

The Influence of Technical Competence on Employee Productivity: A Systematic Review

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ABSTRACT: Technical competence is one of the key factors in improving employee productivity in various industrial sectors. This study aims to systematically analyze the effect of technical competence on employee productivity through a Systematic Literature Review (SLR) approach. A total of 23 journals discussing the relationship between technical competence and employee productivity were analyzed to identify patterns of findings as well as factors that influence the relationship. The results showed that 73.91% of studies stated that technical competence has a significant positive influence on productivity, especially in terms of work efficiency, output quality, and achievement of organizational targets. However, 26.09% of the studies found that the effect was not significant without the support of other factors, such as work motivation, experience, and organizational culture. This study highlights the importance of effective technical training programs as well as the strengthening of moderating factors to improve employee productivity. The implications of this study can serve as a reference for academics and practitioners in developing more optimal human resource management strategies.

Keywords: technical competence, employee productivity, systematic literature review, training, HR management.

INTRODUCTION

In the era of globalization and increasingly fierce business competition, employee productivity is one of the main factors that determine the success of the organization. Employee productivity is influenced by various factors, both those directly related to the individual itself and external factors. Some of the influencing factors include the level of education, skills, discipline attitude, work ethics, motivation nutritional intake and health conditions, income level, social security, as well as environmental conditions and work climate. In addition, technology, production facilities applied management, and work performance also play a role in increasing productivity (Nofriyanti & Kuswanto, 2019). Competence refers to an individual's capacity to carry out tasks or work based on skills, knowledge, and attitudes that are in accordance with the needs of the job (Alfiana Nur Aisyah et al., 2022). Therefore, understanding how technical competencies contribute to employee productivity is a crucial aspect of human resource management strategies.

A number of studies have examined the relationship between technical competence and employee productivity using a variety of approaches, including quantitative, qualitative, and mixed methods. Some studies found that employees with high technical competence are better able to complete work efficiently, produce quality output, and contribute to the achievement of organizational goals. However, some other studies show that technical competence does not always have a significant influence on productivity, especially if it is not supported by other factors such as work motivation, experience, and organizational culture.

This study aims to identify and analyze the effect of technical competence on employee productivity through a Systematic Literature Review (SLR) approach by analyzing 23 related

journals, this study will present empirical findings regarding the relationship between technical competence and employee productivity, as well as identify factors that can moderate or mediate the relationship. The results of this study are expected to provide insights for academics, HR, practitioners and policy makers in designing employee competency development strategies to improve productivity and overall organizational performance.

Through the SLR, approach this study will categorize previous research results based on the methodology used, the variables reviewed, and the main findings obtained. Thus, this study can present a more comprehensive picture of the importance of technical competencies in improving employee productivity, as well as provide recommendations for organizations in designing more effective HR training and development programs.

METHOD

This research uses a Systematic Literature Review (SLR) approach to analyze the relationship between technical competence and employee productivity. SLR was chosen because it can provide a comprehensive and objective picture of the topic under study by collecting, assessing, and integrating relevant research results.

Identification of Relevant Studies

The identification process begins with a search for scientific journals that discuss the relationship between technical competence and employee productivity. In this, the study literature search was conducted through several journal portals using the Google, search engine namely through the sites <https://scholar.google.com/> and <https://sinta.kemdikbud.go.id/>. The keywords used in the search included: "technical competence" and "employee productivity".

Inclusion and Exclusion Criteria

Studies included in this review must meet the following criteria:

1. Inclusion:

- a. Research that discusses the relationship between technical competence and employee productivity.
- b. Studies published in peer-reviewed (journals especially within the last 5 years).
- c. Using a clear and measurable methodology, whether quantitative, qualitative or mixed methods.
- d. Research conducted in relevant industry sectors or organizations.

2. Exclusion:

- a. Studies that do not focus on the relationship between technical competence and productivity.
- b. Research that only discusses general competencies without a clear link to employee productivity.
- c. Articles that are not available in Indonesian or English.

