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Impact of digital HRM on academicians' performance: exploring the mediating role of organisational commitment

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Abstract: This study examines how digital human resource management (HRM) practises affect academic performance through organisational commitment. Digital HRM concepts like assessment calculation and performance signals are examined. The study randomly selected 200 notable university professors. Data was analysed using SPSS-21 using a valid questionnaire. Digital HRM practises are assessed utilising e-trainings, e-communication, e-performance appraisal, and e-performance, while scales measure performance and commitment. Regression, descriptive statistics, and path analysis analyse research. Organisational commitment mediates digital HRM features' indirect effect on performance assessment. Communication, appraisal, and transparency in digital HRM impact performance assessment. Three organisational commitment factors hardly slightly affect performance assessment. Further investigation demonstrates that digital HRM elements indirectly affect performance assessment, most notably training. HR-organised training improves faculty performance. Performance assessment benefits from affective commitment, but normative and ongoing commitments hurt it. This study examines how digital HRM practises affect academic achievement and how organisational commitment mediates this. The findings highlight the need for concentrated e-training and HR practises that encourage affective commitment while removing negative influences from other commitment forms. This research adds to the HRM digital transformation discussion and its effects on academic performance and commitment.

Keywords: digital human resource management; HRM; academic performance and commitment; mediating role of organisational commitment; data-driven approach; teaching profession; higher education; performance evaluation methods.

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1 Introduction

Modern businesses, industries, and academic institutions have embraced technological advancements in pursuit of organisational excellence and operational efficiency. Among the key areas witnessing a transformation is the human resource management (HRM) domain, where digital technologies are revolutionising traditional practices. Integrating digital HRM practices has become increasingly prevalent in academic institutions seeking to optimise faculty management and enhance overall performance. This study explores the impact of digital HRM on the performance of academicians, specifically examining the mediating role of organisational commitment in this relationship. Digital HRM, known as e-HRM, represents a modern shift in managing human resources (HR), integrating technology into its core processes. This digital transformation in HRM is not just a mere upgrade to existing systems but a significant leap toward more efficient and streamlined operations. It allows HR managers to effectively devise and apply HR policies while maintaining detailed attendance records for members (Ocoró et al., 2023). This system extends beyond administrative tasks, enabling HR managers to track and evaluate individual work contributions, which is crucial in understanding and optimising workforce productivity within an organisation.

Implementing digital HRM has also brought a paradigm shift in how faculty members engage with the HR department. One of the critical features of this approach is the ease of access it provides to faculty members regarding their performance evaluations and feedback. This accessibility fosters a culture of openness and transparency between the faculty and the HR department, which is essential in building trust and ensuring faculty members align with the organisation's goals and values. Moreover, this transparency is not just limited to performance evaluations; it also encompasses various aspects of HR operations, including recruitment, training, development, employee benefits management, and more (Srinivas et al., 2023). The digitisation of HR processes has also led to a more data-driven approach, enabling HR managers to make informed decisions based on accurate and real-time data (Tambaip et al., 2023). This significantly impacts the overall efficiency and effectiveness of HR operations, as it reduces manual errors and streamlines processes, resulting in better resource allocation and enhanced employee satisfaction. Overall, digital HRM represents a significant advancement in HRM, leveraging technology to optimise HR operations and improve the overall employee experience (Sabti et al., 2023).

The quality of education is intrinsically linked to the competency and dedication of the teaching staff. Dedicated and fulfilled teachers have been associated with effective teaching and a positive attitude towards their profession (Deng et al., 2023). Consequently, attracting and retaining committed individuals in the teaching profession is essential to elevate the overall quality of education. Understanding how digital HRM practices influence faculty commitment and performance is crucial in this pursuit (Tripathi and Al-Zubaidi, 2023). As outlined by Mohammad (2020), the concept of organisational commitment highlights the critical role of employees' identification with management and the internalisation of organisational values in shaping an institution's culture and overall success. This commitment is not merely about loyalty or tenure but encompasses a deeper connection where employees align their values and goals with the organisation's (Jasper et al., 2023b). In institutions where this level of commitment is high, one often observes robust organisational cultures that support and actively foster environments conducive to growth, innovation, and enhanced performance. This

