

THE INFLUENCE OF WORKLOAD, EDUCATION SKILLS, AND AUTONOMY ON JOB SATISFACTION MODERATED BY DIGITAL SKILLS

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Abstract

The purpose of this study is to identify the effects of workload, education skills, and autonomy on job satisfaction, moderated by digital skills. This research is classified as quantitative research. The population of this study consists of employees at the Central Office of the Ministry of Marine Affairs and Fisheries. The sampling technique used in this study is purposive sampling, resulting in a sample size of 140 employees from the Central Office of the Ministry of Marine Affairs and Fisheries. The data analysis technique employed in this study uses Partial Least Squares (PLS). PLS is a Structural Equation Modeling (SEM) approach. The results show that: 1) Workload has a significant and positive effect on Job Satisfaction; 2) Educational Skill has a significant and positive effect on Job Satisfaction; 3) Autonomy has a significant and positive effect on Job Satisfaction; 4) Digital Skill cannot moderate the effect of Workload on Job Satisfaction; 5) Digital Skill cannot moderate the effect of Educational Skill on Job Satisfaction; and 6) Digital Skill cannot moderate the effect of Autonomy on Job Satisfaction.

Keywords: Workload, Education Skills, Autonomy, Job Satisfaction, Digital Skills

INTRODUCTION

The low job satisfaction among employees at the Ministry of Marine Affairs and Fisheries is caused by various interrelated problems. An unbalanced workload becomes a barrier, where employees face demands that exceed their capacity and available resources, leading to stress and burnout (Zhang et al., 2023). The lack of adequate education and skills makes employees feel incompetent, lowering their confidence and job satisfaction. Additionally, limited autonomy in decision-making makes employees feel they have no control over their work (Mansour & Sharour, 2021). An unsupportive work environment, poor relationships with colleagues or superiors, and a lack of career development opportunities also contribute to dissatisfaction. Difficulty in balancing work demands and personal life adds to the psychological burden, resulting in high levels of dissatisfaction among employees (Schwabe & Castellacci, 2020). Identifying these problems is a crucial step in formulating effective strategies to improve employee job satisfaction, which in turn can enhance the overall productivity and performance of the organization (Kim & Cho, 2020).

Job satisfaction is influenced by several factors, namely workload, education skills, and autonomy. One of the main issues is the often-unbalanced workload, where job demands exceed available capacity and resources, leading to stress and burnout (Salsabilla et al., 2022). Furthermore, insufficient education skills make employees feel unprepared to carry out their tasks, negatively impacting their confidence and job satisfaction (Da'as, 2021). Low levels of autonomy in decision-making also contribute to dissatisfaction, as employees feel they have no control over their work (Jiang et al., 2020). An unsupportive work environment, along with a lack of career development opportunities, adds to the level of dissatisfaction. Lastly, the disruption of work-life balance due to high job demands can lower overall job satisfaction. By understanding these issues, the Ministry of Marine Affairs and Fisheries can design more effective interventions to improve employee job satisfaction, which in turn has a positive impact on organizational productivity and performance (Zhang et al., 2023).

Digital skills play an important role as a moderator in the influence of workload, education skills, and autonomy on job satisfaction. Employees with good digital skills can more effectively manage their workload, utilizing technology to increase efficiency and reduce stress caused by high workloads (Rubach & Lazarides, 2021). Education that includes

digital skills also boosts employees' confidence in applying knowledge, contributing to increased job satisfaction (Fareri et al., 2020). Moreover, employees with strong digital skills tend to gain more autonomy, as they are able to work independently and complete tasks without direct supervision, which enhances motivation and job satisfaction. Thus, digital skills act as an enhancer that strengthens the positive relationship between these factors and job satisfaction, underscoring the importance of developing digital skills in the workplace to improve employee well-being and productivity (Spada et al., 2022).

In this study, the researcher identifies a research gap from previous studies, where the results of those studies support the findings of this research, as shown in Table 1.