Process Selection and Categorization

After the initial search, relevant journals will be screened based on their title, abstract and methodology. Journals that pass the first stage will be then read in depth to ensure their suitability to the research objectives. Based on the selection results, 23 journals will be selected for further analysis.

Data Analysis

In the analysis stage, the author will categorize the key findings of the selected studies into several categories:

1. **Methodology**

whether the study uses a quantitative, qualitative, or mixed methods approach

2. **Influencing Factors**

What factors were found to play a role in the relationship between technical competence and employee productivity, such as motivation, work experience, and organizational culture.

3. **Key Findings**

significant results on the effect of technical competence on employee productivity, both those that show a positive relationship and those that are not significant.

Synthesis of Findings

The results of the analysis will be synthesized to identify common patterns, similarities, as well as differences that emerge in the reviewed research. This will assist in exploring factors that moderate or mediate the effect of technical competence on employee productivity.

Validity and Reliability

To ensure the reliability and validity of the included studies, the authors will double-check the research methods used by each journal, as well as the consistency in reporting findings. More than one reviewer will be used to enhance objectivity in selection and analysis.

Discussion and Implications

Based on the synthesized findings, the authors will present a discussion of the practical and theoretical implications. This discussion includes recommendations for technical competency development through more focused training programs, as well as how other factors such as motivation and experience can be strengthened to support employee productivity.

Research Limitations

This research is limited to literature available in Indonesian and English and accessible through the mentioned platforms. Addition In, the results of the analysis rely mostly on the findings in the existing literature, so generalization of the results to other industry sectors needs to be done with caution.

Provide with this methodology, it hoped that the research can provide deep insight into the effect of technical competence on employee productivity, as well as practical recommendations that are useful for human resource management in organizations.

RESULTS AND DISCUSSION

Table 1. Systematic Literature Review (SLR):

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
1	Arief, M. Y., & Nisak, M. (2022). The Effect of Work Procedures, Competencies, and Job on Satisfaction Employee Productivity of PG. Asembagoes.	1. Competence 2. Productivity	The approach used is descriptive quantitative by looking at the relationship between variables and cause-and-effect relationships. The research population is PG.	Competency variables have no partial effect on employee work productivity.

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
	<p><i>J-MAS (Journal of Management and Science)</i>, 7(1), 386-392.</p> <p>https://doi.org/10.33087/JMAS.V7I1.349</p>		<p>employeesAsembagoes and for sampling</p> <p>Saturated sampling technique was used, where all members of the population were sampled, namely 40 respondents.</p>	
2	<p>Fahrurrozi, Muh., Murcahyanto, H., & Mohzana, M. (2021).</p> <p>Lecturer Work Productivity Influenced by Competence, Motivation and Work Experience.</p> <p><i>Journal of Administration and Educational Management (ALIGNMENT)</i>, 4(1), 31-42.</p> <p>https://doi.org/10.31539/ALIGNMENT.V4I1.2086</p>	<p>1. Competence</p> <p>2. Productivity</p>	<p>Using a quantitative approach with a correlational method, to ascertain whether there is a bond between 2 or more variables</p> <p>Population, all lecturers of the Faculty of Social Sciences and Economics, totaling 32 lecturers.</p> <p>The sampling method utilized saturated sampling</p>	<p>The work competency variable has a positive and significant influence on productivity</p>
3	<p>Harnawan, S. P., & Hakim, L. (2020).</p> <p>The Effect of Competence, Program Occupational and Health on Safety Work Productivity of Building Division at PT Employees Hutama Karya (Persero).</p> <p><i>Management Economics and Accounting</i>, 1(2), 168-178.</p> <p>https://doi.org/10.37012/ILEKA.V1I2.315</p>	<p>1. Competence</p> <p>2. Productivity</p>	<p>The method used in this research is descriptive research with causality relationship with approach quantitative method and using linear regression analysis techniques assisted with the SPSS .program</p>	<p>The competency variable has effect a partial on employee work productivity</p>
4	<p>Hidayat, L., Sulisty, H., & Erlita, D. (2022).</p> <p>The Influence of Competence and Organizational Culture on the Work ServiceProductivity of the Navy Supply</p> <p><i>JWM (Journal of Management Insights)</i>, 10(1), 34-44.</p> <p>https://doi.org/10.20527/JWMTHEMANAGEMENTINSIGHTJOURNAL.V10I1.198</p>	<p>1. Competence</p> <p>2. Productivity</p>	<p>The data analysis descriptive quantitative research method along with the survey design was determined by the researcher as a reference for conducting</p> <p>The sampling technique used is proportionate stratified random sampling with a total sample of 88 people.</p>	<p>Competence has effect a positive and significant on work productivity</p>
5	<p>Istanti, E., & Hwihanus. (2024).</p> <p>Job Satisfaction as a Mediator of the Impact of Leadership Style, Competence and Motivation on Work at Productivity Cv Abc Mojokerto.</p> <p><i>ECONOMICS45: Scientific Journal of Management, EconomicsBusiness, Entrepreneurship</i>, 11(2), 1146-1162.</p>	<p>1. Competence</p> <p>2. Productivity</p>	<p>The analysis used a quantitative approach.</p> <p>The data used a collection methodology questionnaire with 75 respondents.</p> <p>The population and samples in this were study employees of CV ABC Mojokerto, and the analysis method used software Smart PLS.</p>	<p>Competence has a effect significant on work productivity</p>

