(Online) ISSN 2712-0554
Original Research

Heritage and Sustainable Development
Vol. 9 , No. 1, 2027, pp.1-18
https://doi.org/10.37868/hsd.v9 i1.2027

The impact of electronic training on job performance: the mediating role of job satisfaction

Khaled M. K. Alhyasat
Department of Human Resource Management, Military College, Abu Dhabi University, Abu Dhabi, UAE

*Corresponding author E-mail: khaled.alhyasat@adu.ac.ae

Received Mar. 15, 2026
Revised Oct. 7, 2026
Accepted Oct. 13, 2026
Online Oct. 26, 2026

Abstract

The aim of this research is to explore the influence of electronic training (ET) on job satisfaction (JS) as well as job performance (JP) among employees in the banking sector. Furthermore, it aims to determine whether JS mediates the relationship between ET and JP. Data were gathered using a survey distributed to a sample of 320 employees working in Jordanian banks. The current study relied on the structural equation modeling (SEM) approach, with AMOS as the selected software for data analysis. The findings indicate a direct positive effect of (ET) on (JS) ($\beta = 0.547$) and (JP) ($\beta = 0.587$). Furthermore, a positive association exists between (JS) and (JP) ($\beta = 0.349$). An important finding of this research is the recognition of ET and JS as factors that influence JP. The current research responds to existing gaps in the previous literature regarding the influence of electronic training on job performance and the mediating function of job satisfaction among them.

© The Author 2027.
Published by ARDA.

Keywords: E-HRM, E-Training, Job satisfaction, Job performance, Banking in Jordan

1. Introduction

In the contemporary business environment, (ET), (JS), and (JP) have become increasingly important factors in enhancing organizational effectiveness and employee outcomes. Electronic training (ET) provides organizations with flexible and technology-enabled approaches to developing employees' knowledge and skills, while (JS) reflects employees' attitudes towards their work and working environment. (JP), in turn, represents an important indicator of employees' contribution to organizational objectives. Understanding the relationships among these variables is therefore important for organizations seeking to develop effective human resource practices and improve employee and organizational performance. The banking sector is acknowledged as a vital industry that profoundly influences the economic activities of all nations, including Jordan. It is essential for achieving monetary stability, which underpins financial stability and, consequently, economic stability [1]. The banking industry is essential for fortifying the Jordanian economy; the local economy is significantly reliant on this industry, as it is needed to promote economic advancement [2]. Jordanian institutions utilize advanced managerial accounting techniques and maintain high-quality financial reporting. The financial system of Jordan is made up of the Central Bank and all authorized banking institutions within the Hashemite Kingdom. Jordan grants licenses to all commercial, Islamic, as well as foreign banks. All banks, both Jordanian and foreign,

This work is licensed under a Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/) that allows others to share and adapt the material for any purpose (even commercially), in any medium with an acknowledgement of the work's authorship and initial publication in this journal.

operating in Jordan are required to possess a license. Today, companies employ capital maintenance to establish financial records that measure profit [3], [4]. The International Accounting Standards Board (IASB) framework introduces the concept of capital upkeep, offering a distinction between financial and physical capital. The banking industry currently comprises 25 banks, of which 15 are publicly traded on the Amman Stock Exchange. There are 13 commercial banks, comprising 521 branches along with 52 representative offices. Furthermore, there exist three Islamic banks, including 94 branches and 12 representative offices, alongside nine peregrine banks with 48 branches and 7 representative offices [5], [6]. Due to the intense competition in the Jordanian banking sector, improving employee performance is vital for ensuring long-term growth and business prosperity. JP can be conceptualized as the overall productivity of workers in doing assigned activities. This includes fulfilling job requirements and setting up objectives [7]. JP is essential for achieving success since operating without assessing performance is like driving without a dashboard [8]. The emphasis lies on evaluating the suitability of various methods for using ideas and assessing employee performance [9]. Prior research has employed many indicators to assess organizational success. This list encompasses the following variables that are included in this list: gross profit, profitability, return on investment (ROI), return on asset (ROA), return on sale (ROS), return on equity (ROE), market share, revenue growth, sales growth, stock price, liquidity, export growth, as well as operational efficiency [10], [11], [12], [13]. Venkatraman and Ramanujan [9] proposed that researchers employing financial indicators should, in addition, incorporate operational indicators when assessing administrative success. Operational indicators can encompass measurements like new product launches, value-added manufacturing, product quality, and marketing efficacy. Abu-Jarad et al. [14] and Shamout et al. [15] argue that e-HRM offers HR the chance to develop innovative methods that might improve staff performance. Because of this, it is a method that HR professionals may use that is more effective and efficient [16]. ET refers to a type of online learning, and it incorporates multimedia and audio. It is easily viewable using all web browsers [17]. ET is one of the approaches that are employed to improve the effectiveness as well as efficiency of an organizational workforce [17]. Kamal et al. [18] stated that ET may be either done in any place at any moment. In addition, ET has a significant impact on employee performance [19]. Areiqat and Al-doori [20] argued that ET has the potential to enhance the skills as well as abilities of employees. Moreover, ET has also proven to be more beneficial compared to traditional training methods [21]. Spector et al. [22] stated that the definition of JS must involve the overall emotional condition of a person towards his/her job and everything about it. The role of the mediator of the JP of university lecturers was also examined as the influence of a combination of JS and self-efficacy on the mediator, as well as the moderator of the role of leadership support [23]. JS is a basic concept that Herzberg introduced in his motivation-hygiene theory. The theory predicts that many job factors that revolve around worker needs have an influence on JS and dissatisfaction [24]. Moreover, the research conducted by Sethuraman et al. [25] and Alolayyan et al. [26] revealed that ET is a significant contributor to JS. The results of these studies reveal a favorable correlation between aspects of ET and JS. This study focuses on ET's practical influence on JP from JS's viewpoint. Theoretically, this study contributes to the literature by examining the relationships among ET, JS, and JP within an integrated framework. While previous studies have examined training and employee outcomes, this study extends the existing literature by considering JS as a mediating mechanism through which ET may influence JP. By integrating these relationships within the context of the Jordanian banking sector, the study provides further empirical insight into how technology-enabled training can contribute to employee outcomes and extends the application of existing theoretical perspectives to a developing-country context. Thus, the study contributes to a more comprehensive understanding of the mechanisms linking ET with JP. This paper's achievement sections follow this pattern: The following section provides background information about the banking sector in Jordan. Section two provides a comprehensive overview of the relevant literature as well as formulates hypotheses. The model of the study is created also in Section two. Next, section three outlines the methodology used in the study. Section four provides a comprehensive overview of data analysis and results. Section five presents a discussion and interpretation of the study findings. Section six discusses the theoretical implications. Section Sven presents Implications for Practice. Section Eight provides limitations and Future Research. Ultimately, the study presents the Conclusion and findings. The research problem addressed by this

study is the limited understanding of how electronic training influences employees' job performance and whether job satisfaction mediates this relationship among employees in the banking sector.

2. Literature review and hypotheses development

2.1. Theoretical background

This research is grounded in two core theories, Expectancy Theory, and Equity Theory, together to help to explain how electronic training (e-training) influences job performance, indirectly and directly through job satisfaction.

2.1.1. Expectancy theory

According to Expectancy Theory for Vroom **[**27], states that the propensity to perform a specific behavior is contingent upon the intensity of the anticipation that such behavior would lead to a particular consequence, as well as the desirability of that outcome to the individual [28]. Also**,** employees feel motivated when they trust that their effort will result in successful performance, and that performance will lead to desired rewards or outcomes. In this study, e-training enhances employees' belief in their ability to perform tasks well by increasing their knowledge and skills. As a result, they are more motivated, which boosts their JS and ultimately their job performance**.** Expectancy Theory helps explain how e-training strengthens employees' belief in their own effectiveness, leading to improved outcomes [29].

2.1.2. Equity theory

Equity Theory of Adams suggested that people evaluate the effort they put into their work and the rewards they receive with those of others and thereafter act to make up any perceived differences [28]. It emphasizes that employees care deeply about fairness in the workplace. When employees see that e-training opportunities are fairly and equally provided**,** they tend to feel more respected as well as valued by their organization. This perception of fairness increases job satisfaction, which then contributes to higher job performance. Equity Theory, therefore, supports the idea that fair access to e-training leads to more satisfied and productive employees [30].

