Work engagement and perceived job performance: does information communication technology orientation matter?

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Abstract

Purpose – The purpose of this paper is to develop and test an integrated model to examine the relationship between work engagement and three facets of perceived job performance (PJP). The authors argue that work engagement might not optimally improve PJP unless it is channelized through information and communication technology orientation.

Design/methodology/approach – Data for the present research were collected from higher educational institutes in the northern region of India by using a convenient sampling technique. Results of structural equation modeling (SEM) through AMOS 20 revealed that work engagement facilitates all three facets i.e. task performance, contextual performance and adaptive performance of teaching professionals. Furthermore, SEM results established the partial mediating effect of information and communication technology orientation between work engagement, task performance, contextual performance and adaptive performance.

Findings – Findings from present research contribute theoretically as well as practically to job performance and work engagement literature by giving insights to administrators and practitioners on how to improve the overall job performance of teaching professionals by enhancing their engagement and addressing their need for digital know-how.

Originality/value – To the best of the authors’ knowledge, this study is one of the first to study the impact of work engagement and information and communication technology on the three facets of PJP using a diverse sample of 1030 teachers from universities in North India.

Keywords Work engagement, ICT orientation, Task, Contextual, Adaptive performance, Mediation

Paper type Research paper

Introduction

Experts predict the emergence of the “Great Resignation”, which refers to a surge in voluntary employee departures, as the global community gradually navigates its way toward a post-COVID-19 recovery (Fuller and Kerr, 2022). To illustrate, recent research indicates that as of August 2021, approximately 55% of individuals employed expressed their intention to actively seek alternative job opportunities within the next 12 months (Stein et al., 2021). This data underscores the significance of work engagement and elucidates why it remains a highly popular subject within both academic and practical contexts. Work engagement is a positive
A work-related state of mind characterized by vigor, dedication and absorption, where vigor refers to energy and resilience, dedication to strong involvement and enthusiasm and absorption to concentration and engrossment (Schaufeli et al., 2006). Studies have highlighted the influence of work engagement on employee well-being and performance (e.g., Christian et al., 2011; Halbesleben, 2010; Knight et al., 2017). When employees are engaged, they derive satisfaction from their work, experience heightened levels of motivation and frequently become fully immersed in their daily responsibilities (Bakker and Van Wingerden, 2021). Research suggests that this positive state of engagement not only facilitates improved performance but also fosters innovation and creativity among employees (Christian et al., 2011).

Taking the context of academia, there are at least three reasons researchers and practitioners have started to pay more attention to teachers’ work engagement. First, given the strong evidence linking teacher effectiveness and engagement (Darling-Hammond and Youngs, 2002; Hindman and Stronge, 2009) as well as the link between the two (Bakker and Bal, 2010), researchers and policymakers are eager to learn how to encourage teachers’ work engagement to improve teacher effectiveness. Studies have shown that motivated teachers exhibit better teaching performance and have more enthusiastic learners as pupils (Bakker and Bal, 2010; Roth et al., 2007). Second, levels of work engagement are thought to be inversely correlated with teacher attrition because engaged instructors are supposed to be less susceptible to burnout and related health issues (Hakanen et al., 2006). This is because teachers who are engaged in their work are less likely to leave the field or need expensive medical care. Third, work engagement at the workplace and productivity are linked, so teachers who are more involved in their profession are more inclined to contribute to school life and take on more responsibilities (Parker and Martin, 2009).

Despite the significance of work engagement in academia, a limited number of studies have examined the impact of work engagement on the three aspects of perceived job performance (PJP) from an emerging market perspective. Previous research had adopted a limited perspective on job performance, viewing it as a unidimensional or two-dimensional construct, which fails to offer a comprehensive understanding of the various individual dimensions that underlie PJP (Khoreva and Wechtler, 2018; Hu et al., 2015; Hwang et al., 2015; Huang et al., 2014). The advent of technological (online) learning systems has opened up new avenues of accessibility to countless digital resources and updated materials for both students and teachers (Starkey and Eppel, 2019). Information communication and technology (ICT) in academia is defined as the basic tendency to apply knowledge, understanding and application of ICT in teaching and learning activities to support the educational process (Bhat and Beri, 2016b, p-3124). Several researchers argue that technological innovation and practices have not only enhanced the elements of well-being such as values, capabilities, motivation, emotions and satisfaction among teachers but also various job-related aspects and experiences including accessibility, updated materials, online resources, effort expectancy, communication, connectivity, student management and interaction, resources, motivation and assessment, thereby ultimately improving their overall work performance (Melash et al., 2020; Pablos-Pons et al., 2013; Uzunboylu and Tuncay, 2009; Mohammadyari and Singh, 2015). Therefore, against this backdrop, we propose that ICT can serve as a mediator in the relationship between work engagement and PJP.