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
	https://doi.org/10.30640/EKONOMIKA45.V11I2.2779			
6	Jannah, A., & Nabila, R. (2023). The Effect of Competence and Human Resource on Development Employee Productivity with Religiousness as Moderator. <i>Revenue: Journal of ManagementIslamic Business</i> , 4(2), 137-154. https://doi.org/10.24042/REVENUE.V4I2.15937	1. Competence 2. Productivity	This research was tested using quantitative research methods. The population in this were study all employees of Argotelo Cheese Cassava UMKM, totaling 44 people using the saturated sampling method for sample selection. The data was carried out through collection technique distributing questionnaires or questionnaires Data analysis in this used study Moderate Regression Analysis (MRA) .	Competence has no effect on employee productivity.
7	Kuswibowo, C. (2021). Analysis of the influence of competence, work and motivation career development on teacher work in productivity Islamic educational institutions <i>Journal of Islamic Education and Innovation</i> , 155-166. https://doi.org/10.26555/JIEL.V2I2.4849	1. Competence 2. Productivity	quantitative research approach by testing certain theories or concepts by analyzing the influence or relationship between variables. Respondents in this were study 42 respondents. Instrument The study used a questionnaire The data analysis technique used is the Structural Equation Model (SEM) analysis technique with the Smart-PLS analysis tool	Teacher work competence has effect a positive and significant on teacher productivity
8	Lestari, N. W. F. A., Dewi, I. R., & Kanivia, A. (2021). The Effect of Compensation, Competence, and Motivation on Employee Productivity of PT Jasa Marga (Persero) Tbk. BranchPalikanci . <i>Jayakarta Journal of Management & Business</i> , 3(1), 1-11. https://doi.org/10.53825/JMJBAYAKARTA.V3I1.79	1. Competence 2. Productivity	Methods This research is quantitative with analysis using linear regression with the help of SPSS. This research took sample 58 employee respondents . The retrieval technique with purposive sampling was collected through the instrument questionnaire .	There is a positive and significant influence between the variables compensation, competence, and motivation on the variable productivity.
9	Nofriyanti, E., & Kuswanto, A. (2019). The Effect of Employee Competence, Organizational Culture, Employee Discipline, and Job Satisfaction on Employee Productivity.	1. Competence 2. Productivity	This is research quantitative research causality , testing variables carried out emphasizes the study of theory through variable measurement. The population in this were all study employees at the AgencySemarang Regency	employee competence has a effect positive and significant on employee work productivity.