2.2. Job performance

Job performance, defined as the specific behaviors that enable personnel to attain goals and objectives, is fundamental to organizational success. Based on the definition given by McDaniel et al. [31], JP refers to the power that an employee possesses to carry out their responsibilities and tasks with efficiency and effectiveness within a designated job or assignment. JP is a metric that evaluates how well an employee or worker meets the needs and expectations of their job [32]. Concentrate on their research on JP. Assessing the efficiency with which employees carry out their work responsibilities, activities and evaluating their impact on JS and JP, this subsequently aids in the attainment regarding a company's goals. The study performed by Deng et al. [33] showed that attendance and punctuality are essential factors in job success, emphasizing consistent attendance and timely arrival at work. Persistent absenteeism or consistently late attendance might detrimentally affect JP. According to Kundi et al. [34], Effective communication skills, whether verbal or written, are crucial for JP. Many studies, like those studies conducted by Alonazi [35], link emotional intelligence to JP. This comprises clear communication, active listening, and teamwork. Problem-solving abilities are needed to identify and resolve workplace issues. Problem-solving employees improve their JP. Many occupations demand adaptability and learning new skills or technology. This is particularly true in fast-changing businesses. Many occupations require the ability to work with people and create a healthy team atmosphere. According to Alhooti and Anto [36], McDaniel et al. [31], present Time management to prioritize activities, meet deadlines, and avoid procrastination is crucial to JP. Job success in customer-facing positions depends on meeting client expectations and providing excellent service. Goal accomplishment is achieving or surpassing set goals, targets, or KPIs. According to Kundi et al. [34], KPIs are often used to evaluate employee performance, particularly in sales and other performance-driven roles. Employers evaluate employee performance via regular assessments, feedback,

and performance appraisals. Based on Kundi, et al. [34], JP is important for career progress and success in an organization since performance evaluations may lead to remuneration and promotion. JP also affects workplace morale, security, and happiness.

2.3. Electronic training and job performance

Training is one of the approaches used to improve JP, among others. Training may be conducted in class, online, or by combining both methods. Training programs enhance workers' knowledge, skills, and attitude, impacting JP. Today's organizations adopt ET, virtual meetings, and distant education [18]. According to WOLOR [19] effective ET, also known as e-studying or online training, would improve activity performance and aim to enhance people's practical talents, hence fostering their inventiveness. The research mentioned by Sehgal and Nanda [37] showed that ET can deeply affect JP by providing employees with the opportunity to acquire new competences and information that is useful for their jobs. This enhanced skill set may lead to improved operational efficiency, as staff are more qualified to fulfill their responsibilities successfully. However, many scholars, including Meltem and Birgul [38], believe ET enables workers to access educational resources conveniently from any location with an internet connection. Such a loosely arranged system permits workers to engage in training without disturbing their working hours and, consequently, facilitates easy development of their skills and JP. According to the study conducted by WOLOR [19] ET packages are designed with the specific aim of independent and flexible education, alongside allowing a person to read the content at a comfortable pace. Such an approach can help especially those who require some time to learn some concepts, which results in a deeper cognition of their professional responsibilities. The reason is that, according to a study conducted by Rukia et al. [39], it is possible to deliver the contents continuously, so that all employees get the same training and information. Regarding the results of Sehgal and Nanda [37], consistency can contribute to maintaining the norms and expectations of activities and result in improved overall JP within the organization. Rukia et al. [39] stated that compared to face-to-face courses, ET is less expensive, which can save the company as well as employees money. ET tests and quizzes indicate the understanding of workers. This could be used to identify the areas of their need for additional training. The workers can also take the assistance of ET tools. These can be used in jobs that involve knowledge or approach. According to the research of Sehgal and Nanda [37], it was explained that JP is, overall, better with the help of ET. It lets organizations swiftly update training content and adapt to changing industry standards and technology. Staying updated with industry developments and best practices helps employees perform better. According to Wright and Cropanzano [40], ET may improve JP if the training is effective, the organization does it, and the trainee wants to learn, according to research [36]. E-learning works best when organizations make it relevant and entertaining and encourage people to participate. According to WOLOR [19] and Moradi et al. [40], ET improves JP. The findings of El-Saeed [41] indicated that E-training provides a significant, direct, as well as favorable impact on perceived JP and organizational performance. Thus, the subsequent major hypothesis is anticipated:

H_1: ET has a positive impact on JP.

2.4. Job satisfaction and job performance

Perera and Weerakkody [42] argue that JS is essential for organizations to achieve their intended performance. Hence, to guarantee optimal JP, it is important to cultivate and enhance the competencies, expertise, and proficiency of employees, in conjunction with shared goals. According to the study of Alhyasat [16] JS and JP are tightly intertwined but separate ideas in the domain of organizational psychology and human resources [43]. Both play crucial roles in an individual's professional life, and they possess the capacity to influence each other. Iaffaldano and Muchinsky [44], said JS means that an employee is pleased, satisfied, and fulfilled with their job or work setting. It is a personal way for people to rate how much they enjoy their jobs and different parts of their work life. Based on Jawabri et al. [45] and Judge et al. [46], factors that affect JS include pay and benefits, relationships with coworkers and supervisors, work-life balance, growth and development opportunities, job security, recognition and appreciation, and organizational culture and values. Research indicates a significant correlation between the enjoyment of exercise and performance outcomes. JS are more likely to exercise

superior judgment. The research by Platis et al. [47] revealed a favorable connection between JS and healthcare service performance. Multiple processes explain this relationship: Glad staff are more motivated, engaged, and devoted to painting. This may boost effort and performance. According to WOLOR [19] JS are less likely to quit, minimizing turnover costs and interruptions. Based on Wright and Cropanzano [40], this stability can improve activity overall performance over time because happy, involved workers are more inclined to make an investment in their work and make contributions to their organization. It is important to note that several moderating factors might influence the association between process satisfaction and task performance. According to the research of Vroom [27] and Jawabri et al. [45], activity, personality, and outside factors may all affect this courtship. While there may be a positive association, excessive process joy does not always lead to high process performance. According to (Meltem and Birgul [38] and Platis et al. [47], some people with high activity performance also have high activity enjoyment due to their job fulfillment. In conclusion, a positive link exists between JS and performance; however, this relationship is complex and affected by numerous personal, professional, and environmental factors. According to studies by Jacobs and Solomon [48], companies attempt to boost JS and performance to boost productivity and employee well-being. The outcome of the research undertaken by Wulandari et al. [49] showed that JS influences JP, competency impacts JS, and proficiency impacts JP. In another study conducted by Ariani [50], the results showed that JS is an autonomous factor that does not have a correlation with employee performance. The findings of Li [51] indicated that perceived organizational support directly and indirectly affects (JP) through personality features, self-efficacy, and job satisfaction. According to research by Mumford et al. [52], officers with low to moderate baseline resilience continued to show substantial associations, whereas the correlation between JS as well as performance diminished for law enforcement with high resilience. This hypothesis is derived from the study presented:

H_2: JS has a positive impact on JP.

2.5. Electronic training and job satisfaction

The study by Hameed et al. [53] revealed a meaningful and favorable association between training and both worker productivity and JS. According to WOLOR [19] and Sehgal and Nanda [37], when done well, e-learning, or online training, may boost JS. ET may affect JS in different ways: ET provides workers with new job-related skills, information, and competencies. When employees feel they are continually learning and improving, JS increases. Furthermore, WOLOR [19], Aityassine et al. [54] noted that remote learning permits workers to engage with training resources at their own speed and from various places. This flexibility may reduce the stress of in-person training, improving JS. Training modules may be completed at a reasonable speed and are often self-paced [35]. The study Contributed by Aityassine et al. [54], JS may be enhanced due to autonomy, since it gives them more influence over their learning experience. According to Vroom [27], ET may be cheaper than conventional training, saving organizations money.

