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# MEDIATING THE DIGITAL SHIFT: THE ROLE OF JOB PERFORMANCE IN RELATIONSHIP BETWEEN TECHNO-TEACHING AND JOB SATISFACTION AMONG EDUCATORS

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## ABSTRACT

The digital transformation in education has redefined teaching practices emphasizing the integration of technology in instructional processes. This transition affects educators' job role, performance and overall job satisfaction. The study aimed to examine the mediating effect of job performance on the relationship between techno-teaching and job satisfaction among educators in self-financing colleges in Kerala. The study employed a quantitative cross sectional design and gathered data from 423 educators through a structured questionnaire. Standardized instruments were employed to assess techn0-teaching, job performance and job satisfaction with all responses documented on a five-point Likert scale. Data analysis was carried out using Partial Least Squares Structural Equation modelling through SmartPLS 4.0. The findings revealed that techno-teaching can enhance both job performance and job satisfaction. Furthermore, job performance was identified as a significant mediator in the relationship between techno-teaching and job satisfaction. The results aligned with the previous studies indicating that technology enhanced teaching methods can enhance job related outcomes for educators. The mediating role of job performance emphasized that enhanced proficiency in techno-teaching leads to better work outcomes and increased satisfaction. The study substantiates that investment in digital teaching skills improves teacher performance and satisfaction. Institutions should prioritize continuous digital skill development and support mechanisms to facilitate effective integration of technology and enhance educator well-being

**KEYWORDS:** Educators; Job Performance; Job Satisfaction; Techno-Teaching.

## 1. INTRODUCTION

The digital transformation of education has swiftly progressed in recent years, reshaping the design, delivery and assessment of teaching and learning processes. This transition frequently referred to as techno-teaching involves the strategic utilization of digital instruments and platforms such as smart boards, learning management systems and virtual classrooms to improve pedagogical methodologies and educational outcomes (Inan & Lowther, 2010). As technology becomes an integral part of classroom instruction, educators are highly expected to be proficient in its application and also modify their teaching methodologies to suit a digitally enhanced learning environment.

The integration of technology provides various pedagogical advantages including improves student engagement, tailored instructions and efficient resource management (Glukhov & Vasetskaya, 2017). It also introduces challenges that can affect educator's professional experiences. Educators often encounter significant learning hindrances, time constraints, and insufficient institutional support when adopting new technologies resulting in stress, decreased performance and lower job satisfaction (Ottenbreit-Leftwich et al., 2010); (Lowther et al., 2008).

Job satisfaction is a key factor in the quality of education and the stability of the workforce. Satisfied educators are usually more motivated, dedicated and skilled at their jobs which has a direct effect on student's outcome and the institutional success (Skaalvik & Skaalvik, 2017). On the other hand, job dissatisfaction may result in burnout, absenteeism and higher turnover rates, particularly in high pressure academic environments. This is why it is important to understand what makes educators happy at work so as to improve their health and the institution's performance.

In the context of this digital transition, job performance might act as a bridge. Educators who use technology well in their lessons may find that their classrooms are easier to manage, their lessons are more effective and their students do better, which makes them more effective and happy in their jobs (Yılmaz, 2021). However, if the use of technology makes things worse instead of better, it could have the opposite effect. This could happen for a number of reasons such as insufficient training, infrastructure or support.

Although numerous studies have explored the relationship between technology integration and job satisfaction, there is a shortage of research in investigating the mediating effect of job performance within the developing regions or institutions deprived of resources. This disparity is evident in self-financing colleges, especially in Kerala, where educators often face contract based employment, excessive workloads and limited access to instructional resources. This study seeks to address the existing research gap by investigating the mediating function of job performance in the relationship between techno-teaching and job satisfaction among the educators. The study offers a comprehensive understanding of the impact of technology integration on teacher outcomes through a mediation model, accompanied by evidences based recommendations for educators, policy makers and institutional authorities aiming to achieve a balance between digital innovation and sustainable teaching practices.