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
	<p><i>Economic Education Analysis Journal</i>, 8(3), 879-897.</p> <p>https://doi.org/10.15294/EEAJ.V8I3.35005</p>		<p>Regional Personnel , totaling 48 employees who also served as research samples in this study (saturated sample).</p> <p>Data used collection methods observation, interviews, and questionnaires</p> <p>Data analysis using descriptive percentage analysis and analysis multiple linear regression with the help of SPSS 22.</p>	
10	<p>Nuryanto, N., Enggok, M. S., & Abdurrahman, A. (2017).</p> <p>The Effect of Competence on Employee Productivity of the Onei III .Class Port Operator Unit Office</p> <p><i>Administraus</i>, 1(1), 83-96.</p> <p>https://doi.org/10.56662/ADMINIS.TRAUS.V1I1.16</p>	<p>1. Competence 2. Productivity</p>	<p>This hasresearch type of descriptive quantitative research.</p> <p>The population in this were civil servants who study 24 worked at the UPP class III Satui office</p> <p>Of this population, UPT. the sampling will be all civil servants except the leader</p> <p>Thus the sampling sampling (design is a total technique census).</p> <p>Data using collection techniques questionnaires / questionnaires.</p>	<p>Competence affects work productivity</p>
11	<p>Oh, A., & Novita, E. (2016).</p> <p>The Effect of Competence, Motivation, and Job on Satisfaction Employee Productivity at PT. Industry and Trade Bangkinang.</p> <p><i>Procuratio: Scientific Journal of Management</i>, 4(2), 183-193.</p> <p>https://ejournal.pelitaindonesia.ac.id/ojs32/index.php/PROCURATIO/article/view/344</p>	<p>1. Competence 2. Productivity</p>	<p>This uses a research quantitative descriptive method using a technique and documentation.</p> <p>The number of samples was who were 60 respondents employees of the production section of PT. Industry and Trade Bangkinang.</p> <p>The data analysis technique used is analysis multiple linear regression using the t test and F test for hypothesis testing.</p>	<p>Partially , the variable competence does not significant to productivity</p>
12	<p>Prames Berliana Danianta, A. N. A. F. N. P. (2022).</p> <p>The Effect of Experience and Competence on Work . Productivity</p> <p><i>RJABM (Research Journal of Accounting and Business Management)</i>, 5(2), 86-99.</p> <p>https://doi.org/10.31293/RJABM.V5I2.5642</p>	<p>1. Competence 2. Productivity</p>	<p>The research used is quantitative with a survey approach by distributing questionnaires.</p> <p>The total population of this was study 30 respondents, provided that the work is done randomly.</p> <p>The data analysis technique used is multiple regression analysis using the program IBM SPSS Statistics 25 .</p>	<p>Competency variables have no effect on work productivity</p>
13	<p>Pratama, S. A., & Permatasari, R. I. (2021).</p>	<p>1. Competence 2. Productivity</p>	<p>The data analysis method used is associative quantitative.</p>	<p>Competence has effect a partial</p>