Tabel 1
Research Gap

Variabel	Signifikan	Not Significant
Workload on Job Satisfaction	(Chen et al., 2022); (Anggraini et al., 2022); (Havidz et al., 2022)	(Janib et al., 2021); (Gil et al., 2022); (Ekowati et al., 2021)
Education Skills on Job Satisfaction	(Setyanti et al., 2022); (Ramos et al., 2021); (Qin et al., 2023)	(Abatur, 2023); (Yoon et al., 2020); (Chapagain, 2021)
Autonomy on Job Satisfaction	(Kim & Cho, 2020); (Latzke et al., 2021); (Reza & Anindita, 2021)	(Kim, 2021); (Mohite, 2024); (Zychová, 2024)
Workload on Job Satisfaction Moderated by Digital Skills	(Anggraini et al., 2022); (Havidz et al., 2022)	(Gil et al., 2022); (Ekowati et al., 2021)
Education Skills Towards Job Satisfaction Moderated by Digital Skills	(Ramos et al., 2021); (Qin et al., 2023)	(Yoon et al., 2020); (Chapagain, 2021)
Autonomy Towards Job Satisfaction Moderated by Digital Skills	(Kim & Cho, 2020); (Latzke et al., 2021); (Kim, 2021);	(Mohite, 2024); (Zychová, 2024)

Based on the analysis of the relationships between variables such as workload, education skills, and autonomy with job satisfaction, it can be concluded that the findings suggest that the relationship between workload, education skills, and autonomy with job satisfaction is complex and can be influenced by digital skills, making further research necessary to understand the underlying dynamics of this influence more deeply.

The novelty of the research lies in several key aspects. First, this study integrates factors that are often analyzed separately—namely, workload, education skills, and autonomy—into a single analytical model to explore their comprehensive influence on job

satisfaction, which is a central focus of human resource development. Second, theoretically, this research expands the existing framework by including digital skills as a moderating variable, which has not been widely studied in the context of the relationship between these factors and job satisfaction. Third, this study focuses on the Ministry of Marine Affairs and Fisheries, a government agency facing unique challenges in managing employee workload and digital skills, making the findings significantly contribute to human resource management policies in the public sector. The research method, combining a quantitative approach with advanced statistical analysis, enables a more in-depth and accurate examination of the relationships between variables, resulting in reliable and applicable findings. Thus, this study contributes to the development of both theory and practice, offering new insights that can be applied in broader contexts.

Given the dynamic changes in the increasingly complex world of work, especially in the digital era, maintaining employee job satisfaction is a crucial aspect that directly impacts performance, productivity, and employee retention within an organization. This study provides in-depth insights into the factors influencing job satisfaction, enabling organizations to formulate effective strategies for creating a supportive work environment. With the increasing demand for digital skills, it is important to explore the interaction between workload, education skills, and autonomy in contributing to job satisfaction. In the context of the Ministry of Marine Affairs and Fisheries, this research is relevant for addressing the challenges in human resource management within this vital sector, and it offers practical recommendations for improving employee well-being and performance. Thus, this research is highly necessary to understand and manage the factors contributing to job satisfaction in an increasingly digitalized environment.

This study aims to identify the influence of workload, education skills, and autonomy on job satisfaction, as well as how digital skills moderate the relationship between these variables.

REVIEW OF LITERATURE

Workload

Workload refers to the demands placed on an individual in the work environment, measured as a proportion of the individual's capacity to meet those demands, thereby

producing a response in the form of specific performance outcomes (Al-Hakim et al., 2022). It encompasses the total resources utilized compared to the tasks assigned within a certain period, highlighting the balance between the amount of work required and the available resources (Mansour & Sharour, 2021). Furthermore, workload reflects the relationship between an individual's mental capacity to process tasks and the amount of cognitive effort needed to complete them (Galy, 2020). It may also be defined as the total energy expended by a system or an individual in performing tasks that exceed the allotted time (Salsabilla et al., 2022). In essence, workload describes how individuals interact with job demands by expending energy and utilizing available resources. Key indicators of workload include task volume, time spent on tasks, stress levels due to workload, and satisfaction with task distribution.

Education Skills

Educational skills are the competencies necessary to facilitate learning and knowledge acquisition, encompassing the ability to understand, analyze, and apply information across various contexts (Goktas et al., 2022). These skills involve effective time management and self-discipline, enabling individuals to manage workloads, prioritize tasks, and achieve professional objectives within set deadlines (Jankelová & Joniaková, 2021). In addition, they include research proficiency, data analysis, problem-solving capabilities, and the practical application of theoretical knowledge (Schwabe & Castellacci, 2020; Da'as, 2021). Interpersonal and communication abilities are also vital components, involving active listening, empathy, and collaboration within learning or work environments (Castro et al., 2022). Overall, education skills in the workplace represent a comprehensive set of competencies that support task performance and goal attainment. Indicators of these skills include formal education level, participation in training and development, proficiency in technology and digital tools, and research and analytical skills.