Techno-teaching is the effective use of modern technology and digital tools to make the process of teaching and learning better. Studies have shown that effective use of technology can improve classroom engagement, elevate teacher autonomy and diversify teaching strategies, all of which can have a positive contribution towards the job satisfaction among teachers (Aktan & Toraman, 2022). However, the technology integration can elevate teachers' stress level and reduce job satisfaction if it is executed under pressure or not properly supported (Ranathunga & Rathnakara, 2022). Therefore, due to the dual nature of the impact of techno-teaching, it is necessary to understand the circumstances in which techno teaching increases or decreases job satisfaction.

H1: Techno-teaching has a significant positive effect on job satisfaction among teachers.

The adoption of technology in teaching is also connected with the job performance of teachers. Technology integration enables the teachers to manage classrooms more efficiently through interactive delivery of content and also simplify the administrative tasks (Bangun et al., 2021). The utilization of tools like learning management systems (LMS), digital assessment and content creation platforms improves the instructional delivery and organizational efficiency (Ifinedo, 2017). Educators who feel competent and secure in using technology were found to be more productive and reported high levels of teaching effectiveness (Mugizi & Amwine, 2020). On the other hand, inadequacy in digital skills or infrastructure may hinder the job performance among teachers (Azubuike, 2025).

H2: Techno-teaching has a significant positive effect on teachers' job performance.

In educational environments, educators who view themselves as capable and efficient generally report higher levels of job satisfaction, intrinsic motivation and a sense of professional purpose (Judge et al., 2001). Strong job performance enhance self-esteem,

build confidence and promotes strong relationships with colleagues and students, thereby accelerating job satisfaction (Platis et al., 2015). Furthermore, teachers are more likely to feel appreciated and motivated when their performance is recognized and rewarded, thereby enhancing a constructive atmosphere. Conversely underperformance especially due to constraints such as technological obstacles may result in frustration and dissatisfaction.

H3: Job performance has a significant positive effect on job satisfaction

Techno-teaching can directly affect how happy someone is with their job, but it can also affect how well they do their job indirectly. The Job Demands-Resources (JD-R) model is an example of a theoretical construct that explains how resources like technology can improve job performance, which in turn leads to better job outcomes (Bakker & Demerouti, 2007). The Technology Acceptance Model (TAM) argues that the perceived usefulness of a technology enhances the satisfaction towards it and promotes the adoption of the technology (Venkatesh & Davis, 2000). Educators who efficiently manage the digital transition may excel in their roles, resulting in enhanced job satisfaction. This chain of influences underscores the necessity of perceiving job performance not merely as an outcome but as a crucial mechanism connecting technology utilization to job satisfaction.

H4: Job performance mediates the relationship between techno-teaching and job satisfaction.

The existing literature highlighted the changing role of technology in education and its diverse effects on educators' professional lives. The studies emphasized that the technology integration in education improves job satisfaction but it is often mediated by other factors like job performance. It was also highlighted that job satisfaction of the teachers is highly influenced by the proficiency of teachers in effectively utilizing the technology and adaptation to the digital requirements. However, despite the growing focus on digital proficiency, a gap was identified in comprehending the fundamental mechanism by which techno-teaching influences job satisfaction. Drawing from these insights, the current study proposes a conceptual framework in which job performance serves as a mediating variable elucidating how effective technology integration leads to enhanced job satisfaction among educators. The conceptual framework of the study is explained in figure 1.

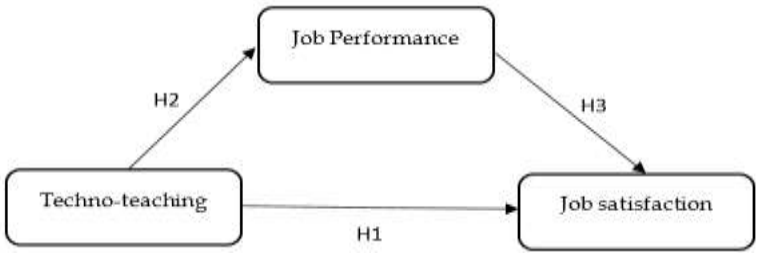


***Figure 1: Conceptual framework***
***Source: Authors' own model***

## 2. METHODS

The research employed a quantitative, cross-sectional design utilizing a structured questionnaire to collect data from educators in self-financing colleges. The study investigated the mediating influence of job performance on the relationship between techno-teaching and job satisfaction.