The present investigation endeavors to address this gap by accentuating the impact of work engagement on three facets of PJP and the intervening function of ICT orientation. This paper attempts to make three broad contributions. First, this study extends the job demands-resources model (JD-R) by elucidating the impact of work engagement on PJP. Second, it has been emphasized in previous research that ICT has had a transformative impact on the education system. This impact is manifested through alterations in the nature of learning, revisions in the entire curriculum and modifications in the way information is
stored, gathered and processed. Additionally, it is crucial to note that ICT has played a vital role in empowering teachers in higher education with novel pedagogical approaches (Bhat and Bashir, 2017). We contend that the orientation toward ICT may serve as the missing connection between work engagement and the three dimensions of PJP. Third, this investigation stands as one of the exceedingly few studies to validate a diverse conceptual model in the context of teachers by gathering a diverse sample of 1,030 educators from an emerging market perspective.

The rest of the paper unfolds as the development of theory and hypotheses, methodology, findings, discussion, implication, limitations and future research.

**Theoretical background**

*Job demands-resources (JD-R) model*

The origin of the JD-R model can be dated back to 15 years ago, when it was first introduced in the global management literature (Demerouti et al., 2001). Throughout the years, scholars from various fields have used this model to comprehend the impact of work environments on work engagement, burnout and job performance (Bakker et al., 2014). The model categories job characteristics into two broad categories: job demands and job resources (Schaufeli and Bakker, 2004). Job resources can be described as the tangible, psychological, social or organizational resources that facilitate employees in meeting fundamental psychological requirements and attaining occupational objectives (e.g. interpersonal support, self-governance and task importance) (Bakker and Demerouti, 2007). Conversely, job demands pertain to the facets of a profession that cause stress (Demerouti et al., 2001). Research suggests that job demands might not necessarily be bad; however, they can become hurdles for employees because they usually call for greater effort to manage stress caused by the job (Naqshbandi et al., 2023). Job demands can be classified into challenge and hindrance demands. Challenge demands refer to the characteristics of a job that deplete energy, yet they contribute to the achievement of goals and personal growth. Examples of challenge demands include workload, time pressure and cognitive demands. On the other hand, hindrance demands are those demands that hinder employees’ ability to achieve their goals and overall well-being. These demands encompass factors such as job insecurity, role ambiguity, organizational constraints and interpersonal conflicts (Cavanaugh et al., 2000).

Therefore, based on the JD-R model, we propose a conceptual framework that studies the impact of work engagement on the three facets of PJP via the intervening mechanism of ICT orientation. This study proposes nine hypotheses. The first three are related to the influence of work engagement on the three facets of PJP. Then, the next three hypotheses discuss the direct impact of ICT on the three facets of PJP and, finally, the last three hypotheses discuss the mediating role of ICT orientation on the relationship between work engagement and PJP. Figure 1 provides a snapshot of the research framework developed in the next sections.

**Hypotheses development**

*Work engagement and task performance*

Work engagement is a positive work-related state of mind characterized by vigor, dedication and absorption, where vigor refers to energy and resilience, dedication to strong involvement and enthusiasm and absorption to concentration and engrossment (Schaufeli et al., 2006). Literature suggests that task performance is one of the major components of job performance and is referred to as in-role performance and reflects officially required outcomes and behaviors that are directly related to an individual’s job (Motowildo and Van Scotter, 1994). The extant literature also suggests that work engagement is an important factor for the success of organizations as it contributes to the bottom line (Demerouti and Cropanzano, 2010), is a good
predictor of task performance (Dishon-Berkovits et al., 2023) and is positively related to the task performance of employees (Corbeau and Iliescu, 2023; Wang et al., 2023; Bakker et al., 2012). Engaged employees are highly attentive and focused on their assigned work, also, they are highly connected with work tasks and strive toward task-related goals tangled with high levels of in-role performance (Christian et al., 2011). Respectful engagement characterized by positive interrelating behaviors enhances focus, effort and pride at work and significantly contributes to employee task performance (Basit, 2019). Recent studies suggested that work engagement not only shows a positive relationship with the self-rated task performance of employees but also effects it positively (Ohemeng et al., 2020; Şahin and Yozgat, 2021). Therefore, we hypothesize:

\[ H1. \text{ Work engagement facilitates task performance.} \]