Autonomy

Autonomy in the workplace is defined as the extent to which individuals can make decisions related to their work independently, including choosing how to complete tasks without excessive supervision (Jiang et al., 2020). It provides employees with control over their responsibilities, often leading to increased motivation and job satisfaction (Zhang et al., 2023). Autonomy also involves the freedom to express creativity and select methods of task

completion. Research indicates that higher autonomy levels contribute to enhanced innovation and job performance (Liu et al., 2021). Individuals with sufficient autonomy tend to experience a greater sense of responsibility, reduced stress levels, and improved psychological well-being (Sørli et al., 2022; Yang & Jung, 2021). In summary, autonomy is the degree of independence granted to employees in managing their tasks and making work-related decisions. Its indicators include freedom in decision-making, flexibility in scheduling, independence in task execution, and satisfaction with work autonomy.

Job Satisfaction

Job satisfaction is the positive emotional response individuals feel toward their job, influenced by factors such as the work environment, interpersonal relationships, and received rewards (Mansour & Sharour, 2021). The alignment between expectations and actual job experiences significantly affects satisfaction levels; when expectations are met, satisfaction tends to be higher (Schwabe & Castellacci, 2020). Job satisfaction influences employee productivity and retention, as satisfied employees are generally more loyal and engaged, reducing turnover rates (Salsabilla et al., 2022). It consists of cognitive aspects, such as evaluating job conditions, and emotional aspects, which involve feelings derived from work experiences (Zhang et al., 2023). Higher levels of job satisfaction contribute to better mental health, while dissatisfaction may lead to stress and reduced well-being (Yang & Jun, 2021). Thus, job satisfaction reflects the overall contentment employees experience in relation to their roles and work environment. Its indicators include satisfaction with job responsibilities, the work environment, recognition and rewards, and career development opportunities.

Digital Skills

Digital skills represent an individual's ability to utilize digital technologies, software applications, and internet-based tools to perform tasks and achieve objectives in the workplace (Ben et al., 2022). These skills involve accessing, analyzing, and effectively using digital data, which are crucial for decision-making processes in professional settings (Fareh et al., 2020). Digital skills also include collaboration through digital platforms, such as project management and communication tools, which enhance teamwork and efficiency (Spada et al., 2022). Additionally, they encompass cybersecurity knowledge and practices necessary to safeguard sensitive information (Rodríguez-Hevía et al., 2020). The capacity to adapt quickly to technological advancements is also part of digital literacy, ensuring

competitiveness in an evolving workforce (Rubach & Lazarides, 2021). In essence, digital skills enable individuals to navigate and thrive in digitally driven work environments. Their indicators include proficiency in relevant software, information management skills, social media and digital communication capabilities, and data analysis and visualization skills.

Conceptual Framework

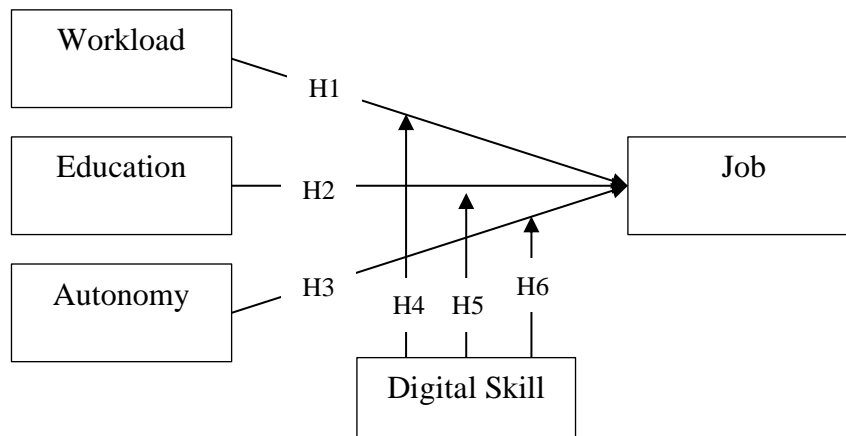


Figure 1.
Conceptual Framework

RESEARCH METHOD

This study falls within the realm of quantitative research. According to Sugiyono (2020), research methods are essentially scientific characteristics aimed at obtaining data for specific purposes and applications. The population and sample in this study comprise employees from the Central Office of the Ministry of Maritime Affairs and Fisheries. The sampling technique employed in this research is purposive sampling, resulting in a sample size of 140 employees from the Central Office of the Ministry of Maritime Affairs and Fisheries. The data analysis technique used in this study is Partial Least Square (PLS). PLS is a Structural Equation Modeling (SEM) model based on a variance or component-based approach. According to Hair et al. (2016), the purpose of PLS-SEM is to develop or build theory (predictive orientation). PLS is used to explain the existence of relationships between latent variables (prediction). PLS is a powerful analytical method because it does not assume data normality with specific scale measurements and is suitable for small sample sizes (Hair et al., 2016).