### *2.1. Participants*

The study sample comprised educators employed in self-financing colleges across Kerala. A stratified random sampling method was used to get 423 responses, which made sure that all departments, genders, and levels of experience were represented.

### *2.2. Procedure*

A structured questionnaire served as the principal instrument for data collection, aimed at eliciting responses regarding techno-teaching, job performance, and job satisfaction. The survey included standardized validated scales measured on a five point Likert scale, and was administered to educators through both online and offline modes to ensure broad participation.

### *2.3. Instrument*

The core constructs of the study were measured using validated instruments. Techno-teaching was assessed using the scale developed by (Hsu, 2010) which covers six dimensions which are information collection and preparation, material production and troubleshooting, communication and sharing, planning, teaching and evaluation, professional development and self-study, and ethical, health and safety issues. The scale developed by (Pradhan & Jena, 2017) with task performance, contextual performance and adaptive job performance as dimensions was utilized to measure the job

performance. Job satisfaction was measured using the scale developed by (Spector, 1997). The scale assesses job satisfaction in nine facets which are pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, co-workers, nature of work and communication.

### 2.4. Data analysis

The data collected were analyzed using Partial Least Square Structural Equation Modelling (PLS_SEM) through SmartPLS 4 software. The analysis was conducted in two phases: the initial phase involved the evaluation of the measurement model, followed by the assessment of the structural model. The measurement model evaluated the constructs' reliability and validity through indicator loadings, composite reliability, Cronbach's alpha, and Average Variance Extracted (AVE). To confirm item reliability, all of the outer loadings were expected to be above 0.70. To show that something is consistent within itself. The values for composite reliability and Cronbach's Alpha should be higher than 0.70 (Hair et al., 2012) and to confirm convergent validity, AVE values should exceed 0.5 (Fornell & Larcker, 1981). Discriminant validity was evaluated employing the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. The structural model assessed the relationships among the constructs to evaluate the proposed hypotheses. To evaluate the model's explanatory power, the coefficient of determination was computed and a value higher than 0.60 is considered significant (Chin et al., 2008). Bootstrapping was performed to evaluate the significance of path coefficients and the mediation role was evaluated using the indirect effect analysis.

## 3. RESULTS

### 3.1. Demographic profile

The demographic profile of the teachers involved in this study illustrates a varied representation of educators working in self-financing colleges throughout Kerala. The sample comprised 423 college educators within a majority of female participants (68%), reflecting the gender distribution characteristics of the region's teaching workforce. In terms of age, 48% were below 30 years, 35% fell within 31-45 years and 17% were over 45 years, indicating a relatively young academic demographic. Regarding educational qualification, the majority (68%) held a post graduate degree with NET qualification, 24% possessed a PH.D., and the remaining 8% had only post graduate degree. Teaching experience was diverse with 41% having less than five years, 47% with 5-10 years, and merely 12% exceeding 10 years of experience. Employment status revealed that 71% of the respondents were engaged in temporary or contractual roles, while just 29% held permanent positions, highlighting the pervasive job insecurity within self-financing institutions. This demographic overview offers essential context for analyzing the study's findings related to techno-teaching, job performance and job satisfaction.

### 3.2. Measurement model assessment

The evaluation of the measurement model concentrated on assessing the reliability and validity of the constructs utilized in the study. Prior to analyzing the structural relationships among the constructs, it is imperative to confirm that the measurement items accurately represent the underlying theoretical constructs. This entails assessing indicator reliability, convergent validity, and discriminant validity. Developing a robust measurement model guarantees that the results of structural model are significant and reliable, thereby enhancing the overall integrity and clarity of the research outcomes.