**Work engagement and contextual performance**

The activities that support the managerial, social and psychological work environment, such as helping colleagues, collaboratively working and contributing to improving organizational processes, are called contextual performance (Borman and Motowidlo, 1997; Van Scotter, 2000). Sincerely devoted employees show higher contextual performance, as compared to their counterparts due to various reasons; first, they are more subtle to opportunities at work, more social, confident and highly optimistic (Christian et al., 2011; Cropanzano and Wright, 2001). Second, they are full of positive emotions, contentment, interest and joy, and they hold the capacity of broadening the momentary thought of colleagues and enhancing physical, social and intellectual resources (Corbeau and Iliescu, 2023; Bindl and Parker, 2010; Fredrickson, 2001). Studies suggested facets of work engagement (vigor and dedication) are supported by volitional work behaviors that persuade an employee to go beyond formal job requirements for the benefit of an organization (Dishon-Berkovits et al., 2023). These behaviors are believed to be strongly involved in one’s work, experiencing a sense of significance, enthusiasm, inspiration, pride and challenge (Borman and Motowidlo, 1993; Van Scotter and Motowidlo, 1996; Schaufeli et al., 2006). It has been observed these volitional behaviors help in handling adversity at the job or motivate the employees to volunteer for job-related tasks that are beyond their formal job description i.e. contextual performance, which in turn contributes to their job performance (Liu et al., 2013; Besides, Van Scotter and Motowidlo, 1996). Thus, we hypothesize:

\[ H2. \text{ Work engagement facilitates contextual performance.} \]
Work engagement and adaptive performance

Adaptive performance refers to an employee’s ability to adjust to rapidly changing working conditions (Neal and Hesketh, 1999). It is also known by various other names such as adaptability, performance adaptation, adaptive expertise, role structure adaptation and post change performance (Stasielowicz, 2019). This concept encompasses problem-solving in a creative manner (innovative behavior), coping with uncertainty, acquiring new procedures and tasks, interpersonal, physical and cultural adaptability, and effectively managing crises and work-related stress (Pulakos et al., 2000). Literature suggests that a positive state of mind plays a significant role in stimulating an employee’s task performance and adaptive performance (Fredrickson, 1998, 2001). Therefore, a positive state of mind enhances an individual’s cognitive and behavioral processes (Fredrickson, 1998). This, in turn, leads to the development of cognitive and behavioral resources, ultimately resulting in improved performance (Wright and Corpanzano, 2007). Work engagement, as a manifestation of a positive state of mind, holds a unique position in its interaction with adaptive performance and adaptability (Marlow, 2016). Highly engaged employees are more likely to invest additional effort in their job and are better prepared to navigate the dynamics of change (Park et al., 2020). As a behavior, work engagement promotes the optimal adaptation process of employees in their workplace (Nandini et al., 2022). Consistent with this, Van den Heuvel et al. (2010) found that work engagement is positively associated with adaptive performance. Recent studies have shown that an increase in employee work engagement significantly enhances adaptive performance by improving various facets of it, such as managing stress, fostering creativity, facilitating interpersonal adaptability and promoting reactivity (Kaltiainen and Hakanen, 2022; Saptarini and Mustika, 2023). Therefore, we hypothesize:


Information and communication technology orientation and task performance

Orientation toward ICT and innovation have become strategic resources in present society. It is the basic tendency to apply knowledge, understanding and application of ICT in teaching and learning activities to support educational process (Bhat and Beri, 2016b. p. 3124). With its manifestation of dynamic competencies, ICT has become one of the leading components for the generation, integration, development and enhancement of resources at present time (Yunis et al., 2017). With the help of ICT tools, an employee can create, store and disseminate job-related knowledge; these tools provide digital access to formal work procedures and help an employee to stay connected with colleagues, thereby boosting their in-role performance (Cormu, 2022). Likewise, Fischer (2022) reported greater the degree of knowledge sharing facilitated by ICT tools and infrastructure, the higher will be the task performance. ICT has become a prerequisite condition for every type of job, with flexibility on behalf of each employee and proficiency in its application to perform required tasks possesses consequences on productivity and in-role behaviors or task performance (Oyedipe and Popoola, 2019). Melone (1990) acknowledged that an individual’s satisfaction acts as a surrogate for a successful system, and the performance of an individual in terms of effective usage of ICT enhances the quality and efficacy of his/her work (Etezadi-Amoli and Farhoomand, 1996; Torkzadeh and Doll, 1999). Supporting the argument, Tarafdar et al. (2010) reported that employees are satisfied with ICT usage, and they can use it to enhance their task performance. Furthermore, Hendriks (1999) stated that knowledge sharing has become one of the key areas where the knowledge of an employee attains its economic and competitive value in an organization, and ICT helps in enhancing knowledge sharing among
employees by reducing temporal and spatial barriers between knowledge and an employee. This leads to the formulation of the hypothesis:

\[ H4. \text{ ICT orientation facilitates task performance.} \]

*Information and communication technology orientation and contextual performance*