Many studies, like Raspopovic and Jankulovic [55], believe that interactive e-learning modules may challenge and engage learners, improving information retention. When they think they understand their obligations, workers may be happier. The research by Parikh and Pirani [56] identified essential aspects affecting JS via the implementation of sustainable training methods. Based on ahmad et al. [32] employees who get electronic instruction may also progress professionally. A clear route for development and progress within the organization may boost JS. According to Vroom [27], ET may help employees work faster and feel more accomplished. Increased JS and performance are often linked. According to Sehgal and Nanda [37], online learning systems commonly include evaluation and feedback. Meaningful performance and progress feedback may boost work satisfaction and motivation. E-learning helps people balance work and life, which boosts JS. This lowers travel and training time and lets workers pick when and where to study. However, the quality of the training, organizational support, and motivation determine whether ET improves JS. According to Raspopovic and Jankulovic [55], learners. Employees may lose interpersonal bonds throughout conventional human and non-human interaction training. If you value face-to-face training, ET may lower work satisfaction. According to Alhooti and Anto [36], organizations should ensure that ET is essential, involved, and supported, and encourage

personnel to offer feedback and be active learners to maximize its benefits to JS. The following hypotheses are suggested:

H_3: ET has a positive impact on job satisfaction.

2.6. Job satisfaction as a mediator between electronic training and job performance

The study carried out by Khan et al. [57] showed that HR-related activities, including training, have a direct and substantial influence on workers' JP. This impact is achieved by cultivating employee ease. The study is estimated to have enhanced the current comprehension of how JS impacts the correlation between ET and JP. Abbas et al. [58] handled the findings and showed a positive as well as transparent relationship between ET and JP. Additionally, the influence of the relationship between training as well as employee performance is significant in relation to the influence of JS. According to the findings of the study conducted by Alshery et al. [59], the meaning of the positive effects of JS as well as training on employee performance is considerable. In the study by Hameed et al. [53]; and Qawasmeh, et al. [60], it is suggested that training as well as employee performance were strongly and positively related. Nyathi and Kekwaletswe [61], discovered that the e-training had a favorable correlation with the results of employees. The correlation between e-training as well as organizational performance has employee performance and JS as mediators. The following hypotheses are proposed:

H_4: JS mediates the relationship between ET and JP.

The conceptual model for the present study was developed after a thorough examination of current and past literature. This research targets to address research gaps by updating past studies and making new contributions to existing knowledge. Specifically, it focuses on the association between ET, JS, and JP at the banking industry in Jordan. Additionally, ensure that the ET is focused on JS. The scarcity of literature on this combination of factors was evident throughout the evaluation of earlier research in this sector. Therefore, this study has used ET, JS, and JP as the main variables in the conceptual framework as shown in Figure 1.

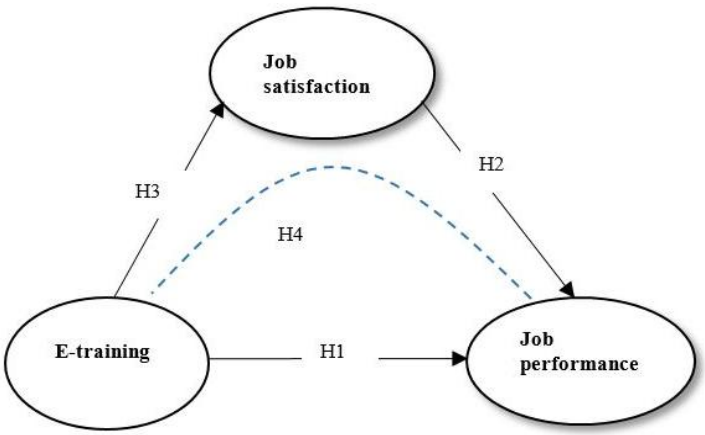


Figure 1. Research model

3. Research method

3.1. Data collection and sampling

This research utilized a cross-sectional questionnaire as the quantitative approach to gather data and analyze the correlation between ET, JS, and JP efficacy and practices in the banking industry of Jordan. The methodology of the research aims to coordinate the gathering and analysis of data to effectively answer research inquiries. Data from workers at banking firms was collected using a straightforward method known as simple random sampling. In this paper, the structural equation model (SEM) is used through the AMOS method to test the hypothesis. AMOS has large-scale applications in Structural Equation Modeling (SEM), which is used in the analysis of measurement models (CFA) as well as structural models simultaneously [62]. It is superior to traditional regression in that it analyzes indirect, direct alongside aggregate impacts of variables. Moreover,

AMOS is best suited to gauge the reliability and validity of constructs as well as ensure that the measurement model is suitable to represent the theoretical framework [63]. AMOS provides a very large number of model fit indices (for example, TLI, CFI, Chi-square, RMSEA), which are vital in assessing the data's model fit. Based on a target population of approximately 3,900 male and female employees in the Jordanian banking sector, a simple random sampling technique was employed to select the study sample. Accordingly, a simple random sampling technique was employed to select the study participants. The sampling frame consisted of eligible male and female employees working in the Jordanian banking sector. Each eligible employee was assigned a unique identification number, and the required sample was selected using a computer-generated random number procedure. This ensured that each employee in the sampling frame had an equal and independent probability of being selected, thereby minimising researcher selection bias. Based on the target population of approximately 3,900 employees, 350 employees were selected to participate in the study, 350 questionnaires were distributed to banking companies' employees in Jordan during this study. The number of questionnaires returned was 330, thereby representing 94% of the questionnaires issued. Out of these, 320 questionnaires were selected for the analysis, indicating a percentage of 96.96%. In addition, the number of questionnaires that were returned and deemed acceptable was 320, above the 200-threshold stated by Hair et al. [64]. The minimal adequate sample size for structural equation modelling in AMOS.

3.2. Measurements and instrument

The questionnaire questions were derived using the existing measuring tools and literature review findings. Upon the release of the first collection of items, an assessment of reliability and validity was conducted via a pilot test. Pilot research is important because it enables us to eliminate unnecessary questions from the questionnaire [65]. The questionnaire has three sections: the cover page, which includes contact information; the respondents' personal information; and the items related to ET, JS, and JP. The focus of this research is on the workers of banking firms in Jordan, where the predominant language spoken is Arabic. The questionnaire was initially developed in English and later translated into Arabic to facilitate comprehension among workers. In addition, Sousa & Rojjanasrirat [66], suggested the use of consecutive translation algorithms. The questionnaire items were assessed using a five-point Likert scale, ranging from strong disagreement to strong agreement. Three main variables will be used in this research, including JS, ET, as well as the dependent variable, JP. This study examines three main variables: electronic training (ET) as the independent variable, job satisfaction (JS) as the mediating variable, and job performance (JP) as the dependent variable. These variables are incorporated into the conceptual framework, research hypotheses, measurement instrument, and subsequent data analysis. The ET content is based on the work of Kamal et al. [18]. The notion of JS is based on the studies of Asghar and Oino [67]. The aspects of JP are based on Pakurar et al. [68]. Appendix A contains the questionnaire items.

4. Data analysis and results

4.1. Respondents' profile

The research sample included 320 employees of various Jordanian banks. In terms of gender distribution, more than half of the respondents (60%) were males and the other (40%) were females. The age range of the largest respondent group (45%) was between 30 and 40 years, and 30 to 25 years. A substantial majority (70%) possessed a bachelor's degree, 20% held a master's degree, while the other 10% had alternative academic or professional qualifications. Regarding job experience, participants reported varying service durations, with 50% indicating 5 to 10 years of experience, while the remaining was spread among different experience categories spanning from 1 year to more than 10 years. This demographic distribution offers a varied and representative basis for examining the influence of (ET) on (JP) via (JS).

4.2. Measurement model

In this study, the SEM was employed to evaluate the measurement as well as structural models. The measurement model illustrates the correlation between the items. The structural model dwells on the relationship

between the unobserved variables, coupled with testing the hypotheses of the study. AMOS was used as a calculative tool to quantify as well as structure the SEM model. The acceptable factor loading of the exploratory factor should be more than 0.50 [68], [63], [69], [64]. A CFA analysis with AMOS demonstrated that the three variables (JS, ET, as well as JP) fit after the deleted items (JP2, JP7, JP8, and ET5) because their factor loadings are less than 0.50, as suggested by Hair et al [64]. In turn, the findings are believed to be appropriate when it comes to the implementation of the measurement model [64]. In addition, Cronbach's alpha, composite reliability, as well as mean variance were calculated using reliability testing. As shown in Table 1, the findings show that the alpha of Cronbach lies between the ranges of 0.860 and 0.901 which is above the accepted alpha of 0.70. Moreover, the composite reliability (CR) test that was performed through AMOS produced results of between 0.845 and 0.896, which are also above the established standard of 0.70. Furthermore, the Average Variance Extracted (AVE) test conducted using AMOS produced results ranging from 0.508 to 0.555, which exceeded the accepted threshold of 0.50. Hence, the outcomes are deemed suitable for the subsequent round of examination.