Validity and Reliability Testing

Validity and reliability testing is conducted to ensure that the measurements used are accurate and reliable. Validity and reliability assessments can be viewed as follows:

First, Convergent Validity is a metric evaluated in relation to the correlation between item/component scores and construct scores, as indicated by standardized loading factors that illustrate the magnitude of correlation between each measured item and its construct. Individual reflective measurements are considered high if they exceed 0.7.

Second, Discriminant Validity is a measurement model assessed based on size and cross-loading construct indices. Discriminant validity compares the root mean square of variance (AVE) extracted; a tool is declared valid if its AVE value exceeds 0.5.

Third, Composite Reliability measures a structure in terms of the latent variable coefficient. In this measurement, if a value greater than 0.70 is achieved, the construct can be said to have high reliability.

Fourth, Cronbach's Alpha is a reliability test designed to reinforce composite reliability results. A variable can be stated as reliable if its Cronbach's alpha value is greater than 0.7.

Instrument Testing

Uji Instrumen	Uji yang digunakan
Uji Validitas	Convergent Validity AVE
Uji Reliabilitas	Cronbach Alpha Composite Reliability

R Square Test

The R-square of the dependent construct is used to analyze the influence of specific independent variables on the latent dependent variable, indicating the magnitude of the effect.

Inner Model Analysis

Inner model analysis, also known as structural model analysis, is a technique for predicting causal relationships between model variables. Hypotheses are tested during the inner model analysis using Smart PLS. The t-statistic value and probability value are used to evaluate the hypotheses. The result of the t-statistic used to test the hypotheses with a statistical value is 1.96 for a 5 percent alpha level, while the beta score is used to determine the direction of the relationship between variables. The acceptance/rejection criteria for the hypotheses are as follows:

Ha: t-statistic > 1.96 with p-value < 0.05.

H0: t-statistic < 1.96 with p-value > 0.05.

RESULTS AND DISCUSSION

Outer Model

Convergent Validity, Discriminant Validity, Composite Reliability, and Cronbach's Alpha are four measurement criteria of the outer model used to evaluate the outer model of the research. The following diagram provides a clearer overview of the theoretical framework of this research:

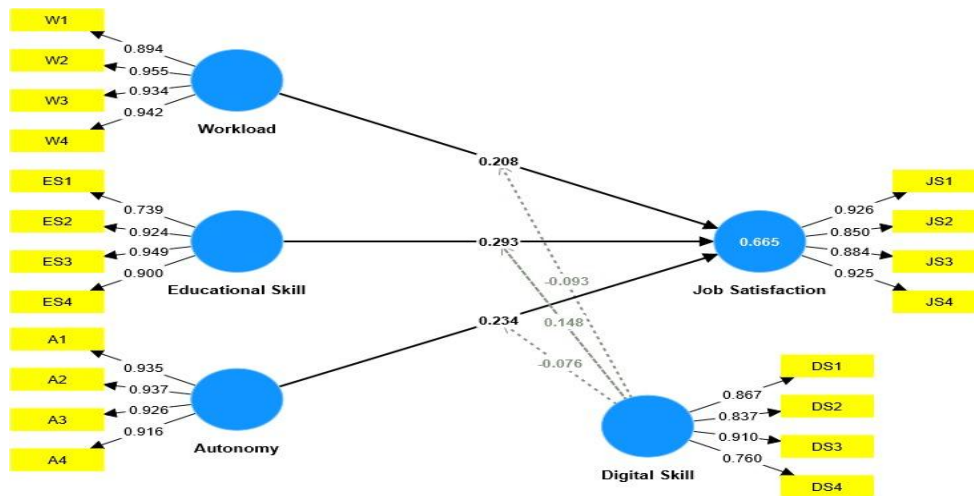


Figure 2
Outer Model

Source: Primary Data Processed (2024)

Based on the image above, it shows that the results of the outer loading measurement on the reflective indicators indicate that most of the research indicators have met the criteria to be used as measurement indicators for the variables, as they have outer loading values greater than 0.7 (outer loading > 0.7). Therefore, all indicators are considered appropriate or valid for use in further research analysis.