The literature identifies the crucial role of ICT in encouraging the contextual performance of different professionals (Busch, 2017; Youssef et al., 2012; Tummers et al., 2009; Peckover et al., 2008). Contextual performance is behaviors that contribute to the social climate or culture of the organization (Han and Williams, 2008, p. 3), possessing interpersonal and motivational implications and assisting in achieving organizational objectives (Hosie and Nankervis, 2016). These are primary factors that determine and characterize organizational settings, and these settings are influenced by the use of ICT (Zhang et al., 2011). Scholars agree that, ICT usage has greatly influenced the contextual performance of employees at work by helping them to learn cooperation from their own experiences and engross themselves in cooperative behavior (Youssef et al., 2012). Gareis and Korte (2002) reported that ICT-enabled working encourages flexible behaviors like voluntary part-time working, cooperation and participation in decision-making among employees. Bukhatir et al. (2023) suggested usage of technology equips employees of the education sector with supplementary resources, thus enhancing their communication and helping them to assist customers, which contributes to their contextual performance further; appropriate technology helps front-line employees to perform proficiently and supports the students beyond their formal job description. Bhat and Bashir (2017), in their study, emphasized factors of ICT orientation (advantage, compatibility, ease of use and perceptions) are significantly related with three facets of job performance i.e. task, contextual and adaptive performance. Youssef et al. (2012) explored the impact of the frequency of ICT usage on the contextual performance of employees, emphasizing the crucial role of ICT in boosting collaboration, cooperation and flexibility among employees. Building on this, Bhat and Beri (2016a) argued that ICT is one of the basic elements that enhance the enthusiasm and professional conduct of employees. Furthermore, Ben Youssef et al. (2014) revealed that ICT usability is transforming the way employees are working and behaving inside the organizations by allowing greater flexibility inducing good interpersonal, cooperative and self-improvement in behaviors. Researchers like Busch (2017), Tummers et al. (2009) and Peckover et al. (2008) delved into the realm of ICT usability, exploring the role of ICT usage in enhancing contextual performance. These researchers accentuated that employees feel better as ICT usage modifies their contextual performance; it plays a pivotal role in stimulating an employee’s cooperative behavior and enhances the probability of having higher contextual performance. ICT stimulates employees to show rational behaviors such as greater effectiveness and efficiency and to control and limit their discretionary power at work based on various contextual factors. ICT has become a generic factor in organizations, and it impacts the elements of contextual dimensions of every organization by enhancing information, availability, accuracy, quality, quantity and speed of decisions, which in turn facilitates smooth goal achievement, strategy realization and mission fulfillment (Brodar et al., 2009). Hence, we hypothesize:

\[ H5. \text{ ICT orientation facilitates contextual performance.} \]

*Information and communication technology orientation and adaptive performance*

The literature emphasizes on the utilization and acceptance of appropriate ICT based on the specific characteristics of work or organizations, resulting in improved performance for both
employees and the organization as a whole (DeLone and McLean, 1992, 2003). Scholars have explained it through the concept of appropriation, which refers to the user’s utilization of technologies in diverse ways that align with the requirements of their work (DeSanctis and Poole, 1994). Within the context of adaptive performance, appropriation entails using technologies in various ways to achieve organizational objectives by using adaptive performance/behavior (Papagiannidis and Marikyan, 2020). The advancements in ICT have fundamentally transformed work processes, promoting the development of higher-order abilities such as problem-solving, absorptive capacity, adaptability, innovation and network capabilities among employees (Mithas et al., 2011). The existing body of literature underscores the critical role of ICT orientation in enhancing an individual’s adaptive performance (Parida et al., 2016). The usability of ICT enables employees to perform tasks anytime and anywhere, thereby enhancing their adaptability through improved flexibility and efficiency in their work performance (Ko et al., 2021). In their study, Gareis and Korte (2002) shed light on the contribution of ICT toward employee adaptability and adaptive performance, revealing a positive relationship between ICT utilization and employee adaptability. This underscores the importance of ICT in enhancing employee flexibility through coordination, collaboration, maintaining connections and continuous learning. Bhat and Bashir (2017) reported that all the factors related to ICT orientation (advantage, compatibility, ease of use and perceptions) are significantly associated with three facets of job performance: task performance, contextual performance and adaptive performance. Bai et al. (2021) explored the adoption of ICT in teaching and emphasized that factors such as ICT usage, perceptions, perceived ease of use and usefulness are positively associated with the enhancement of teaching performance and other domains of work performance. Bhat and Naikoo (2017) reported that ICT orientation enhances the job performance of teachers by improving their lecture delivery skills, competence, job knowledge and interpersonal communication. Furthermore, it enables teachers to stay up-to-date with their professional knowledge, manage their workload and provide access to various information sources through online libraries and databases. Therefore, we hypothesize:

H6. ICT orientation facilitates adaptive performance.

Mediating role of information and communication technology orientation

Work engagement can be described as a positive and fulfilling mental state that is closely linked to work and is characterized by vigor, dedication and absorption, as defined by Schaufeli (2017). When individuals are more engaged in their work, they tend to experience heightened levels of vigor, dedication and absorption (Cacciamani et al., 2022). Existing research indicates that when teachers are more engaged and active in their roles, they are more likely to embrace new challenges (Schaufeli and Bakker, 2010) and display a positive attitude toward learning new opportunities (Çayak, 2021) even in the field of ICT. Recent studies have demonstrated that a higher level of work engagement among teachers leads to a greater interest in receiving ICT training (Cacciamani et al., 2022). Moreover, Li et al. (2022) have suggested that the work engagement of teachers plays a significant role in predicting their continuous professional development, which supports the findings of Cacciamani et al. (2022) that ICT skills are not only essential for a teacher’s pedagogical repertoire but also a vital aspect of their professional growth. Therefore, we posit that higher levels of work engagement among teachers will result in a more effective orientation toward ICT.