Figure 2 explain the measurement of outer model which shows high reliability as all of the outer loadings for the indicators are above the acceptable range of 0.70 (Hair et al., 2012). Higher outer loadings lead to strong internal consistency, which means that the items in each construct are very similar and represent a single underlying idea.

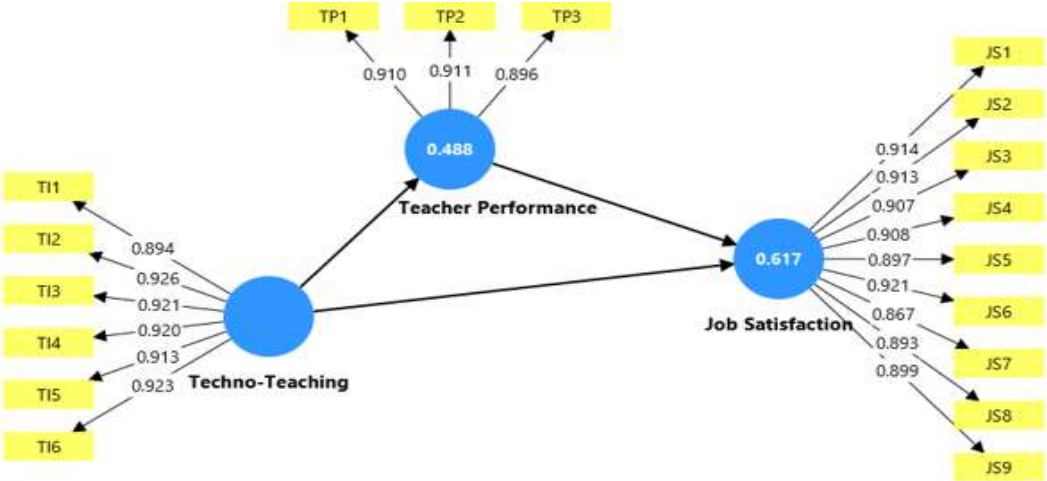


*Figure 2: Measurement model*

Values of composite reliability and Cronbach's alpha also support reliability, in addition to outer loadings. Table 1 shows that the reliability and validity statistics for the constructs used in this study present excellent measurement quality. All Cronbach's alpha values are above the conventional threshold of 0.70 (Hair et al., 2012), showing a strong internal consistency. The composite reliability values for all constructs consistently exceed 0.70 (Dijkstra & Henseler, 2015), thereby reinforcing the reliability of the scale items. The Average Variance Extracted (AVE) values exceed the suggested threshold of 0.50 (Fornell & Larcker, 1981), indicating robust convergent validity.

***Table 1: Reliability measures***

| | Cronbach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|---|
| Job Satisfaction | 0.971 | 0.972 | 0.975 | 0.814 |
| Teacher Performance | 0.891 | 0.891 | 0.932 | 0.82 |
| Techno-Teaching | 0.962 | 0.962 | 0.969 | 0.84 |

Source: Primary data

Discriminant validity denotes the extent to which a construct is authentically separate from other constructs in the model, both theoretically and empirically. The discriminant validity is commonly evaluated using cross loadings, Fornell-Larcker criterion (Fornell & Larcker, 1981) and the Heterotrait-Monotrait (HTMT) ration of correlations. Table 2 displays the cross- loading of all measurement items among three constructs. The results show that each indicator loads more highly on its intended construct than on any other demonstrating strong item discrimination.

