E. F., Lumanauw, B., & Walangitan, M. B. (2017). Pengaruh tingkat pendidikan dan pelatihan terhadap kinerja karyawan pada PT. Bank Rakyat Indonesia (Persero), Tbk Cabang Manado. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 5(3), 4324-4334. doi:10.35794/emba.5.3.2017.18427
- Mangkunegara, A. P. (2019). *Manajemen Sumber Daya Manusia Perusahaan*. Refika Aditama
- Manullang, M. M. (2020). Analisis pengukuran produktivitas dengan menggunakan Metode Mundel dan APC di PT X. *Jurnal Optimasi Teknik Industri*, 2(1), 1-6. doi:10.30998/joti.v2i1.3847
- Perdana, A. (2019). *Pengaruh pendidikan dan pelatihan kerja terhadap produktivitas kerja karyawan pada PT. Bank Sumut Kantor Pusat Di Medan* (Undergraduate thesis). Muhammadiyah Sumatera Utara University, Medan.
- Riana, A., Hendriani, S., & Efni, Y. (2017). Pengaruh pendidikan dan pelatihan, remunerasi dan budaya organisasi terhadap kepuasan kerja dalam meningkatkan kinerja. *Jurnal Psikologi*, 13(2), 98-114.
- Romadon, A. S., Syafitri, L. D., & Ningrum, N. F. (2023). Pengaruh pendidikan dan pelatihan terhadap produktivitas kerja karyawan pada wuryani konveksi. *Jurnal Ilmiah Fokus Ekonomi, Manajemen, Bisnis, & Akuntansi*, 2(01), 11-19. doi:10.34152/emba.v2i01.648
- Satu Data Indonesia. (2023). *Tingkat Produktivitas Tenaga Kerja*. Retrieved from <https://katalog.data.go.id/dataset/tingkat-produktivitas-tenaga-kerja3>
- Siswanto, A., Firdaus, A., & Mariana, L. (2022). Pengaruh pelatihan dan pendidikan terhadap kinerja pegawai pada Kantor Bappeda Makassar. *YUME: Journal of Management*, 5(1), 531-540. doi:10.2568/yum.v5i1.1603

- Sugiyono, D. (2013). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif dan R&D*. Bandung: CV Alfabeta.
- Suherman, U. D. (2018). Pengaruh pendidikan dan pelatihan terhadap kinerja karyawan BNI Syariah Cabang Bandung. *Jurnal Ilmu Sosial dan Ilmu Politik UIN Sunan Gunung Djati Bandung*, 8(2), 433-417. <https://dx.doi.org/10.15575/jispo.v8i2.3799>
- Suprpto, R. (2016). Pengaruh disiplin kerja dan lingkungan kerja terhadap produktivitas kerja karyawan Bank BRI. *Jurnal Istiqro*, 2(2), 104-113.
- Suryadi, N., & Anggraeni, R. (2023). Can entrepreneurship education and personality encourage students to become entrepreneurs?. *Journal of The Community Development in Asia*, 6(2), 35-54. doi:10.32535/jcda.v6i2.2276
- Susanti, E. (2014). Analisa hukum terhadap pemagangan tenaga kerja di daerah kabupaten/kota sebagai regulasi di daerah. *Risalah Hukum*, 10(1) 49-60.
- Turere, V. N. (2013). Pengaruh pendidikan dan pelatihan terhadap peningkatan kinerja karyawan pada Balai Pelatihan Teknis Pertanian Kalasey. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 1(3), 10-19. doi:10.35794/emba.1.3.2013.1368
- Viterouli, M., Belias, D., Koustelios, A., & Tsigilis, N. (2023). Unlocking the Potential: The Game-Changing Impact of Human Resource Training on Integration and Success—Transforming Organizations and Empowering Change. In *Managing Successful and Ethical Organizational Change* (pp. 18-53). Hershey: IGI Global.
- Wijaya, S. (2023). Pentingnya pelatihan dan pengembangan dalam menciptakan kinerja karyawan di era digital. *Analisis*, 13(1), 106-118. doi:10.37478/als.v13i1.2523