Taking the context of task performance into consideration, ICT orientation develops various work components and improves the performance of employees by enhancing communication, information circulation, promoting employee participation and speed up
administrative decision-making (Bhat and Naikoo, 2017; Eric, 2010; Olayanju and Asogwa, 2010). ICT competency facilitates knowledge sharing, thereby improving the overall job performance (both task and contextual) of lecturers (Suryanto et al., 2022). Certain studies have emphasized that technology usage (both devices and application) increases job satisfaction, boosts the task performance by determining psychomotor performance and motivation and positively affects the job performance (Varga and Révéz, 2023; Moqbel et al., 2013; Patel and Jasani, 2010). Recent research has also demonstrated that reported ICT-based smart work significantly affects the task performance of employees (Ko et al., 2021).

Research in the context of contextual performance has highlighted that the usability of ICT has fundamentally transformed the way in which employees operate and conduct themselves within their respective work environments, thereby allowing for increased flexibility and the fostering of positive interpersonal relationships, cooperation and self-improvement in behavior (Ben Youssef et al., 2014). The utilization of ICT has greatly facilitated employees in achieving commendable levels of work productivity through the promotion of interaction, collaboration, learning and teamwork among them (Oghenekaro and Olakumle, 2022). Bhat and Bashir (2017) found a significant correlation between all the dimensions of ICT orientation, namely, advantage, compatibility, ease of use and perceptions and the contextual performance of university educators. Youssef et al. (2012) investigated the impact of ICT usage frequency on employee contextual performance, highlighting the crucial role of ICT in improving collaboration, cooperation and flexibility among employees, as well as enabling them to acquire cooperation skills through personal experiences and engaging in cooperative behavior in their work settings. Recent studies have also reported that ICT competency facilitates knowledge sharing among teachers and enhances their contextual performance (Suryanto et al., 2022).


Therefore, in the light of above discussion, we hypothesize:

\[ H7. \] ICT orientation mediates the relationship between work engagement and task performance.

\[ H8. \] ICT orientation mediates the relationship between work engagement and contextual performance.

\[ H9. \] ICT orientation mediates the relationship between work engagement and adaptive performance.

**Methodology**

**Sample and procedure**

To collect the required data questionnaire survey method was used in the present study. The population of the present study encompasses all the teachers teaching in higher educational institutes of India, which amounted to 1,503,156 in the year 2019–2020, out of
which 57.5% are male and 42.5% are females. Out of the total population, 2.14 lakh are teaching at the university level, 11.3 lakh at the college level and 1.57 lakh at standalone institutions (AISHE, 2019/2020). The data for the present study were collected by using the convenient sampling method via dual mode i.e. online as well as offline. The researchers approached various higher educational institutions in North India. Teaching professionals were contacted, and the required details were discussed. After repeated reminders, 1,098 responses were received. The responses were evaluated for completeness, respondent disengagement, missing value and outlier (Hair et al., 2010). Sixty-eight responses were rejected due to one or the other above reasons. The final data set comprises 1,030 responses.

**Sample profile**
Out of 1,030 respondents, 57.60% were male teachers and 42.20% were female teachers, 38.21% of respondents belong to rural areas and 61.78% belong to urban areas, 65.08% possesses less than 15 years of experience and 34.92% possessed experience of above 15 years, 27.93% of teachers belong to the age group of less than 35 years, 44.42% of teachers belong to the age group of 36 to 45 years of age group, 19.68% of teachers belong to 46–50 age group and 7.95% of teachers belong to the age group of 51 and above.

**Nonresponse and common method bias**
To test the nonresponse bias, the researchers analyzed the mean differences by using a t-test between early 160 and later 160 responses, which is in line with Naqshbandi (2016); no significant differences were found between the two groups \((p > 0.05)\) ruling out the possibility of nonresponse bias in the sample of the present study (Boström et al., 1993). Likewise, to avert common method bias in the data apart from mixing the items of variables, Harman’s single factor test was used to check the common method bias. According to Podsakoff et al. (2003), in EFA, every item shall explain less than 50% of the variance in the unrotated solution when the number of the factors is constrained to 1. In the present study, no item explained the variance above 50%, providing sufficient evidence that data is free from common method bias.