***Table 2: Cross loadings***

| | Job Satisfaction | Teacher Performance | Techno-Teaching |
|---|---|---|---|
| JS1 | 0.914 | 0.677 | 0.671 |
| JS2 | 0.913 | 0.671 | 0.658 |
| JS3 | 0.907 | 0.661 | 0.63 |
| JS4 | 0.908 | 0.668 | 0.659 |
| JS5 | 0.897 | 0.657 | 0.629 |
| JS6 | 0.921 | 0.674 | 0.644 |
| JS7 | 0.867 | 0.643 | 0.647 |
| JS8 | 0.893 | 0.657 | 0.62 |
| JS9 | 0.899 | 0.649 | 0.629 |
| TI1 | 0.637 | 0.647 | 0.894 |
| TI2 | 0.654 | 0.645 | 0.926 |
| TI3 | 0.674 | 0.644 | 0.921 |
| TI4 | 0.649 | 0.641 | 0.92 |
| TI5 | 0.645 | 0.616 | 0.913 |
| TI6 | 0.659 | 0.647 | 0.923 |
| TP1 | 0.667 | 0.91 | 0.639 |
| TP2 | 0.686 | 0.911 | 0.62 |
| TP3 | 0.64 | 0.896 | 0.639 |

Source: Primary data

The Fornell-Larcker criterion assesses the square root of AVE for each construct against its correlation with other constructs, with a higher square root value signifying sufficient discriminant validity. It is evident from Table 3 that all the three constructs under study is more closely related to its indicators than to other constructs, demonstrating acceptable discriminant validity according to Fornell-Larcker criterion.

***Table 3: Fornell-Larcker criterion and HTMT matrix***

| Fornell-Larcker criterion | | | |
|---|---|---|---|
| | Job Satisfaction | Teacher Performance | Techno-Teaching |
| Job Satisfaction | 0.902 | | |
| Teacher Performance | 0.734 | 0.906 | |
| Techno-Teaching | 0.713 | 0.699 | 0.916 |
| HTMT ratios | | | |
| Job Satisfaction | | | |
| Teacher Performance | 0.789 | | |
| Techno-Teaching | 0.737 | 0.755 | |

Source: Primary data

Table 3 also indicates that all HTMT values in this study are below the recommended threshold of 0.85, implying that the constructs are distinctly differentiated with no significant overlap. Therefore, HTMT results further signifies the existence of discriminant validity among the constructs employed in this model. The results affirm that the instruments employed are both reliable and valid rendering them appropriate for subsequent structural model analysis.

### 3.3. Structural model assessment

Following the establishment of a reliable and valid measurement model, an assessment of the structural model was performed to evaluate the proposed relationships among the constructs. This stage of analysis concentrates on evaluating the strength, direction and significance of the relationships linking techno-teaching, teacher performance and job satisfaction. The evaluation involves analyzing path coefficients, R-square values and testing for mediation effects using bootstrapping methods. This method facilitates the evaluation of the model's predictive capability and the extent to which the proposed relationships are substantiated by the data.

*Table 4: Calculation results of R-square value*

| | R-square | R-square adjusted |
|---|---|---|
| Job Satisfaction | 0.617 | 0.615 |
| Teacher Performance | 0.488 | 0.487 |

Source: Primary data

Table 4 presents the r-square and adjusted r-square values, reflecting the explanatory power of the structural model. The r-square value for job satisfaction is 0.617, indicating that 61.7% of the variance in job satisfaction is explained by the interplay of techno-teaching and teacher performance. This represents a moderate to significant degree of predictive accuracy (Chin et al., 2008). Similarly, the r-square for teacher performance is 0.488, indicating that 48.8% of the variance in teacher performance is exclusively accounted for by techno-teaching, thereby demonstrating moderate predictive power.

The examination of path coefficients assesses the direct relationship between the constructs in the structural model and tests the strength and significance of these hypothesized paths. The results presented in figure 3 and table 5 displays the path coefficients and their statistical significance.