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
	<p>The Effect of Implementation of Standard Operating Procedures and Competence on the Employee Productivity of Export Division of PT. Dua Kuda Indonesia.</p> <p><i>M-Progress Scientific Journal</i>, 11(1).</p> <p>https://doi.org/10.35968/M-PU.V11I1.600</p>		<p>The sample in this was study 32 respondents.</p> <p>Sampling is done by using a saturated sampling technique.</p>	and significant on work productivity
14	<p>Rani, F. K. G., Lambey, L., & Pinatik, S. (2018).</p> <p>The Effect of Integrity, Competence, and Professionalism on Employee Productivity in the at PT Bank Accounting Department Mandiri (Persero) Tbk Manado.</p> <p><i>Going Concern: Journal of ResearchAccounting</i> , 13(03).</p> <p>https://doi.org/10.32400/GC.13.03.19942.2018</p>	<p>1. Competence 2. Productivity</p>	<p>This is a research quantitative research causality.</p> <p>Data sources that The data this is primary data. This data is used in research in the form of interviews and administration of questionnaires circulated to employees of the accounting and finance department Bank Mandiri (Persero) Tbk Manado.</p> <p>The sampling technique used is nonprobability sampling. with purposive sampling technique</p>	Competence affects employee work productivity.
15	<p>Riswanto, M. T. A., Ali, S., Supriadi, Y. N., & Husniati, R. (2023).</p> <p>The Effect of Competence and Workload on Employee Productivity with Affective Commitment as a Mediating Variable.</p> <p><i>Metansi Scientific Journal (Management and Accounting)</i>, 6(2), 132-143.</p> <p>https://doi.org/10.57093/METANSI.V6I2.229</p>	<p>1. Competence 2. Productivity</p>	<p>The study used quantitative methods.</p> <p>Data was collected through questionnaires.</p> <p>The population used to be the focus in this were was study 90 employees of the production division of Building B line B3 PT Glostar Indonesia Sukabumi and the population included as a whole. in the sample.</p> <p>The quantitative data analysis technique chosen The researcher is based on statistical methods. data analysis This uses two research types of statistics: descriptive statistics and analysis inferential.</p>	competence has effect a positive and significant to employee productivity.
16	<p>Rohmat, S. (2020).</p> <p>The Effect of Employee Competence and Work on Motivation Work at the CenterProductivity Calibration Aviation Facilities.</p>	<p>1. Competence 2. Productivity</p>	<p>The research used in this is a study form of causal associative research using a quantitative research approach and using statistical formulas through the programSPSS 24.00 computer</p>	Competence has a significant statistical value on the work productivity of BKFP the Ministry

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
	<p><i>Scientific Journal of Reflection: Economic, Accounting, Management and Business</i>, 3(2), 201-210.</p> <p>https://doi.org/10.37481/SJR.V3I2.212</p>		<p>The unit of analysis in this is research employees of the Ministry of Transportation's who are Aviation Facility Calibration Center 50 people in total.</p> <p>The sampling technique uses simple randomization.</p>	of employees of Transportation.
17	<p>Setiarlan, A., & Ahmadun, A. (2020).</p> <p>The Effect of Competence and Transformational Leadership on Employee Productivity of PT Jasa Swadaya Utama.</p> <p><i>Journal of Administration and Management</i>, 10(2), 141-155.</p> <p>https://doi.org/10.52643/JAM.V10I2.1127</p>	<p>1. Competence 2. Productivity</p>	<p>This is a research type of quantitative descriptive research.</p> <p>In this study, sampling using total sampling technique as many as 98 people.</p> <p>The data analysis method uses analysis Structural Equation Modeling- Partial Least Square (SEM-PLS) Smart PLS software version 3.0.</p>	Competence has a effect positive and significant on Work Productivity
18	<p>Setiawan, S. (2018).</p> <p>The Effect of Motivation, Job Training, and Competence on Employee Productivity at PT. Seni Optima Pratama Surabaya.</p> <p><i>Advantage Management Journal of Science</i>, 2(02), 41-50.</p> <p>https://doi.org/10.30741/ADV.V2I02.358</p>	<p>1. Competence 2. Productivity</p>	<p>The method used in this is research quantitative method.</p> <p>The population in this were study all existing employees that is totaling 40 people in the division of production PT. Seni Optima Pratama Surabaya with 37 respondents</p> <p>The data collection techniques and instruments used were observation, questionnaires, and literature study.</p> <p>The analysis method used is the process estimation through a statistical analysis approach that is estimation using the results of analysis multiple linear regression.</p>	Partially (separately) competence has real, and positive influence on employee work productivity.
19	<p>Suherman, E., M. Y., & SyafeiNarimawati, U. (2024).</p> <p>The Effect of Competence on Employee Productivity with Organizational Culture as a Mediating Variable.</p> <p><i>Journal of Aggregation: Government Reform Action in a Democracy</i>, 12(1), 20-36.</p> <p>https://doi.org/10.34010/AGREGASI.V12I1.12585</p>	<p>1. Competence 2. Productivity</p>	<p>This uses a research quantitative descriptive approach.</p> <p>The population in this were study employees of the Regional Water Company Tirta Bhakti Drinking Raharja District Majalengka, with a total of 45 people who were as well as the research sample and were taken with a census sampling technique.</p>	Competence has no effect significant to employee work productivity.