observation underscores the importance of exploring the intricate relationship between digital HRM, faculty commitment, and performance in educational institutions (Usman and Ullah, 2024). Digital HRM, with its advanced tools and strategies for managing HR, can significantly influence how faculty members perceive and engage with their organisation. By examining how digital HRM practices impact faculty commitment and, in turn, how this commitment influences organisational performance, we can gain a deeper understanding of the factors that contribute to the success of educational institutions (Raj et al., 2024). This exploration is especially relevant in the modern era, where digital transformation reshapes traditional organisational structures and processes. It is imperative to understand how these changes affect fundamental aspects of organisational culture and success (Varmann et al., 2023).

Within the Coimbatore district's academic institutions, digital HRM practices have been adopted through various digital platforms, including the enterprise resource planning (ERP) system (Mosca, 2020). ERP systems offer a centralised repository for maintaining faculty records and performance data, leading to efficient data management and informed decision-making. Faculty performance evaluations and considerations of commitment levels play an integral role in determining rewards, incentives, and opportunities for professional growth (Makridakis, 2017). This research paper aims to conduct a comprehensive survey and analysis to evaluate the role of digital HRM in academic institutions within the Coimbatore district. By investigating the impact of digital HRM constructs, such as e-trainings, e-communication, e-performance appraisal, and e-performance, on faculty commitment and performance, this study provides valuable insights into fostering a culture of excellence and dedication among academicians. The findings of this study will contribute to the ongoing discourse on digital transformation in HRM and its implications for academic institutions, with implications for future research and policy-making.

2 Literature review

The relationship between HRM practices and organisational commitment has been of increasing interest among researchers. Several studies have explored the mediating role of positive psychological capital in this linkage, shedding light on the significance of employee well-being and resilience within the organisational context.

Al-Kharabsheh et al. (2023) conducted a study focusing on the mediating role of positive psychological capital in the connection between HRM practices and organisational commitment. Their research highlighted the influence of four dimensions of positive psychological capital: resilience, optimism, hope, and self-efficacy as mediating factors in this relationship. While three dimensions exhibited a mediating effect on organisational commitment, resilience was found to have a negative impact on commitment. The study emphasised the importance of investigating positive psychological capital as a key mediating variable and its implications for organisational development and overall impact on other relevant variables.

Topolinski (2014) explored the influence of teacher leadership on teaching and learning, particularly focusing on teachers' knowledge and change in instructional practices in low-performing schools. The study involved 740 teachers from 35 schools identified as priority schools. The research revealed the crucial role of informal

professional learning in supporting teacher leadership and collaboration between teachers. Formal and informal teacher leadership and formal professional learning emerged as key factors affecting instructional practices in low-performing schools. The study highlighted the immense pressure teachers' face in these schools and the need for adequate support and development opportunities.

Adekola and Aribisala (2023) delved into the intricacies of HR practices and their direct influence on employee performance, presenting a significant contribution to the existing body of HR literature. Their research, which falls under the domain of descriptive studies, was meticulously conducted with a sample size of 250 employees drawn from various banking institutions. The methodological rigour of their approach is evident in their use of random sampling, a technique that ensures a representative cross-section of the banking sector and adds validity to their findings. The study's focus on a range of HR practices, such as training and development, employee engagement, competence, recognition, leadership, and compensation, is particularly noteworthy as it provides a comprehensive view of the multifaceted nature of HR's impact on workforce efficiency.

The study stands out in its methodical examination of these HR practices, revealing them to be significant drivers that directly shape employee performance. This is an important finding in HR management research, as it underscores the need for organisations to invest in these areas to enhance employee performance and achieve broader organisational goals. Anand et al. (2023) research contributes to a deeper understanding of the relationship between HR practices and employee performance, particularly in the banking sector, which has unique challenges and dynamics. Their emphasis on the importance of these HR practices in boosting employee performance also suggests potential pathways for future research, especially in exploring how these practices can be optimised and implemented effectively across different organisational contexts. This study, therefore, not only adds to the theoretical understanding of HR management but also offers practical insights for HR professionals and organisational leaders seeking to improve performance and achieve strategic outcomes through targeted HR interventions.