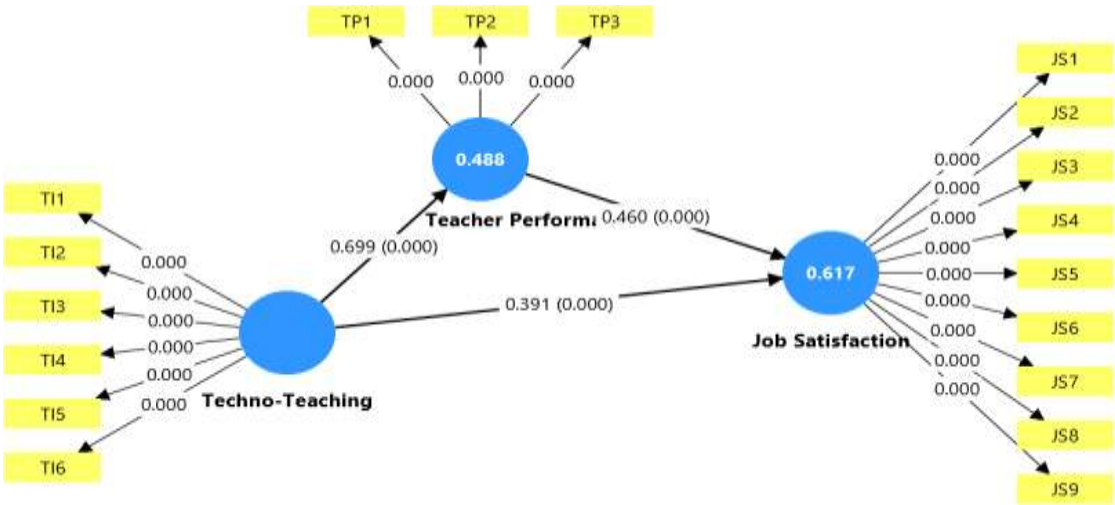


*Figure 3: structural model*

All three proposed relationships in the model are confirmed to be positive and statistically significant, as evidenced by high t-statistics and p-values less than 0.001 there by confirming strong support for the hypothesized paths. The relationship between techno-teaching and teacher performance exhibits a highest standardized coefficient ($\beta = 0.699$, $p<0.05$), signifying a robust positive impact. This means that effective integration of technology in education significantly improves teacher performance.

*Table 5: Path coefficients*

| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (\|O/STDEV\|) | P values |
|---|---|---|---|---|---|
| TI -> JS | 0.391 | 0.392 | 0.038 | 10.424 | 0.000 |
| TI -> TP | 0.699 | 0.698 | 0.026 | 26.662 | 0.000 |
| TP -> JS | 0.46 | 0.46 | 0.04 | 11.596 | 0.000 |

Source: Primary data

Secondly, teacher performance exerts a significant positive effect on job satisfaction (β= 0.460, p<0.05), indicating that higher performing teachers are more inclined to experience job satisfaction. The direct relationship between techno-teaching and job satisfaction is significant and moderate (β = 0.391, p<0.05), suggesting that technology utilization in teaching positively influences teacher's job satisfaction, independent of performance mediation. All the t-values exceed the critical threshold of 1.96 (at a 5% significance level), and the standard errors are minimal, thereby affirming the precision and consistency of the estimates.

***Table 6: mediation test results based on indirect effect***

| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (\|O/STDEV\|) | P values |
|---|---|---|---|---|---|
| Techno-Teaching -> Teacher Performance -> Job Satisfaction | 0.322 | 0.321 | 0.03 | 10.715 | 0.000 |

Source: Primary data

The indirect effect of techno-teaching on job satisfaction through teacher performance as illustrated in table 6 reveals a path coefficient of 0.322, signifying a positive mediating effect. This indicates that a significant part of impact of techno-teaching on job satisfaction functions through its improvement of teacher performance. The t-statistic of 10.715 and p-value 0.000 indicates that this mediation is highly statistically significant (p<0.05). The significant direct effect of techno-teaching on job satisfaction, along with the indirect effect through teacher performance, indicates the existence of partial mediation.

## 4. DISCUSSION

This study examined the function of job performance as a mediator in the correlation between techno-teaching and job satisfaction among educators. The findings demonstrated that techno-teaching significantly enhances both job performance and job satisfaction. Moreover, job performance was identified as a significant contributor to job satisfaction and partially mediated the relationship between techno-teaching and job satisfaction.