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
			The data in collection tool this was a study questionnaire . Data analysis method used in this is study SEM-PLS second-order approach	
20	<p>Sulistiawati, F., Sukri, S., & Latif, D. (2023).</p> <p>The Effect of Competence and Motivation on Employee Productivity of PT Kasmar Matano Persada.</p> <p><i>SEIKO: Journal of Management & Business</i>, 6(1), 792-799.</p> <p>https://doi.org/10.37531/SEJAMA.N.V6I1.4053</p>	<p>1. Competence 2. Productivity</p>	<p>In this the data study, used by researchers is secondary data. Data the research is quantitative data</p> <p>Data in collection techniques this research also conducted by distributing questionnaires to respondents.</p> <p>The data analysis technique used in this is the research analysis technique Multiple linear regression and to measure (operationalize) research variables, The researcher used a Likert Scale, obtained using program the SPSS .</p> <p>The sample used as respondents was 43 employees of PT Kasmar Matano Persada.</p>	<p>By Partially, competence also has positive a effect significant on work productivity</p>
21	<p>Taek, S., & Assery, S. (2022).</p> <p>The Effect of Compensation, Employee Training and Competence on Work at PT Productivity Matahari Dept Store Artos Mall Magelang.</p> <p><i>Indonesian Journal of Research Accounting and Business</i> , 2(1), 255-269.</p> <p>https://doi.org/10.32477/JRABI.V2I1.436</p>	<p>1. Competence 2. Productivity</p>	<p>The research in this uses using thesis quantitative research primary data.</p> <p>The sample in this study were 50 people who were employees MDS Artos Mall.</p> <p>The data collection method used in this is research with distribution of questionnaires.</p> <p>Data analysis in this was carried out study by analyzing based on statistical methods using statistical calculation tools, namely the classic assumption test.</p>	<p>Competence has a significant influence on employee productivity at MDS Artos Magelang.</p>
22	<p>Uli, T. A., Wira, W., & Dermawan, D. (2018).</p> <p>The Effect of Motivation, Leadership, Competence on Employee Productivity of PT PLN (Persero) Area Tanjungpinang .</p> <p><i>Bahtera Inovasi</i>, 2(1), 50-61.</p> <p>https://doi.org/10.31629/BI.V2I1.1507</p>	<p>1. Competence 2. Productivity</p>	<p>The data analysis method used is analysis quantitative using data, tests quality test sclassical assumption and analysis multiple linear regression.</p> <p>The sample technique using purposive sampling amounted to 74 respondents who were distributed to all permanent employees of PT PLN (Persero) Area Tanjungpinang .</p>	<p>Partially competence does not have a effect significant on employee work productivity</p>

No.	Article (Identity author, year, journal name, edition, DOI if available)	Corresponding Variable	Methodology Used	Research Results
			The types of data used are primary data and data secondary obtained through interviews, distributing questionnaires and studying literature which is measured using a Likert scale and processed with the SPSS22 program.	
23	Wijayanto, S. P., Derriawan, D., & Salim, F. (2021). The Effect of Competence on Work Productivity with Job Satisfaction as a Moderator at Airport I Gusti Ngurah Rai Bali. International <i>Indonesian Journal of Social Technology</i> , 2(02), 292-303. https://doi.org/10.59141/JIST.V2I0.2.90	1. Competence 2. Productivity	This uses a research quantitative approach. The and the data data is done collection technique by survey method used is primary data . The sample size was 240 respondents out of a total of 575 employees. The method used in this research is descriptive statistical analysis method. The statistical method used is Structural Equation Modeling (SEM) .	Competence has a significant effect on work productivity

Research Methods

The SLR table shows that the research methods used in the analyzed studies involved various approaches, such as:

1. Quantitative Approach

Most studies use quantitative methods, such as surveys and statistical data processing, to measure the impact of technical competencies on employee productivity.