The reviewed literature emphasises the significance of HRM practices in influencing organisational commitment, employee performance, and instructional practices in educational institutions. Positive psychological capital emerges as a critical mediating factor, impacting employees' well-being and commitment to the organisation. Teacher leadership and professional learning also play essential roles in shaping instructional practices, particularly in low-performing schools. These studies collectively contribute valuable insights into optimising HR practices, promoting employee well-being, and enhancing overall organisational effectiveness. Digital HRM has gained increasing attention in recent years as organisations across various sectors strive to leverage technological advancements for improved performance and efficiency. Within the academic sector, understanding the impact of digital HRM on academicians' performance and the role of organisational commitment as a mediating factor has become a significant area of research.

From the literature review perspective, the study by Bhakuni and Ivanyan (2023) significantly contributes to understanding the impact of digital HRM practices on academic performance in higher education institutions. Their research delves into various digital HRM practices, including e-trainings, e-communication, e-performance appraisal, and e-performance tracking, to ascertain how these digital tools and methodologies

influence the performance of academicians. The findings of their study are crucial, as they indicate a positive correlation between the adoption of digital HRM practices and enhanced academic performance. This performance improvement is attributed to several key factors facilitated by digital HRM increased access to training resources, effective communication channels, and transparent performance evaluation methods.

Furthermore, the study sheds light on the role of organisational commitment as a mediator in the relationship between digital HRM practices and academic performance. This aspect is particularly noteworthy as it underscores the importance of faculty member's commitment to their institutions in the context of digital HRM. The research suggests that academicians with higher levels of organisational commitment tend to engage more effectively with digital HRM practices, enhancing their performance. This relationship indicates that organisational commitment not only fosters a conducive environment for implementing digital HRM practices but also amplifies their positive impact on performance. The implications of Dionisio et al. (2023) findings are significant for both theoretical understanding and practical application in the field of HRM in higher education. The study contributes to the existing literature by highlighting the transformative potential of digital HRM practices in the academic sector. It suggests that higher education institutions can leverage digital HRM tools to improve academic performance and strengthen their faculty's organisational commitment. This research provides a foundation for further studies on integrating digital technologies in HRM and their impact on various aspects of academic and institutional performance.

In a study by Jasper et al. (2023a) the researchers investigated the impact of digital HRM on academic staff members' job satisfaction and organisational commitment. They assessed the implementation of e-training initiatives, digital performance appraisals, and e-communication platforms in a sample of academic institutions. The findings revealed that academicians who participated in e-training programs reported higher job satisfaction and stronger organisational commitment. Moreover, the study indicated that digital performance appraisal systems positively influenced academic staff members' commitment to their respective institutions.

Digital HRM practices regarding faculty motivation and performance have also been examined. Joshi et al. (2023) explored the role of digital HRM tools in faculty development and performance evaluation in a higher education setting. Their research highlighted how e-training programs provided academicians with opportunities for skill enhancement and professional growth, leading to increased motivation and commitment. The study demonstrated that faculty members who actively engaged with digital HRM initiatives exhibited higher performance and commitment to their institutions. While most research emphasises digital HRM's positive impact on academicians' performance and organisational commitment, some studies have investigated potential challenges and drawbacks.

Sharma et al. (2022) identified concerns about implementing digital HRM practices in academic institutions. They found that inadequate training and support in using digital HRM platforms, coupled with resistance to change, hindered the full potential of digital HRM initiatives. Despite these challenges, the study acknowledged the potential benefits of digital HRM in enhancing faculty performance and commitment if implemented strategically and with adequate support.

In summary, the literature on the impact of digital HRM on academicians' performance and organisational commitment highlights the potential advantages of

digital HRM practices in improving faculty performance, motivation, and job satisfaction. Organisational commitment emerges as a critical mediating factor, reinforcing the significance of faculty engagement and dedication. However, researchers also recognise the importance of addressing potential challenges and providing adequate training and support for effective digital HRM implementation. Overall, this body of research contributes to understanding how digital HRM can shape academic institutions' effectiveness and faculty success, and it can combine the above literature review and provide us with one final draft.