Discriminant Validity

Each idea from a latent variable or construct must be distinct from every other latent variable or construct, and this is where Discriminant Validity is used. To obtain the most up-to-date readings, refer to the “Heterotrait-Monotrait Ratio” (HTMT). According to Ghozali (2018), a construct has strong discriminant validity if the HTMT value is below 0.90:

Table 2

Heterotrait – Monotrait Ratio (HTMT)

	Autonomy	Digital Skill	Educational Skill	Job Satisfaction	Workload	Digital Skill x Workload	Digital Skill x Educational Skill	Digital Skill x Autonomy
Autonomy								
Digital Skill	0,723							
Educational Skill	0,709	0,914						
Job Satisfaction	0,754	0,788	0,790					
Workload	0,758	0,704	0,671	0,743				
Digital Skill x Workload	0,081	0,215	0,121	0,202	0,259			
Digital Skill x Educational Skill	0,106	0,313	0,259	0,139	0,128	0,548		
Digital Skill x Autonomy	0,126	0,196	0,124	0,145	0,098	0,604	0,668	

Source: Primary Data Processed (2024)

Based on the table, it can be seen that the HTMT ratios for all variables have HTMT values smaller than 0.9 (HTMT < 0.9), indicating that all variable constructs have good discriminant validity.

Another method for measuring discriminant validity is to look at the value of the "square root of average variance extracted" (AVE). The recommended value is above 0.5 (Ghozali, 2021). Below are the AVE values obtained in this research, presented in the following table:

Table 3.
Average Variant Extracted (AVE)

	Average Variance Extracted (AVE)
Autonomy	0,862
Digital Skill	0,714
Educational Skill	0,778
Job Satisfaction	0,804
Workload	0,868

Source: Primary Data Processed (2024)

Based on the table above, it is known that all research variables have met the standard AVE value above 0.5 (AVE > 0.5). The Autonomy variable has an AVE value of 0.862, the Digital Skill variable has an AVE value of 0.714, the Educational Skill variable has an AVE value of 0.778, the Job Satisfaction variable has an AVE value of 0.804, and the Workload variable has an AVE value of 0.868. The AVE values for each variable have been calculated,

and it can be concluded that all variables with AVE values higher than 0.5 meet the discriminant validity criterion. Thus, each variable has strong discriminant validity.

Composite Reliability

The composite reliability of the indicator block of the construct is the next aspect to be examined. According to Ghozali (2018), a construct is considered reliable if its composite reliability value is greater than 0.70. The findings of the outer model depicting the composite reliability of each construct are as follows:

Table 4.
Composite Reliability

	Composite reliability (rho_a)	Composite reliability (rho_c)
Autonomy	0,948	0,962
Digital Skill	0,881	0,909
Educational Skill	0,912	0,933
Job Satisfaction	0,920	0,943
Workload	0,951	0,963

Source: Primary Data Processed (2024)

The table above shows satisfactory composite reliability results, where the Autonomy variable has a Composite Reliability (rho_a) value of 0.948 and a Composite Reliability (rho_c) value of 0.962. The Digital Skill variable has a Composite Reliability (rho_a) value of 0.881 and a Composite Reliability (rho_c) value of 0.909. The Educational Skill variable has a Composite Reliability (rho_a) value of 0.912 and a Composite Reliability (rho_c) value of 0.933. The Job Satisfaction variable has a Composite Reliability (rho_a) value of 0.920 and a Composite Reliability (rho_c) value of 0.943. The Workload variable has a Composite Reliability (rho_a) value of 0.951 and a Composite Reliability (rho_c) value of 0.963. These results indicate that the composite reliability values for all variables are greater than 0.7, suggesting that this research variable has high reliability.

Cronbach's Alpha

Cronbach's alpha can be used to provide a weight for the composite reliability test mentioned above. If the Cronbach's alpha for a particular variable is greater than 0.7, we can say that the variable is reliable (Ghozali, 2021). The Cronbach's alpha for each variable is presented below.

Table 5.
Cronbach's Alpha

	Cronbach's Alpha
Autonomy	0,947
Digital Skill	0,866
Educational Skill	0,902
Job Satisfaction	0,918
Workload	0,949

Source: Primary Data Processed (2023)

Through the data shown above in Table 4, it can be proven that the Cronbach's alpha value for each research variable is greater than 0.7. Thus, it can be concluded that the reliability of all research variables is good, as they have Cronbach's alpha values above 0.80.