Table 1. Cronbach-Alpha, AVE, and CR

	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)	Number of Items
JS	0.860	0.896	0.555	7
ET	0.895	0.857	0.508	6
JP	0.901	0.845	0.522	5

Notes: (a) AVE =$\sum\lambda^2/n$ λ = Standardized Factor Loading
n = Number of Items in a Model, (b) CR = $(\sum k)^2/[(\sum k)^2 + (\sum 1\text{-}k^2)]$; k^2 = factor Loading of every Item

The measurement model was estimated via AMOS software, and the outcome is shown in Figure 2. The figure illustrates that the measurement model aligns with the established criterion for loading factors for all items, exceeding 0.50. The average chi-square (CIMN) is 2.038, with 127 degrees of freedom (DF). The model fit indices showed a goodness-of-fit index (GFI) of 0.901, a Tucker-Lewis index (TLI) of 0.943, a comparative fit index (CFI) of 0.953, and a root mean square error of approximation (RMSEA) of 0.062. Discriminant validity was subsequently assessed, with the findings summarized in Table 2.

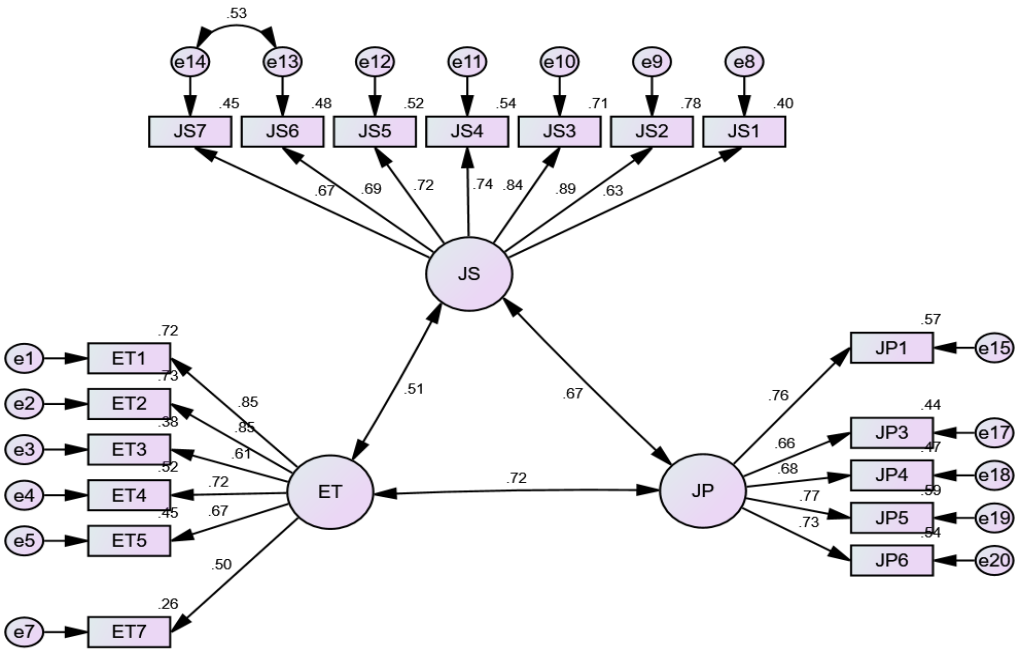


Figure 2. Measurement model

Similarly, discriminant validity was examined to ensure that the measurement items of each construct are distinct from those of the other constructs. The Fornell-Larcker criterion was applied to conduct the test. Evidence of confirmation was obtained when the square root of each construct's Average Variance Extracted

(AVE) was greater than its correlations with other constructs [70]. Table 3 indicates that the discriminant validity findings range from 0.509 to 0.745, all of which fall within the approved range of 0.20 to 0.90. Consequently, these results meet the criteria for acceptance and may proceed to the next stage of research. Assessing the normality of the data is a crucial requirement for using SEM analysis with AMOS. The normality test indicated that the Skewness values varied from -0.138 to -0.907, which is within the acceptable range of ±2. The kurtosis varies from -0.712 to 1.145, which is within the appropriate range of ± 3. Hence, the data follows a normal distribution. The structural equation modeling (SEM) aligns with the measurement model for the specified analysis stage.

Table 2. Discriminant validity

	JS	ET	JP
JS	0.745		
ET	0.718	0.713	
JP	0.674	0.509	0.722

4.3. Structural model

The last phase in the analytical process is the estimation of the structural model. Figure 3 demonstrates that the measurement model is in accordance with the recognized value of factor loading for all items (above 0.50), with a relative chi-square (CIMN) of 2.032, DF (degrees of freedom) = 128, GFI (Goodness of Fit Index) = 0.907, CFI (Comparative Fit Index) = 0.952, TLI (Tucker-Lewis Index) = 0.943, and RMSEA (Root Mean Square Error of Approximation) = 0.061. The coefficient of determination (R^2) was 0.693, indicating that 69.3% of the staffing strategy can be attributed to ET, while the remaining 30.7% may be attributed to other variables not included in this research. The primary goal of this research is to ascertain the hypotheses outlined in Table 3.

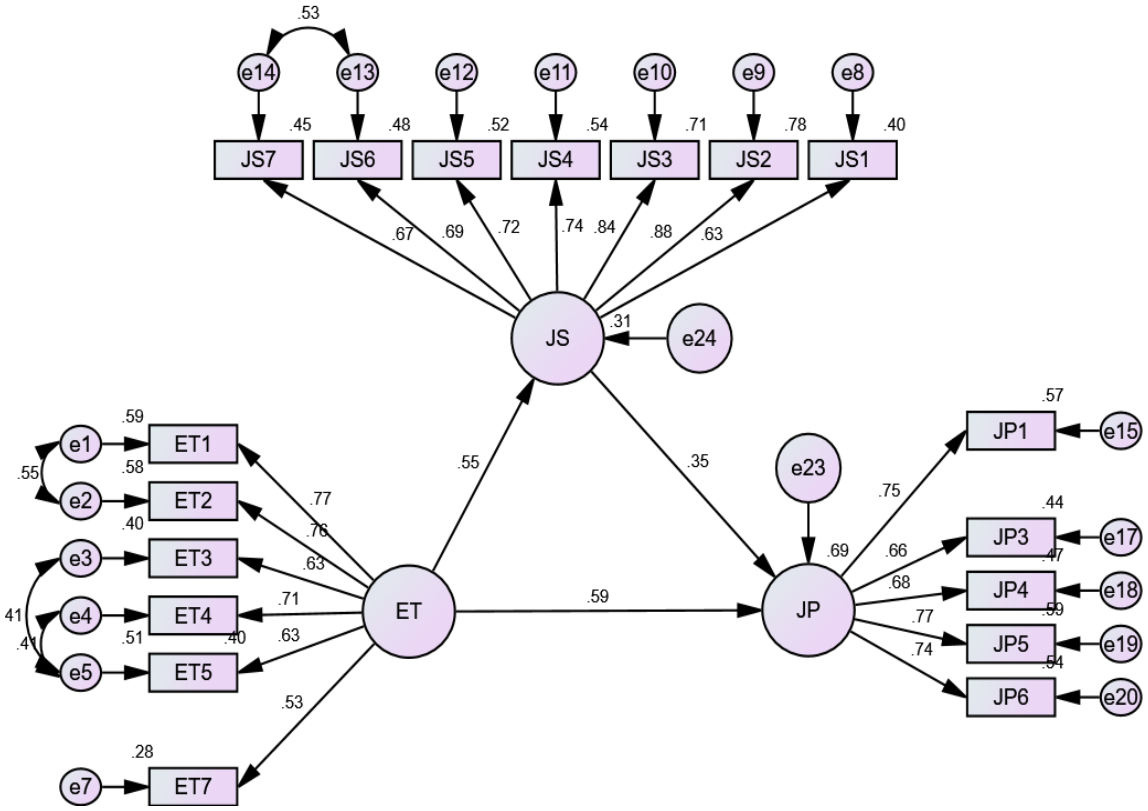


Figure 3. Structural model

The findings from Table 3 illustrate that all hypotheses have been validated, with a P-value of 0.001. The initial hypothesis asserts that ET influences JP inside the banking sector in Jordan. A beta coefficient of 0.587 alongside a p-value of 0.001 substantiates the hypothesis. Hypothesis 2 asserts that JS influences JP within the banking sector in Jordan. The hypothesis is deemed valid with a beta coefficient of 0.349 alongside a p-value

of 0.001. Hypothesis three posits that there is an effect of ET on JS inside the banking industry in Jordan. The hypothesis is accepted with a beta of 0.547 alongside a p-value of 0.001.