2. Qualitative Approach

Some journals use in-depth interviews and case studies to dig deeper into technical competencies.

3. Mixed Method

There are studies that combine quantitative and qualitative approaches to produce a more comprehensive picture.

The majority of journals in this table focus on the use of survey methods, indicating researchers' preference for primary data collection through questionnaires.

Variables Key Reviewed

The research in this SLR table identified two main variables:

1. Technical Competence

This includes specific job-relevant skills, such as IT proficiency, time management, and technical knowledge in the field of work.

2. Employee Productivity

Measured through work output, time efficiency, and the level of achievement of organizational targets.

Research Results

1. Positive Effect of Technical Competence on Productivity

Almost all journals show that technical competence has a significant influence on employee productivity. Employees with high technical competence tend to be more productive, able to complete work faster, and produce better quality work.

2. Supporting Factors

Some studies also highlight that work experience, training, and technological support moderate the relationship between technical competence and productivity.

3. Insignificant Relationship

There are several journals (minority) that mention that the effect of technical competence is not significant if it is not supported by factors such as motivation and job satisfaction.

A. Percentage of Journals that Show a Positive (Significant) : Relationship

Percentage= $(17/23) \times 100 = 73.91\%$

This means that 73.91% of the journals analyzed agreed that technical competence has a significant impact on employee productivity. This suggests that technical competence is considered generally an important factor in improving performance.

B. Percentage of Journals that Show a Negative Relationship (Not Significant) :

Percentage= $(6/23) \times 100 = 26.09\%$

About 26.09% of journals concluded that there was no significant effect. This suggests there are other that factors may moderate the relationship between technical competence and productivity.

Factors that May Affect Different Results

Journals that Show a Positive (Significant) (73.91%) Relationship

Organizational Context:

1. Organizations with good technical training programs are more likely to show a positive relationship.
2. Jobs that heavily rely on technical skills, such as IT or manufacturing, are more affected by technical competencies.

Research Methods:

Studies that use quantitative analysis tend to find significant relationships due to clear and measurable data.

Moderator Variable:

Factors such as motivation, work experience, and organizational culture strengthen the relationship between technical competence and productivity.

Journals that Show Negative (Not Significant) (26.09%) Relationship

Organizational Context:

In more administrative or managerial jobs, technical competencies may not be as important as soft skills or leadership skills.

Variation of Moderator Variables:

Factors such as job satisfaction, motivation, or leadership may have a greater impact than technical competence.

Research Methodology:

Studies with small samples or research designs that do not account for other variables are likely to find insignificant results.

Result Implications

For Organizations:

The majority of studies show the importance of improving employees' technical competencies. programs Relevant technical training should be a priority in HR development to improve productivity.

For Future Research:

1. Further studies are needed to explore organizational contexts where technical competence is not significant, to identify more relevant factors.
2. Focus on mediating and moderating variables, such as work motivation, experience, or managerial support.

HR Policy:

Companies in highly technical sectors (manufacturing, IT, engineering) should pay more attention to technical training. In on the other hand, it sectors may need to be combined with soft skills training.

Study Limitations

Some limitations identified from the journals in the table:

- a. Geographic Range
Most journals focus on a specific region, so generalization of results may be limited.
- b. Variations in Measurement Methods
Not all studies use the same measurement instruments for technical competence and productivity, limiting the consistency of results.

CONCLUSION

Of the 23 studies reviewed, 17 studies (73.91%) showed a significant positive relationship between technical competence and employee productivity, while 6 studies (26.09%) showed a negative or insignificant relationship. Technical competence has been shown to be a key factor in productivity improvement in various sectors, although its effectiveness depends on the match with the job context and organizational support. This study confirms that technical competence is not just an individual attribute, but an organizational strategic asset, which supports target and achievement operational efficiency.

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