**Data normality**
To test the normality of the sample, skewness and kurtosis of all the variables were calculated with the help of SPSS 21. The results revealed that skewness values ranged between \(-2\) and \(+2\) and kurtosis values ranged between \(-7\) and \(+7\), providing evidence of univariate normality (Curran et al., 1996). Furthermore, the analysis of scatter plots, PP plots, QQ plots and normality tests revealed data followed a normal distribution pattern; also, the sample size was greater than 200, thereby ruling out the detrimental effects of normality (Hair et al., 2010).

**Measurements**
*Work engagement:* In the present study, a well-known 17-item scale covering three domains vigor, dedication and absorption, developed by Schaufeli et al. (2006), was used to tap the work engagement of teachers working in the Indian higher education system.

*ICT orientation:* To tap the ICT orientation of teachers, a 15-item scale based on the four-factor ease of use, advantage, compatibility and perception developed by Bhat and Bashir (2017) was used in the present study. The scale possesses three reverse-coded statements, which were handled properly during the analysis process.
PJP: In the present study, the PJP scale by Bhat and Beri (2016c) was used. The first factor, i.e. task performance, is tapped with the help of 15 items. The second domain, i.e. contextual performance, was measured by 10 items, and the third dimension, i.e. adaptive performance, was scaled with the help of 18 items. Out of 43 items, the scale includes 11 reverse-coded items, due care of which have been taken during the analysis.

Findings

Control variables
For the identification of the control variable, researchers applied a one-way analysis of variance (ANOVA) test for the variable that possibly could have some effect on task, contextual and adaptive performance. It came to the fore that age group ($F = 1.44, p < 0.05$) and experience ($F = 1.57, p < 0.05$) showed significant differences with respect to the task performance of teaching professionals. Conversely, there was no significant difference for task performance in the case of gender and locale. Similarly, for contextual performance, significant differences were found for age group ($F = 1.48, p < 0.05$) and locale ($F = 1.47, p < 0.05$) and no significant differences were found for contextual performance in the case of gender and experience. For adaptive performance, significant differences were found for age group ($F = 1.65, p < 0.05$) and experience ($F = 1.62, p < 0.05$). However, no significant differences were found for adaptive performance in the case of gender and locale. Therefore, age group, gender and experience of teaching professionals were used as control variables for further analysis.

Correlations and descriptive statistics
Perusal of Table 1 revealed that there is a significant and positive association between work engagement and ICT orientation ($r = 0.228, p < 0.01$), task performance ($r = 0.387, p < 0.01$), contextual performance ($r = 0.496, p < 0.01$) and adaptive performance ($r = 0.488, p < 0.01$). In addition, ICT orientation of teaching professionals was found significantly related with task performance ($r = 0.491, p < 0.01$), contextual performance ($0.468, p < 0.01$) and adaptive performance ($r = 0.504, p < 0.01$).

Hypothesis
Researchers used AMOS 20 for running analysis. Before proceeding with the analysis, the researchers assessed the structural model. The indices of model fit were found in the acceptable range like chi-square = 39.27, CFI = 0.981, GFI = 0.991, CMIN/DF = 2.18, RMSEA = 0.034 providing sufficient evidence for the structural model is a good fit for the data. The hypotheses testing showed the following results.

The perusal of Table 2 reveals that the relationship between work engagement (independent variable) and dependent variables task, contextual and adaptive performance

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>WE</th>
<th>ICTOR</th>
<th>TP</th>
<th>CP</th>
<th>AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE</td>
<td>81.66</td>
<td>9.0</td>
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<td>ICTOR</td>
<td>56.04</td>
<td>6.8</td>
<td>0.228**</td>
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<tr>
<td>TP</td>
<td>23.16</td>
<td>9.0</td>
<td>0.387**</td>
<td>0.491**</td>
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<tr>
<td>CP</td>
<td>21.78</td>
<td>4.80</td>
<td>0.496**</td>
<td>0.468**</td>
<td>0.866**</td>
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<td>AP</td>
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<td>9.90</td>
<td>0.488**</td>
<td>0.504**</td>
<td>0.970**</td>
<td>0.941**</td>
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</tr>
</tbody>
</table>

Table 1. Correlations

Notes: **Correlation is significant at the 0.01 level (two-tailed). $p < 0.01$, $N = 1,031$; ICTOR = ICT orientation; TP = task performance; CP = contextual performance; AP = adaptive performance; SD = standard deviation and WE = work engagement
is found significant ($p > 0.01$), thereby providing support to $H1$, $H2$ and $H3$. Analysis of the table also revealed that ICT orientation is significantly related to the task, contextual and adaptive performance, thereby providing support to $H4$, $H5$ and $H6$.

Table 3 shows the results of three proposed hypotheses signifying the mediating role of ICT orientation in the relationship between work engagement and task, contextual and adaptive performance. The observation of the analysis showed that after introducing ICT orientation as a mediator, the relation of work engagement with the task ($\beta = 0.426$, $p < 0.001$), contextual ($\beta = 0.421$, $p < 0.001$) and adaptive performance ($\beta = 0.419$, $p < 0.001$) is still significant. The magnitude of these relationships has changed considerably, suggesting a significant partial mediation. Therefore $H7$, $H8$ and $H9$ are partially supported. The path coefficients are shown in Figure 2.