Table 3. Results of hypotheses

Hypotheses				Beta	Estimate	S.E.	C.R.	P
H1:	ET	⟶	JP	0.587	0.625	0.105	5.940	0.001
H2:	JS	⟶	JP	0.349	0.404	0.081	5.014	0.001
H3	ET	⟶	JS	0.547	0.766	0.125	6.151	0.001

4.4. Mediating effect

This study adopted the formula proposed by Preacher and Hayes (2008) for testing the JS mediating effect between JP as well as ET. To evaluate the mediating impact, an analysis was undertaken that measured the direct effect without mediation. The outcomes of this examination are evident in Figure 3. Additionally, Table 4 presents a summary of the findings for mediating, as seen in Figures 3. The direct effect without mediation in table (6) is 0.632, with a significant p-value of 0.001. When considering the mediating effect, the value decreases to 0.587 but remains substantial with a p-value of 0.001. Therefore, there exists a partial mediating effect of JS on the correlation between ET and JP.

Table 4. The Mediating Effect of JS on the Relationship between ET and JP

DV=Job Performance (JP) M = Job Satisfaction (JS)	Independent variables (IV) Electronic Training (ET)
Total Effect of IV on DV without M	0. 632*** (0.001)
Direct Effect of IV on DV with M	0.587*** (0.001)
Effect of IV on M	0.547*** (0.001)
Effect of M on DV	0.349*** (0.001)
Indirect Effect of IV on DV through M	0.193*** (0.001)
Mediation Effect	Yes
Degree of Mediation	Partial
Hypothesis Result	Supported(H_3)

Notes: * = Sig. at $p < 0.05$; ** = Sig. at $p < 0.01$; *** = Sig. at $p < 0.001$, (two-tailed)

5. Discussion

This study emphasizes examining the influence of ET on JP. It also aimed to test if JS has any mediating effect on the relationship between them. The findings showed that ET positively affects JP. The studies performed by WOLOR [19] and Alhooti et al. [36], provide evidence that ET improves work performance. Furthermore, it also verifies that ET has a distinct correlation with work performance [37]. Prior studies have shown that ET has a significant as well as beneficial impact on enhancing work performance [40], ET is crucial and impactful for the success of all global organizations. In addition, it also ensures that the content is delivered continually, so all workers receive similar information as well as training tools. Sehgal and Nanda [37] reported that consistency can assist in upholding consistent norms and expectations of activity and will enhance JP within the organization. Such an approach is especially beneficial to individuals who require additional time to understand some concepts and consequently develop a deeper comprehension of their professional tasks, as described by Rukia et al. [39].

The findings also favored the existence of a positive influence of JS on JP. Platis et al. [47] and Iaffaldano and Muchinsky [44], found that organizational psychology as well as human resources are two distinct concepts that are closely related in previous studies. These two factors are crucial in the professional life of any individual and can influence one another. Additionally, it is also worth noting that there is a positive relationship between JS as well as JP. Yet, it is important to realize that this connection is complex and may be affected by several personal, work-related, alongside environmental factors, which various studies have underscored and fortified, including Jacobs et al. [48]. This serves to support the findings of this hypothesis as compared to other studies.

In addition, the results confirmed that ET has a positive influence on JS. Research by WOLOR [19] also revealed that ET made useful proposals to organizations to enhance JS. Moreover, Aityassine et al. [54], found that ET is one of the most notable contributors to the enhancement of JS. The hypothesis testing process shows that ET affects work satisfaction significantly. Therefore, it can be concluded that employee satisfaction is increased by the existence of effective ET among workers [27]. Further studies have revealed the effectiveness of ET in increasing work satisfaction, as evidenced by Raspopovic and Jankulovic [55]. Moreover, the results are consistent with the study Sehgal and Nanda [37], who examined the advantages of ET in the context of occupations that require specialized skills and knowledge. The researchers emphasized that ET could have a positive effect on the overall work performance and can offer employees the possibility to develop new skills.

Lastly, the results showed that JS mediates between ET and JP. In particular, the non-mediated effect of 0.632 with a P-value of 0.001 was shown. Regarding the mediating effect, the value becomes lower at 0.587 and has a significant P-value of 0.001. Therefore, it can be concluded that there is a partial mediating effect of JS on the association between JS as well as JP. The partial effect refers to the direct effect of ET on JP, even when JS serves as a mediator in their interaction. In this case, the influence of ET on JP is enhanced by JS. Thus, hypothesis number four (H4) is confirmed. Earlier studies also indicated that JS and training have meaningful positive impacts on employee performance [59], [53], [60].

6. Theoretical implications

This research examined the connection between JS, JP, and ET, with JS acting as a mediating variable. It provides significant insights into organizational behavior and theories of human resource development. This viewpoint endorses the notion that ET augments employees' knowledge, skills, and confidence, thereby elevating their JS. Social exchange and motivation-hygiene theories suggest that when employees recognize organizational investment in their growth via successful training, they experience increased satisfaction, leading to enhanced commitment and engagement. JS, functioning as a mediating variable, elucidates the indirect impact of ET on JP; it is not alone the acquisition of skills that enhances performance, but rather the heightened satisfaction and drive derived from the learning process. This mediation model enhances current theories by elucidating the psychological mechanisms connecting training and performance, underscoring the significance of employee attitudes in the training-performance relationship. It also encourages additional investigation into how various training modalities, individual variances, and organizational cultures influence this mediating impact.

This research contributes theoretical literature by synthesizing and implementing two existing theories—Expectancy Theory and Equity Theory—within the framework of ET and employee performance in the banking industry of a developing nation. Although these theories are extensively utilized in organizational behavior and human resource management, their integrated application concerning e-training and the mediating influence of work satisfaction is inadequately represented in the current research. This research elucidates the enhancement of employee motivation via the anticipation of favorable results (Expectancy Theory) and examines how perceptions of equity in training accessibility influence satisfaction and performance (Equity Theory), thereby offering a more thorough theoretical framework connecting training to performance outcomes. This study enhances the literature by emphasizing JS as a crucial mediating element, providing fresh insights into the impact of digital learning initiatives on employee outcomes. This research enhances existing theoretical frameworks by demonstrating that the efficacy of e-training is influenced not only by technical skills but also

by psychological and motivational factors, contingent upon employees' perceptions of their value and equity. This is specifically vital in the inadequately studied context of Jordanian banks, in which digital transformation is in progress but not yet fully developed.

7. Implications for practice

This study suggests that banking sector managers should prioritize fostering a supportive work environment that promotes JS through recognition, effective communication, career growth opportunities, and equitable compensation. Enhanced JS results in heightened motivation, less turnover, and improved customer service. Moreover, managers must acknowledge the clear correlation between JS and JP—engaged and content employees are more inclined to achieve performance objectives and contribute to organizational aims. Implementing efficient ET programs is crucial in the rapidly growing banking sector, where digital literacy and compliance mandates are ever shifting. Managers must guarantee that ET is engaging, accessible, and customized to diverse learning types to enhance staff competencies. Continuous assessment and feedback systems must be incorporated into training to evaluate impact and inform enhancement. By synchronizing JS initiatives with performance objectives and utilizing technology for training, managers can cultivate a high-performing, adaptive, and content staff.