Structural Model Evaluation (Inner Model)

Path Coefficient Test

The path coefficient reveals the relative importance of the association between constructs. The t-test (critical ratio) obtained through the bootstrapping procedure (resampling method) can be used to evaluate the significance of the path coefficients, provided that the sign is consistent with the hypothesized theory. The results of the t-test between the inner and outer models are as follows:

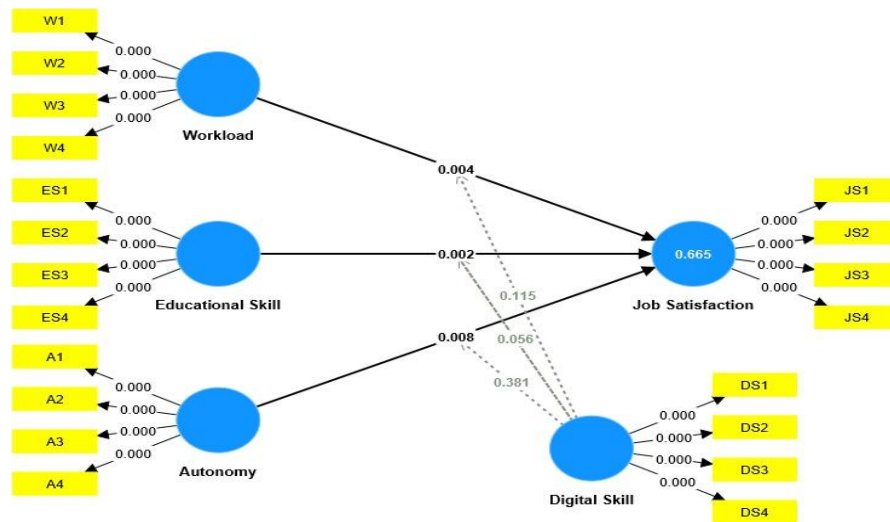


Figure 3.
Inner Model

Source: Primary Data Processed (2024)

The t-test used is derived from the bootstrap sample. Next, we will compare the t-table value with the t-test results shown in the image above.

Table 7.
Hypothesis Test Results

	Original Sample (O)	T Statistics	P Values
Workload -> Job Satisfaction	0,208	2,875	0,004
Educational Skill -> Job Satisfaction	0,293	3,172	0,002
Autonomy -> Job Satisfaction	0,234	2,655	0,008
Digital Skill x Workload -> Job Satisfaction	-0,093	1,578	0,115
Digital Skill x Educational Skill -> Job Satisfaction	0,148	1,909	0,056
Digital Skill x Autonomy -> Job Satisfaction	-0,076	0,877	0,381

Source: Primary Data Processed (2024)

Hypothesis Testing Results

The results of the hypothesis testing can be explained as follows:

Hypothesis H1

The results of the hypothesis testing show that the effect of Workload on Job Satisfaction has a T-statistic value of 2.875 and a P-value of 0.004. The T-statistic value is greater than the T-table value ($2.875 > 1.65597$), and the P-value of 0.004 is less than the alpha standard of 5% ($0.004 < 0.05$), indicating a significant effect of Workload on Job Satisfaction. The positive path coefficient value indicates that the effect of Workload on Job Satisfaction is positive. In other words, an improvement in Workload can enhance Job Satisfaction, or Hypothesis H1 is accepted.

Hypothesis H2

The results of the hypothesis testing show that the effect of Educational Skill on Job Satisfaction has a T-statistic value of 3.172 and a P-value of 0.002. The T-statistic value is greater than the T-table value ($3.172 > 1.65597$), and the P-value of 0.002 is less than the alpha standard of 5% ($0.002 < 0.05$), indicating a significant effect of Educational Skill on Job Satisfaction. The positive path coefficient value indicates that the effect of Educational Skill on Job Satisfaction is positive. In other words, an improvement in Educational Skill can enhance Job Satisfaction, or Hypothesis H2 is accepted.

Hypothesis H3

The results of the hypothesis testing show that the effect of Autonomy on Job Satisfaction has a T-statistic value of 3.172 and a P-value of 0.002. The T-statistic value is greater than the T-table value ($3.172 > 1.65597$), and the P-value of 0.002 is less than the alpha standard of 5% ($0.002 < 0.05$), indicating a significant effect of Autonomy on Job

Satisfaction. The positive path coefficient value indicates that the effect of Autonomy on Job Satisfaction is positive. In other words, an improvement in Autonomy can enhance Job Satisfaction, or Hypothesis H3 is accepted.