**Discussion**

The aim of this paper is to assess and elucidate the significance of work engagement on the diverse aspects of PJP in higher education institutions, an area that has not been adequately explored in existing educational literature. This paper is unique in that it highlights the fundamental mechanism of these connections through ICT orientation, which is also a novel contribution. A total of 1,030 respondents were surveyed to first validate the adequacy of the measures and second, to examine the hypothesized relationships. The findings of this study reveal the direct and indirect influence of work engagement on various facets of PJP. The results provided support for all nine hypotheses, which were developed based on a rigorous review of the literature.

The first three hypotheses ($H1$, $H2$ and $H3$) predicted the positive influence of work engagement on task, contextual and adaptive performance. The findings of the study provided support for all three hypotheses, indicating that engaged employees exhibit high levels of energy and enthusiasm, possess a strong sense of connection to their work, demonstrate a genuine fondness for their job and display resilience, all of which significantly contribute to their job performance. Previous research has suggested that positive interrelating behaviors enhance focus, effort and pride in the workplace, thereby making a significant contribution to employees’ task performance (Basit, 2019; Ohemeng et al., 2020). The current findings further validate the proposition that work engagement

<table>
<thead>
<tr>
<th>Relationship</th>
<th>SE</th>
<th>CR</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP ← WE</td>
<td>0.090</td>
<td>7.53</td>
<td>0.001</td>
</tr>
<tr>
<td>CP ← WE</td>
<td>0.075</td>
<td>5.68</td>
<td>0.001</td>
</tr>
<tr>
<td>AP ← WE</td>
<td>0.022</td>
<td>9.22</td>
<td>0.001</td>
</tr>
<tr>
<td>ICTOR ← WE</td>
<td>0.012</td>
<td>6.24</td>
<td>0.001</td>
</tr>
<tr>
<td>TP ← ICTOR</td>
<td>0.056</td>
<td>11.38</td>
<td>0.001</td>
</tr>
<tr>
<td>CP ← ICTOR</td>
<td>0.037</td>
<td>16.54</td>
<td>0.001</td>
</tr>
<tr>
<td>AP ← ICTOR</td>
<td>0.061</td>
<td>23.15</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 2. Relationships

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Direct without mediator</th>
<th>Direct with mediator</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP ← ICTOR ← WE</td>
<td>0.264 (0.002)</td>
<td>0.426 (0.001)</td>
<td>Significant Partial mediation</td>
</tr>
<tr>
<td>CP ← ICTOR ← WE</td>
<td>0.167 (0.003)</td>
<td>0.421 (0.001)</td>
<td>Significant Partial mediation</td>
</tr>
<tr>
<td>AP ← ICTOR ← WE</td>
<td>0.261 (0.002)</td>
<td>0.419 (0.001)</td>
<td>Significant Partial mediation</td>
</tr>
</tbody>
</table>

Table 3. Mediation analysis
facilitates adaptive performance. Marlow (2016) and Bakker and Demerouti (2017) explained this relationship by arguing that work engagement occupies a unique position in its interaction with adaptability and possesses the capacity to adapt and cope more effectively. Employees who are sincerely devoted to their work exhibit higher levels of contextual performance compared to their counterparts for various reasons because they are more attuned to the opportunities present in their work environment and are more socially adept, confident and highly optimistic (Christian et al., 2011; Cropanzano and Wright, 2001). While previous studies have examined the relationship between work engagement and PJP, very few have explored the influence of work engagement on the three dimensions of PJP. Therefore, this study makes a novel contribution in this regard.

H4, H5 and H6 examined the association of ICT orientation with task, contextual and adaptive performance, respectively, by suggesting a positive significant relationship. These hypotheses garnered substantial support from the existing literature, which suggests that the orientation toward ICT enhances teaching skills, problem-solving abilities, decision-making capabilities, the handling of job-related challenges, the maintenance of interpersonal relations and the overall quality of work. Previous studies have indeed emphasized that ICT orientation facilitates task performance by promoting knowledge sharing among employees and by reducing temporal and spatial barriers between knowledge and an employee. The literature also acknowledges the pivotal role of ICT in promoting the contextual performance of various professionals (Busch, 2017; Youssef et al., 2012; Tummers et al., 2009; Peckover et al., 2008). Scholars concur that the usage of ICT has significantly influenced the contextual performance of employees at work, enabling them to learn cooperation through their own experiences and engage in cooperative behavior (Youssef et al., 2012). Furthermore, studies have indicated that ICT impacts adaptive performance by enhancing employees’ flexibility through coordination, collaboration, the maintenance of connections and continuous learning (Gareis and Korte, 2002; Bhat and Bashir, 2017).