8. Limitations and future research

There are many constraints in this research that need attention. Initially, the data collection in the Jordan banking sector was limited to a quantitative method, with no consideration for any qualitative assessment. Therefore, future studies can rely on interviews or focus groups for data collection. Furthermore, the questionnaire was modified from prior studies to align with the study's aims. Consequently, no novel ideas were generated during this investigation. A second constraint is that the data was only gathered from the Jordan banking sector, therefore failing to include other industrial sectors in Jordan, no other nations were included for comparison. Therefore, it is recommended to do more study by addressing the shortcomings. An additional limitation concerns the cross-sectional design of the study, as data were collected at a single point in time. Consequently, the findings may not fully capture changes in the relationships among ET, JS, and JP over time, and causal relationships should therefore be interpreted with caution. Moreover, since the data were collected through a self-administered questionnaire from a single source, the possibility of common method bias cannot be completely excluded. Future studies could address these limitations by adopting longitudinal designs and collecting data from multiple sources, such as employees and supervisors, or by combining self-reported measures with objective indicators of job performance. Future studies could extend the current research model by examining additional mediating or moderating variables, such as employee engagement, organizational commitment, perceived organizational support, digital competence, and organizational culture, to provide a more comprehensive understanding of the mechanisms through which electronic training influences job satisfaction and job performance. Future studies could also examine the proposed relationships across different organizational and cultural contexts to determine whether the findings are consistent across sectors and countries. In addition, comparative studies between public and private organizations could provide further insights into how organizational characteristics influence the effectiveness of electronic training. Finally, future researchers could investigate emerging forms of digital and AI-supported training and their potential effects on employee attitudes and performance, thereby extending the current understanding of technology-enabled learning in organizations.

9. Conclusion

The primary goal of the current research is to evaluate the influence of ET on JS as well as JP within the Jordan banking sector. The hypotheses of the research were examined and tested using structural equation modeling (SEM). The findings validate the support for all four primary research hypotheses. The research outcomes validated the importance of the study framework, whereby the ET model and JS model together explain 69% of JP. The primary theoretical contribution is in the provision and validation of a methodology for assessing the

impact of ET and JS on JP. The results demonstrate the significant impact of ET and JS on predicting JP in the Jordan banking sector, ultimately leading to improved JP. The outcomes are advantageous for both the Jordanian banking sector and the broader Jordanian industrial sector. From a theoretical perspective, this study contributes to the existing literature by providing an integrated explanation of the relationships between ET, JS, and JP. The findings extend previous research by demonstrating the importance of JS as a mediating mechanism linking ET to JP. The study also extends the application of these relationships to the Jordanian banking sector, providing empirical evidence from a developing-country context. Accordingly, the findings strengthen the theoretical understanding of how technology-enabled training may influence employee outcomes and highlight the importance of considering both direct and indirect mechanisms when examining the relationship between ET and JP.

Funding information

No funding was received from any financial organization to conduct this research.

Acknowledgements

The author would like to thank Abu Dhabi University for providing the support and facilities necessary to conduct this research.

Author contribution

The author was responsible for all aspects of the study, including conceptualization, methodology, data collection, analysis, interpretation of results, and writing and revising the manuscript. The author read and approved the final version of the manuscript.

Ethical approval statement

Ethical approval is not applicable for this research.

Informed consent

Informed consent to participate in this study was obtained from all participants. Participation was voluntary, and respondents provided their consent by answering the consent question at the beginning of the survey, without any coercion. Participants were informed about the purpose of the study and assured that their responses would remain confidential and anonymous and would not be disclosed in any manner that could identify them

Declaration of use of AI in the writing process

The author used Grammarly during the preparation of this manuscript to assist with language editing, including grammar, spelling, punctuation, and clarity. The author reviewed and edited the manuscript as necessary and take full responsibility for the content and final version of the manuscript.

References

[1] M. I. Mugableh, E. M. Malkawi, and M. A. Hammouri, “Analyzing the effects of actions followed by the Central Bank of Jordan during COVID-19 pandemic on financial performance of Jordanian banks,” Arab Gulf Journal of Scientific Research, vol. 41, no. 4, pp. 508–517, 2023, https://doi.org/10.1108/AGJSR-09-2022-0189.

[2] T. Filali, “The impact of advanced management accounting methods on the quality of financial reporting: The case of the Jordanian banking system,” Journal of Social Sciences, vol. 6, no. 1, pp. 25–38, 2023, https://doi.org/10.52326/jss.utm.2023.06(1).03.

[3] Central Bank of Jordan, Annual Report 2023. [Online]. Available: https://www.cbj.gov.jo/EBV4.0/Root_Storage/AR/Research/Annual_Report_2023.pdf. Accessed: Sep. 13, 2026.

[4] M. Pakurár, H. Haddad, J. Popp, T. Khan, and J. Oláh, "Supply chain integration, organizational performance and balanced scorecard: An empirical study of the banking sector in Jordan," Journal of International Studies, vol. 12, no. 2, pp. 129–146, 2019, https://doi.org/10.14254/2071-8330.2019/12-2/8.

[5] I. Jianu, I. Jianu, and C. Țurlea, "Measuring the company's real performance by physical capital maintenance," Economic Computation and Economic Cybernetics Studies and Research, vol. 51, no. 1, pp. 37–57, 2017.

[6] H. Y. Aljuhmani and O. L. Emeagwali, "The roles of strategic planning in organizational crisis management: The case of Jordanian banking sector," International Review of Management and Marketing, vol. 7, no. 3, pp. 50–60, 2017.

[7] R. Zeitun, K. S. Abdulqader, and K. A. Alshare, "On the relative efficiency of conventional and Islamic banks: A DEA-window approach," International Journal of Financial Services Management, vol. 6, no. 3, pp. 236–251, 2013, https://doi.org/10.1504/IJFSM.2013.058070.

[8] V. M. Ekowati and F. M. Amin, "The effects of occupational health and safety on employee performance through work satisfaction," in Proc. Int. Conf. Islamic Economics and Business (ICONIES), pp. 242–245, 2018, https://doi.org/10.2991/iconies-18.2019.46.

[9] A. M. M. Alshammari, "The mediating role of organizational innovation in the relationship between strategic planning process and organizational performance in nonprofit organizations in the Kingdom of Saudi Arabia," Ph.D. dissertation, Universiti Teknologi Malaysia, 2015.

[10] N. Venkatraman and V. Ramanujam, "Measurement of business performance in strategy research: A comparison of approaches," Academy of Management Review, vol. 11, no. 4, pp. 801–814, 1986.

[11] E. Segev, "Strategy, strategy-making and performance in a business game," Strategic Management Journal, vol. 8, no. 6, pp. 565–577, 1987, https://doi.org/10.1002/smj.4250080606.

[12] J. A. Parnell and P. Wright, "Generic strategy and performance: An empirical test of the Miles and Snow typology," British Journal of Management, vol. 4, no. 1, pp. 29–36, 1993, https://doi.org/10.1111/j.1467-8551.1993.tb00159.x.

[13] A. S. Thomas and K. Ramaswamy, "Matching managers to strategy: Further tests of the Miles and Snow typology," British Journal of Management, vol. 7, no. 3, pp. 247–261, 1996, https://doi.org/10.1111/j.1467-8551.1996.tb00118.x.

[14] F. A. Gimenez, "The benefits of a coherent strategy for innovation and corporate change: A study applying Miles and Snow's model in the context of small firms," Creativity and Innovation Management, vol. 9, no. 4, pp. 235–244, 2000, https://doi.org/10.1111/1467-8691.00197.

[15] I. Y. Abu-Jarad, N. A. Yusof, and D. Nikbin, "A review paper on organizational culture and organizational performance," International Journal of Business and Social Science, vol. 1, no. 3, 2010.

[16] M. D. Shamout et al., "E-HRM practices and sustainable competitive advantage from HR practitioner's perspective: A mediated moderation analysis," International Journal of Data and Network Science, vol. 6, no. 1, pp. 165–178, 2022, https://doi.org/10.5267/j.ijdns.2021.9.011.

[17] K. M. K. Alhyasat, "Exploring factors influencing employees satisfaction during COVID-19 era: An empirical study on Jordanian telecommunication firms," International Journal of Business Excellence, vol. 30, no. 1, pp. 111–131, 2023, https://doi.org/10.1504/IJBEX.2023.130786.