Hypothesis H4

The results of the hypothesis testing show that the effect of Workload on Job Satisfaction moderated by Digital Skill has a T-statistic value of 1.578 and a P-value of 0.115. The T-statistic value is less than the T-table value ($1.578 < 1.65597$), and the P-value of 0.115 is less than the alpha standard of 5% ($0.115 < 0.05$), indicating that Digital Skill cannot moderate the effect of Workload on Job Satisfaction. In other words, good Digital Skill does not moderate Workload to enhance Job Satisfaction, or Hypothesis H4 is rejected.

Hypothesis H5

The results of the hypothesis testing show that the effect of Educational Skill on Job Satisfaction moderated by Digital Skill has a T-statistic value of 1.909 and a P-value of 0.056. The T-statistic value is less than the T-table value ($1.909 < 1.65597$), and the P-value of 0.056 is less than the alpha standard of 5% ($0.056 < 0.05$), indicating that Digital Skill cannot moderate the effect of Educational Skill on Job Satisfaction. In other words, good Digital Skill does not moderate Educational Skill to enhance Job Satisfaction, or Hypothesis H5 is rejected.

Hypothesis H6

The results of the hypothesis testing show that the effect of Autonomy on Job Satisfaction moderated by Digital Skill has a T-statistic value of 0.877 and a P-value of 0.381. The T-statistic value is less than the T-table value ($0.877 < 1.65597$), and the P-value of 0.381 is less than the alpha standard of 5% ($0.381 < 0.05$), indicating that Digital Skill cannot moderate the effect of Autonomy on Job Satisfaction. In other words, good Digital skills do not moderate Autonomy to enhance Job Satisfaction, or Hypothesis H6 is rejected.

The Effect of Workload on Job Satisfaction

The results of the hypothesis testing show that the effect of Workload on Job Satisfaction has a T-statistic value of 2.875 and a P-value of 0.004. The T-statistic value is greater than the T-table value ($2.875 > 1.65597$), and the P-value of 0.004 is less than the alpha standard of 5% ($0.004 < 0.05$), indicating a significant effect of Workload on Job Satisfaction. The positive path coefficient value indicates that the effect of Workload on Job

Satisfaction is positive. In other words, an improvement in Workload can enhance Job Satisfaction, or Hypothesis H1 is accepted.

The significant effect of workload on job satisfaction can be seen in how excessive workloads can lead to stress and fatigue, ultimately decreasing employee job satisfaction. When employees feel that the demands of their jobs exceed their capacity, they are likely to experience a decline in motivation and engagement in their tasks. Research shows that an imbalanced workload can result in dissatisfaction, as employees feel less capable of meeting the established expectations, leading to feelings of frustration and helplessness (Al-Hakim et al., 2022). Conversely, a balanced workload that aligns with employees' capacities can enhance feelings of achievement and job satisfaction, encouraging employees to be more productive and loyal to the organization. Therefore, effective management of workload is crucial for improving employee job satisfaction.

The Effect of Educational Skill on Job Satisfaction

The results of the hypothesis testing show that the effect of Educational Skill on Job Satisfaction has a T-statistic value of 3.172 and a P-value of 0.002. The T-statistic value is greater than the T-table value ($3.172 > 1.65597$), and the P-value of 0.002 is less than the alpha standard of 5% ($0.002 < 0.05$), indicating a significant effect of Educational Skill on Job Satisfaction. The positive path coefficient value indicates that the effect of Educational Skill on Job Satisfaction is positive. In other words, an improvement in Educational Skill can enhance Job Satisfaction, or Hypothesis H2 is accepted.

The significant effect of educational skills on job satisfaction is evident in how adequate educational skills can enhance employees' confidence and competence in performing their tasks. Employees who can effectively understand, analyze, and apply knowledge tend to feel more satisfied with their work, as they can meet the challenges they face and achieve the expected goals (Goktas et al., 2022). Moreover, education that includes digital skills and time management enables employees to adapt quickly to the ever-changing job demands, thereby reducing stress and increasing job satisfaction (Jankelová & Joniaková, 2021). Thus, the enhancement of educational skills directly contributes to job satisfaction, as employees feel more empowered and valued in their work environment.

The Effect of Autonomy on Job Satisfaction

The results of the hypothesis testing show that the effect of Autonomy on Job Satisfaction has a T-statistic value of 3.172 and a P-value of 0.002. The T-statistic value is greater than the T-table value ($3.172 > 1.65597$), and the P-value of 0.002 is less than the alpha standard of 5% ($0.002 < 0.05$), indicating a significant effect of Autonomy on Job Satisfaction. The positive path coefficient value indicates that the effect of Autonomy on Job Satisfaction is positive. In other words, an improvement in Autonomy can enhance Job Satisfaction, or Hypothesis H3 is accepted.