The hypotheses numbers (H7, H8 and H9) predicted the mediating role of ICT orientation between work engagement and task performance (H7), work engagement and contextual performance (H8) and work engagement and adaptive performance (H9). Results
from the data analysis reveal that the relationship between work engagement and the three facets of PJP is partially mediated by ICT orientation ($H7$, $H8$ and $H9$). The findings indicate that the work engagement of teaching professionals has an impact on their ICT orientation, which in turn enhances various aspects of job performance, including task, contextual and adaptive performance. This study is the first of its kind to elucidate the mediating role of ICT orientation in this relationship. However, prior research supports the idea that work engagement facilitates employees in improving job requirements, focus, effort and pride at work, thereby enhancing task performance (Basit, 2019). Similarly, work engagement aids employees in coping with job-related challenges, motivating them to exert more effort and promoting rule-following and fulfillment of requirements, ultimately fostering contextual performance (Liu et al., 2013; Podsakoff et al., 2000). Furthermore, work engagement enhances workflow, crisis management and employee adaptability, thereby facilitating adaptive performance (Van den Heuvel et al., 2010). Thus, we argue that work engagement has a direct and as well as indirect influence on PJP.

**Theoretical implications**

This paper aims to expand the existing body of knowledge on work engagement, PJP and ICT orientation by providing three main novel insights. First, this research builds upon the JD-R model by offering a more comprehensive understanding of the impact of work engagement on PJP. Previous studies have taken a limited perspective on job performance, treating it as a unidimensional or two-dimensional concept, which fails to capture the various individual dimensions that underlie PJP (Khoreva and Wechtler, 2018; Hu et al., 2015; Hwang et al., 2015; Huang et al., 2014). Therefore, by expanding the conceptualization of PJP, this study contributes to a more holistic understanding of the relationship between work engagement and job performance.

Second, previous research has shed light on the transformative effects of ICT on the educational system, including changes in learning approaches, curriculum revisions, information storage and processing and the provision of new pedagogical tools to higher education instructors (Bhat and Bashir, 2017). In this study, we extend the JD-R model by proposing that the orientation toward ICT may serve as a crucial link between work engagement and the three dimensions that constitute PJP. This is one of the very few studies to highlight the mediating role of ICT orientation in the relationship between work engagement and the three facets of PJP. By exploring the mediating role of ICT orientation, this research provides a unique perspective on the relationship between work engagement and job performance. This perspective adds to the existing literature by highlighting the importance of considering the influence of ICT orientation in understanding the effects of work engagement on PJP.

Finally, this study distinguishes itself by validating a diverse conceptual model within the context of Teachers, using a diverse sample of 1,030 educators from prominent universities in North India. By including a diverse sample, this research ensures that the findings are applicable to a wide range of educators and institutions. This study contributes to the literature by demonstrating that work engagement is highly valued in academia and serves as an important predictor of job performance. Therefore, it is essential to develop a comprehensive theoretical framework for work engagement that not only considers the balance of work demands but also acknowledges its impact on ICT orientation.

**Practical implications**

This study also offers notable implications for practitioners in academia. From a practical standpoint, this study proposes that the orientation toward ICT serves as a means of
support for employees who are actively engaged in their work. Consequently, this support facilitates the achievement of various job-related objectives, streamlines routine tasks associated with their work and enhances efficiency in both teaching and organizational aspects. Hence, administrators within educational institutions ought to enhance their technological infrastructure. Second, administrators in academia should explore methods to enhance the level of work engagement among teaching professionals, thereby strengthening communication and collaboration with colleagues, administrators and the organization as a whole. Third, it is worth noting that ICT orientation contributes to all facets of PJP. Therefore, administrators should prioritize the development and improvement of technological skills of teaching staff. We suggest that administrators in academia should design training programs for faculty regarding new technological developments. The role of ICT has become particularly crucial post-COVID-19 as many universities have started offering either fully remote learning programs or blended learning programs.

**Limitations and future research**

Authors advise caution with respect to the generalizability of the findings from this study because of some limitations. First, this study tested the proposed model in the northern region of India having a distinct geographical and climatic setup. Due to these differences, there are variations in lingual, physical and cultural features among residents of the north and south (Prasanna et al., 2013; Ullrich, 1982). Therefore, the authors do not claim the generalizability of the results. Future research can extend data collection to other regions of India and also to other countries to access differences. Second, responses were collected through a convenient sampling technique, ruling out the randomization of respondents. Future research can include randomized comprehensive data covering all the regions of India. Third, this study was conducted on educators working at the tertiary level of institutions i.e. colleges and universities, abandoning primary, middle, secondary and senior secondary levels of educators. Future research can be extended to educators working at all levels of the education system. Fourth, this study was conducted in an emerging economy (India) where resources are limited to the educational system. Future research can be extended to developed countries as well, which will provide insight by comparing the infrastructure and training facilities.

**References**


Further reading

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