[18] M. J. Alhooti and M. L. Anto, "The effect of e-training on employee performance of Gulf Petrochemical Industries Company in the Kingdom of Bahrain," IKSP Journal of Innovative Writings, vol. 1, no. 1, pp. 42–52, 2020.

[19] K. B. Kamal, M. Aghbari, and M. Atteia, "E-training and employees' performance: A practical study on the Ministry of Education in the Kingdom of Bahrain," Journal of Resources Development and Management, vol. 18, 2016.

[20] C. W. Wolor, S. Solikhah, N. F. Fidhyallah, and D. P. Lestari, "Effectiveness of e-training, e-leadership, and work life balance on employee performance during COVID-19," The Journal of Asian Finance, Economics and Business, vol. 7, no. 10, pp. 443–450, 2020, https://doi.org/10.13106/jafeb.2020.vol7.no10.443.

[21] A. Areiqat and J. Al-Doori, "The role of electronic training in employee performance development," International Journal of Advances in Management and Economics, vol. 7, no. 6, pp. 10–15, 2018.

[22] F. Ismail, N. Hazwani, and K. Y. S. Kee Mohd Yussof, "The effect of e-training towards employee performance," Research in Management of Technology and Business, vol. 3, no. 1, pp. 207–218, 2022, https://doi.org/10.30880/rmtb.2022.03.01.015.

[23] P. E. Spector et al., "Cross-national differences in relationships of work demands, job satisfaction, and turnover intentions with work–family conflict," Personnel Psychology, vol. 60, no. 4, pp. 805–835, 2007, https://doi.org/10.1111/j.1744-6570.2007.00092.x.

[24] J. X. Zhang, "Exploring the mediating role of job satisfaction and self-efficacy and moderator role of leader support for job performance among lecturers from state-owned universities in Shanxi, China," 2024.

[25] F. Herzberg, "Motivation-hygiene profiles: Pinpointing what ails the organization," Organizational Dynamics, 1974, https://doi.org/10.1016/0090-2616(74)90007-2.

[26] D. Sethuraman, S. Parveen Banu, V. Kavitha, S. Anuradha, R. K. Modi, and C. Sathiyamoorthy, "An empirical study of E-HRM on job satisfaction," Journal of Research Administration, vol. 5, no. 2, pp. 1015–1028, 2023.

[27] M. N. Alolayyan et al., "Electronic HR practices as a critical factor of employee satisfaction in private hospitals in Jordan," in The Effect of Information Technology on Business and Marketing Intelligence Systems. Cham, Switzerland: Springer International Publishing, pp. 1009–1025, 2023, https://doi.org/10.1007/978-3-031-12382-5_54.

[28] V. H. Vroom, "Ego-involvement, job satisfaction, and job performance," Personnel Psychology, vol. 15, no. 2, pp. 159–177, 1962, https://doi.org/10.1111/j.1744-6570.1962.tb01858.x.

[29] S. P. Robbins and T. A. Judge, Organizational Behavior. Pearson, 2009.

[30] D. Howe and A. Soderberg, "The court of theories: A debate-style exercise for teaching motivation theories," Organization Management Journal, 2025, https://doi.org/10.1108/OMJ-06-2023-1891.

[31] G. A. E. Suranata, I. G. Riana, I. Dewi, and I. B. K. Surya, "Perceived organizational justice, organizational commitment, and employee performance in the public sector: Disclose the power of fairness," Quality—Access to Success, vol. 26, no. 207, 2025.

[32] M. A. McDaniel, F. L. Schmidt, and J. E. Hunter, "Job experience correlates of job performance," Journal of Applied Psychology, vol. 73, no. 2, pp. 327–330, 1988, https://doi.org/10.1037/0021-9010.73.2.327.

[33] I. Ahmed, I. Sultana, S. K. Paul, and A. Azeem, "Employee performance evaluation: A fuzzy approach," International Journal of Productivity and Performance Management, vol. 62, no. 7, pp. 718–734, 2013, https://doi.org/10.1108/IJPPM-01-2013-0013.

[34] H. Deng, S. X. Duan, and S. Wibowo, "Digital technology driven knowledge sharing for job performance," Journal of Knowledge Management, vol. 27, no. 2, pp. 404–425, 2023, https://doi.org/10.1108/JKM-08-2021-0637.

[35] Y. M. Kundi, M. Aboramadan, E. M. Elhamalawi, and S. Shahid, "Employee psychological well-being and job performance: Exploring mediating and moderating mechanisms," International Journal of Organizational Analysis, vol. 29, no. 3, pp. 736–754, 2021.

[36] W. B. Alonazi, "The impact of emotional intelligence on job performance during COVID-19 crisis: A cross-sectional analysis," Psychology Research and Behavior Management, vol. 13, pp. 749–757, 2020, https://doi.org/10.2147/PRBM.S263656.

[37] T. Ramayah, N. H. Ahmad, and T. S. Hong, "An assessment of e-training effectiveness in multinational companies in Malaysia," Journal of Educational Technology & Society, vol. 15, no. 2, pp. 125–137, 2012.

[38] G. Sehgal and A. Nanda, "Factors influencing SMEs' internationalisation and their effect on performance," Journal of Namibian Studies: History, Politics, Culture, vol. 33, Special Issue 3, pp. 3189–3204, 2023, https://doi.org/10.59670/jns.v33i.2799.

[39] M. O. Meltem and B. K. Birgul, "Employee satisfaction of corporate e-trainings program," Procedia—Social and Behavioral Sciences, vol. 2, pp. 5561–5565, 2010, https://doi.org/10.1016/j.sbspro.2010.03.907

[40] R. D. Rukia and A. Mariita, "Electronic training and organizational performance in the Communication Authority of Kenya," International Research Journal of Business and Strategic Management, vol. 4, no. 2, pp. 5–20, 2022.

[41] L. Moradi, I. Mohamed, and Y. Yahya, "The effect of organizational commitment and e-training on e-tourism job performance," International Journal on Advanced Science, Engineering and Information Technology, vol. 8, no. 6, pp. 2286–2293, 2018, https://doi.org/10.18517/ijaseit.8.6.6665.

[42] M. El Saeed, H. M. Maarouf, and R. A. A. Younis, "The role of HRM-service quality in the relationship between electronic human resource management and perceived performance," Future Business Journal, vol. 11, no. 1, 2025, https://doi.org/10.1186/s43093-024-00415-4.

[43] K. A. C. N. Perera and W. A. S. Weerakkody, "The impact of human capital and social capital on employee performance: A study of employees in small scale industry enterprises in Western Province of Sri Lanka," Kelaniya Journal of Human Resource Management, vol. 13, no. 1, 2018, https://doi.org/10.4038/kjhrm.v13i1.48.

[44] N. Assyahidah, W. Purwidianti, and A. Fitriati, "The role of job satisfaction as mediation on the influence of work life balance and training on job performance," Asian Journal of Economics, Business and Accounting, vol. 24, no. 6, pp. 92–106, 2024, https://doi.org/10.9734/ajeba/2024/v24i61345.

[45] M. T. Iaffaldano and P. M. Muchinsky, "Job satisfaction and job performance: A meta-analysis," Psychological Bulletin, vol. 97, no. 2, pp. 251–273, 1985.

[46] A. Jawabri, A. Alarmoti, and W. Rehman, "Impact of remote working environment on employee motivation, engagement, and job satisfaction: A study of service sector from UAE," Business and Economic Research, vol. 12, no. 1, pp. 82–98, 2022, https://doi.org/10.5296/ber.v12i1.19679.

[47] T. A. Judge, C. J. Thoresen, J. E. Bono, and G. K. Patton, "The job satisfaction–job performance relationship: A qualitative and quantitative review," Psychological Bulletin, vol. 127, no. 3, pp. 376–407, 2001, https://doi.org/10.1037/0033-2909.127.3.376.

[48] C. Platis, P. Reklitis, and S. U. Zimeras, "Relation between job satisfaction and job performance in healthcare services," Procedia—Social and Behavioral Sciences, vol. 175, pp. 480–487, 2015, https://doi.org/10.1016/j.sbspro.2015.01.1226.