### *4.1. Impact of techno-teaching on job satisfaction*

The study demonstrated that techno-teaching has a direct and significant positive effect on educators' job satisfaction. This indicates that educators who proficiently integrate technology into their teaching practices typically attain a higher degree of satisfaction. The effective use of educational technologies likely improves classroom delivery, streamlines instructional tasks and increase student engagement, all of which contribute to a more fulfilling work experience. These findings corroborate prior literature emphasizing the empowering impact of technology in educational settings (Nurgaliyeva et al., 2023); (Teo, 2011), especially during the post pandemic digital transformation period. Therefore, techno-teaching is not solely a technical skill but a vital factor in professional satisfaction in contemporary educational environments.

### *4.2. Effect of techno-teaching on job performance*

The results of the study also supported the positive influence of techno-teaching on job performance, demonstrating that it significantly enhances job performance. Educators proficient in technology demonstrate enhanced task performance, adaptability to change and superior contextual efficacy. This discovery supports the notion that digital competence empowers educators to effectively access resources, enhance time management and deliver content more efficiently (Pradhan & Jena, 2017); (Abubakar & Salmanu, 2018). The strong positive correlation emphasizes that technology, when adeptly integrated serves as a performance facilitator rather than an impediment, particularly in dynamic educational environments. Fundamentally, techno-teaching improves pedagogical approaches and elevates the overall caliber of educator performance

### *4.3. Relationship between job performance and job satisfaction*

The research also supported the hypothesis that higher job performance leads to a higher job satisfaction. Educators who perceives themselves as proficient and impactful in their positions experience an elevated sense of accomplishment and well-being, which in turn foster their satisfaction. This outcome corresponds with the motivational theory of performance, where high performing individuals often tend to feel more valued and fulfilled (Spector, 1997); (Locke, 1976). In educational settings, this indicates that performance functions not only as a result of professional competencies but also an indicator of educators' psychological and emotional engagement with their work.

### *4.4. Job performance as a mediator*

The mediating role of job performance in the relationship between techno-teaching and job satisfaction was found significant and indicated a partial mediation. This suggests that techno-teaching enhances job satisfaction both directly and indirectly

through job performance. This indicates that while the integration of technology can independently make teachers fell more satisfied, its full potential is achieved when it simultaneously improves their performance. This model clarifies how digital tools impact job related outcomes and provide a deeper understanding of how performance acts as a psychological bridge connecting workplace satisfaction and technological proficiency. These findings align with frameworks such as the Job Demands-Resources (JD-R) model, which highlights the importance of personal resources like performance and skills as determinants of well-being. Furthermore, research has shown that teacher efficacy and job performance are important mediators in raising job satisfaction and lowering burnout in educational settings (Skaalvik & Skaalvik, 2017) and (Bocheng, 2023).

## 5. CONCLUSION

The study investigated the interaction between techno-teaching, job performance and job satisfaction among educators in the digital era. The results clearly show that techno teaching makes educators perform better and feel better about their jobs. This shows that digital tools and strategies can boost professional effectiveness and morale. Job performance was identified as a partial mediator in the relationship between techno-teaching and job satisfaction, underscoring its crucial function in transforming technological integration into workplace fulfilment. These findings contribute to the existing literature on educational technology by emphasizing that the benefits of technology in teaching transcend mere efficiency; it can substantially enhance educators' experiences when it results in improved performance. From a practical perspective, the findings indicate that the institutions should not only invest in technological infrastructure but also support continuous professional development that enhances educators' digital competencies. Implementing this will enhance classroom performance and foster long term satisfaction and retention of educators in a progressively technology oriented educational environment.

Although the findings are encouraging, certain limitations must be noted. The research depended on self-reported data, potentially leading to social desirability bias. Additionally, it was cross-sectional nature limiting casual interpretations. Further studies may utilize longitudinal designs, incorporating multi-source data and explore additional mediators like emotional intelligence, technological self-efficacy or burnout.

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