The significant effect of autonomy on job satisfaction is reflected in how the level of independence employees have in decision-making regarding their work can enhance their satisfaction and motivation. Employees given greater autonomy to determine how to complete their tasks tend to feel more responsible for their work outcomes, contributing to higher job satisfaction (Jiang et al., 2020). Autonomy allows employees to express creativity and adjust their work methods according to personal preferences, creating a more positive and productive work environment (Zhang et al., 2023). Research also indicates that employees with high levels of autonomy experience lower stress and better mental health, ultimately positively influencing overall job satisfaction (Sørli et al., 2022).

The Effect of Workload on Job Satisfaction Moderated by Digital Skill

The results of the hypothesis testing show that the effect of Workload on Job Satisfaction, moderated by Digital Skill, has a T-statistic value of 1.578 and a P-value of 0.115. The T-statistic value is less than the T-table value ($1.578 < 1.65597$), and the P-value of 0.115 is less than the alpha standard of 5% ($0.115 < 0.05$), indicating that Digital Skill cannot moderate the effect of Workload on Job Satisfaction. In other words, good Digital skills do not moderate Workload to enhance Job Satisfaction, or Hypothesis H4 is rejected.

Digital skills cannot moderate the effect of workload on job satisfaction because although digital skills can help manage workload, it does not necessarily mean it can significantly improve job satisfaction (Ekowati et al., 2021). When the workload is too high and exceeds individual capacity, even with good digital skills, employees will still feel stressed and overwhelmed. Digital skills may improve efficiency, but are not enough to mitigate the negative impact of excessive workload, so the effect of workload on job satisfaction remains significant without moderation from digital skills (Gil et al., 2022).

The Effect of Educational Skill on Job Satisfaction Moderated by Digital Skill

The results of hypothesis testing show that the effect of Educational Skill on Job Satisfaction, moderated by Digital Skill, has a T-statistic value of 1.909 and a P-value of 0.056. The T-statistic value is smaller than the T table ($1.909 < 1.65597$), and the P value is 0.056, which is less than the alpha standard of 5% ($0.056 < 0.05$), indicating that Digital Skill cannot moderate the effect of Educational Skill on Job Satisfaction. In other words, good Digital Skill cannot moderate Educational Skill to enhance Job Satisfaction, or the fifth hypothesis (H5) is rejected.

Digital skills are unable to moderate the effect of educational skills on job satisfaction because mastery of educational skills, such as knowledge and analytical abilities, focuses more on the core competencies of individuals. While digital skills are important, they do not always strengthen this relationship since job satisfaction is more influenced by how individuals apply their knowledge and skills in their work context (Yoon et al., 2020). Even with good digital skills, if an employee's educational skills do not match the job demands, job satisfaction will not significantly improve. Therefore, digital skills do not directly enhance the effect of educational skills on job satisfaction (Chapagain, 2021).

The Effect of Autonomy on Job Satisfaction Moderated by Digital Skill

The results of hypothesis testing show that the effect of Autonomy on Job Satisfaction, moderated by Digital Skill, has a T-statistic value of 0.877 and a P-value of 0.381. The T-statistic value is smaller than the T table ($0.877 < 1.65597$), and the P value is 0.381, which is less than the alpha standard of 5% ($0.381 < 0.05$), indicating that Digital Skill cannot moderate the effect of Autonomy on Job Satisfaction. In other words, good Digital skills cannot moderate Autonomy to enhance Job Satisfaction, or the sixth hypothesis (H6) is rejected.

Digital skills are unable to moderate the effect of autonomy on job satisfaction because, although employees may have good digital skills, this does not always enhance the positive impact of autonomy on job satisfaction. Autonomy generally relates to the individual's freedom to make decisions and manage how they complete tasks (Zychová, 2024). When employees already have a high level of autonomy in their work, the addition of digital skills may not provide significant added value, especially if the tasks do not require complex digital skills. In other words, high autonomy is sufficient to create job satisfaction, so digital skills do not directly strengthen this relationship (Mohite, 2024).

CONCLUSION

Based on the analysis results, it is concluded that: 1) Workload has a significant and positive effect on Job Satisfaction; 2) Educational Skill has a significant and positive effect on Job Satisfaction; 3) Autonomy has a significant and positive effect on Job Satisfaction; 4) Digital Skill cannot moderate the effect of Workload on Job Satisfaction; 5) Digital Skill cannot moderate the effect of Educational Skill on Job Satisfaction; and 6) Digital Skill cannot moderate the effect of Autonomy on Job Satisfaction.

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