[49] R. Jacobs and T. Solomon, "Strategies for enhancing the prediction of job performance from job satisfaction," Journal of Applied Psychology, vol. 62, no. 4, pp. 417–421, 1977, https://doi.org/10.1037/0021-9010.62.4.417.

[50] R. A. Wulandari, I. A. Brahmasari, and I. A. B. Ratih, "The influences of job design, competence and rewards on job satisfaction and employee performance of PDAM Delta Tirta Sidoarjo Regency," International Journal of Economics, vol. 3, no. 1, 2024, https://doi.org/10.55299/ijec.v3i1.577.

[51] D. W. Ariani, "Exploring relationship of job satisfaction, organizational culture, and employee performance in small medium enterprise," International Journal of Professional Business Review, vol. 8, no. 2, 2023.

[52] L. Li, K. Kanchanapoom, J. Deeprasert, N. Duan, and Z. Qi, "Unveiling the factors shaping teacher job performance: Exploring the interplay of personality traits, perceived organizational support, self-efficacy, and job satisfaction," BMC Psychology, vol. 13, no. 1, Art. no. 14, 2025, https://doi.org/10.1186/s40359-024-02324-1.

[53] E. A. Mumford, W. Liu, and M. S. O'Leary, "US law enforcement officers' stress, job satisfaction, job performance, and resilience: A national sample," Police Quarterly, vol. 28, no. 1, pp. 104–126, 2025, https://doi.org/10.1177/10986111241253851.

[54] R. M. Hameed, N. Zahid, and A. R. M. Raja, "Effectiveness of training on employee motivation and job satisfaction with mediating role of e-learning in branchless micro finance banking," Bulletin of Business and Economics, vol. 12, no. 4, pp. 54–64, 2023, https://doi.org/10.61506/01.00082.

[55] F. L. Y. Aityassine, A. M. Y. Alsayah, and M. M. Al-Ajlouni, "The effect of electronic human resources practices on employee satisfaction in private hospitals," International Journal of Data & Network Science, vol. 6, no. 3, 2022, https://doi.org/10.5267/j.ijdns.2022.3.006.

[56] M. Raspopovic and A. Jankulovic, "Performance measurement of e-learning using student satisfaction analysis," Information Systems Frontiers, vol. 19, pp. 869–880, 2017, https://doi.org/10.1007/s10796-016-9636-z.

[57] V. Parikh and S. Pirani, "Integrating sustainable HRM, digital HRM, and remote work practices: A conceptual framework for enhancing job satisfaction," International Journal of Multidisciplinary Research & Reviews, vol. 4, no. 1, pp. 68–81, 2025, https://doi.org/10.56815/ijmrr.v4i1.2025.68-81.

[58] M. A. Khan, R. Md Yusoff, A. Hussain, and F. Binti Ismail, "The mediating effect of job satisfaction on the relationship of HR practices and employee job performance: Empirical evidence from higher education sector," International Journal of Organizational Leadership, vol. 8, pp. 78–94, 2019, https://doi.org/10.33844/ijol.2019.60392.

[59] N. Abbas, U. Ashiq, and A. Abbas, "Training and employee performance: Mediating role of job satisfaction in civil society organizations of Pakistan," Journal of Accounting and Finance in Emerging Economies, vol. 6, no. 4, pp. 1041–1050, 2020, https://doi.org/10.26710/jafee.v6i4.1458.

[60] W. B. R. Alshery, F. Bin Ahmad, and A. K. Al-Swidi, "The moderating effect of role ambiguity on the relationship of job satisfaction, training and leadership with employee performance," International Journal of Business Administration, vol. 6, no. 2, 2015, https://doi.org/10.5430/ijba.v6n2p30.

[61] E. F. Qawasmeh, S. Y. Alnafisi, R. Almajali, B. S. Alromaih, M. M. Helali, and H. Ismail Al-Lawama, "The impact of human resources management practices on employee performance: A comparative study between Jordanian and Saudi Arabian universities," Migration Letters, vol. 21, no. 2, pp. 243–257, 2024.

[62] M. Nyathi and R. Kekwaletswe, "Electronic human resource management (e-HRM) configuration for organizational success: Inclusion of employee outcomes as contextual variables," Journal of Organizational Effectiveness: People and Performance, vol. 11, no. 1, pp. 196–212, 2024, https://doi.org/10.1108/JOEPP-08-2022-0237.

[63] L. D. Bacon and L. D. Bacon, Using AMOS for Structural Equation Modeling in Market Research. Chicago, IL, USA: Lynd Bacon & Associates Ltd. and SPSS Inc., 2001.

[64] E. Uslinda, P. N. Shek, and M. M. Tahir, "Implementation of industrialized building system (IBS) in West Sumatera," in Proc. Innovative and Sustainable Infrastructure International Convention (ISIIC 2023), vol. 632, Springer Nature, pp. 321–380, 2018.

[65] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," European Business Review, vol. 31, no. 1, pp. 2–24, 2019, https://doi.org/10.1108/EBR-11-2018-0203.

[66] J. C. Anderson and D. W. Gerbing, "Predicting the performance of measures in a confirmatory factor analysis with a pretest assessment of their substantive validities," Journal of Applied Psychology, vol. 76, no. 5, 1991.

[67] V. D. Sousa and W. Rojjanasrirat, "Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: A clear and user-friendly guideline," Journal of Evaluation in Clinical Practice, vol. 17, no. 2, pp. 268–274, 2011, https://doi.org/10.1111/j.1365-2753.2010.01434.x

[68] S. Asghar and D. I. Oino, "Leadership styles and job satisfaction," Market Forces, vol. 13, no. 1, pp. 1–13, 2018.

[69] E. M. Silva, R. de Lacerda Moreira, and P. M. Bortolon, "Brazilians' attitude towards personal debt: An approach to developing and validating a measurement scale," Research Square, 2025, https://doi.org/10.21203/rs.3.rs-6043283/v1.

[70] S. Sathyanarayana and T. Mohanasundaram, "Fit indices in structural equation modeling and confirmatory factor analysis: Reporting guidelines," Asian Journal of Economics, Business and Accounting, vol. 24, no. 7, pp. 561–577, 2024, https://doi.org/10.9734/ajeba/2024/v24i71430.

Appendix A: Measurement Items of Constructs

E-Training (ET)	ET1	"Necessary communication services with high quality, such as Internet, are available at the banking".	Kamal et al.(2016)
	ET2	"here are virtual training halls at the banking to simulate live or recorded lectures to the audience on E-Training Portal".	
	ET3	"The content of the training courses are prepared for trainees through the identification of the respective training needs".	
	ET4	"As a trainee, I feel that trainers have competent knowledge in Managing the e-learning and managing the e-content".	
	ET5	"The skill of managing trainees' database by trainers is satisfactory".	
	ET6	"Trainers are competent in planning and managing E-Training".	
	ET7	"Trainers use interactive platform with trainees in the banking".	
	ET8	"Trainers use visual electronic applications".	
Job Satisfaction (JS)	JS1	"Considering everything, I am satisfied with my job".	Alhyasat, (2023), Asghar, & Oino, (2017).
	JS2	"I am happy with the opportunity to get a better job in this company".	
	JS3	"I am happy to recommend job to my friends or family".	
	JS4	"I am satisfied with the health information provided by the Organization".	
	JS5	"I am satisfied with the safety equipment provided by the Company".	
	JS6	"I am satisfied with the treatment provided to an injured Employee".	
	JS7	"I am satisfied with the audits and inspection conducted on health at the workplace".	
	JS8	"Considering everything, I am satisfied with my job".	
Job Performance (JP)	JP1	"Most customers are satisfied with our products".	Pakurár, et al. (2019).
	JP2	"The organization is keen to produce excellent products in order to guarantee customers' satisfaction".	
	JP3	"The organization is keen on building a positive image in the minds of its customers".	
	JP3	"Quality skills and competences are available in our organization".	
	JP4	"The level of wastage in the organization is low".	
	JP5	"We have excellent on time delivery performance".	
	JP6	"The organization's profits have consistently increased over the last three years".	
	JP7	"In our organization, financial resources are managed effectively".	
	JP8	"The organization is always able to meet its financial goals".	