3 Statement of the problem

The main objective of this study is to investigate the impact of digital HR practices on academicians' performance and organisational commitment. The teaching profession holds a crucial and prestigious position in society, as teachers are responsible for nurturing future leaders, scientists, philosophers, and professionals across various fields. In the current digital era, the implementation of advanced techniques is reshaping various industries, including education, where HR plays a vital role in formulating effective teaching strategies and ensuring student satisfaction, which, in turn, relies on teachers' commitment and performance (Varadaraj et al., 2021).

The active involvement of HR and the commitment of teachers are essential prerequisites for educational institutions' long-term growth and development. However, with changing socio-economic conditions and increasing unemployment rates, teachers' values and professional concerns regarding their jobs have transformed, leading to heightened stress and challenges in the teaching profession. Notably, teachers' commitment and performance are significantly influenced by HR policies. Consequently, it becomes crucial for educational institutions to implement appropriate incentives, increments, and transparent monitoring through HR policies to foster teachers' dedication and create a conducive environment for sustained growth and development (Saxena, 2023).

3.1 Scope of the study

This research explores the relationship between digital HRM, organisational commitment, and their impact on teachers' performance. The study emphasises the significance of HRM in promoting ethical work behaviour and its crucial role in the education system. Researchers have consistently sought to identify the key factors influencing students' achievement and academic excellence in educational institutions. Inattentiveness and lack of commitment among teachers can have detrimental effects on their overall performance and subsequently impact the quality of education provided to students. Therefore, an integrated examination of organisational commitment and digital HRM is essential to understand their combined influence on teachers' performance.

Understanding organisational commitment and its determinants is critical in enhancing teachers' performance, ultimately influencing students' academic outcomes (Saxena, 2023). Teachers who exhibit higher levels of commitment are more likely to foster a conducive learning environment that positively affects students' moral and mental well-being, contributing to their future success and employability. This study will gather valuable data, shedding light on the factors related to organisational commitment,

digital HRM, and teachers' performance, ultimately leading to informed decision-making and improvements in the education sector.

3.2 Objective of the study

The study is focused on the following objectives:

- Perception of faculties towards digital HRM: this explores how faculty members view their institutions' digital HRM systems. It assesses their attitudes, satisfaction, and acceptance of technology-driven HR practices.
- Relationship between organisational commitment and performance assessment: this examines how organisational commitment factors, like loyalty and dedication, correlate with how employees' performances are evaluated and assessed.
- Performance assessment of arts and science faculties in ERP: this involves evaluating the performance of arts and science faculty members using scores generated by an ERP system. It measures their effectiveness and productivity based on this technology-based scoring system.
- Relationship between digital HRM perception, commitment, and teacher performance: This explores how teachers' views on digital HRM systems relate to their commitment to the institution and overall performance. It assesses the interconnectedness of these aspects in an educational setting.

4 Research methodology

- Area of the study: the research is focused on the Coimbatore district, specifically targeting teachers working in arts and science colleges.
- Sampling and sample design: the study employs a random sampling technique to select a representative sample of teachers from various aided, self-financed, and government arts and science colleges in the Coimbatore district. The sample size was determined using the Taro Yamini method, and 400 teachers were included in the study.
- Source of data: the research relies on primary data from a structured questionnaire administered to arts and science teachers. Additionally, relevant secondary data is sourced from academic journals, websites, published and unpublished books, and online and offline reports.
- Pilot study: before the main data collection, a pilot study is conducted with 30 respondents through an interview schedule. Based on the pilot study results, necessary changes are made to the questionnaire to ensure its validity and reliability. Cronbach's alpha coefficient is used to assess reliability, and the questionnaire is validated by consulting academicians, subject experts, and statisticians.
- Framework of analysis: the collected data is analysed using various statistical tools, including percentage analysis, mean, standard deviation, and path analysis.

4.1 Significance of the study

This research highlights the critical role of digital HRM in enhancing commitment and performance among higher education educators. Its findings offer important perspectives on digital HRM's function in educational settings, encouraging more academic exploration in this field. The study also lays the groundwork for future research on digital HRM's effects on various organisational and behavioural outcomes. The results of this study are particularly relevant for teachers, offering them a deeper understanding of digital HRM and its impact on their performance. It also helps resolve discrepancies between HR policies and performance evaluation methods, emphasising the need for coordinated efforts to achieve salary increments. As millennials increasingly adopt digital HRM strategies across different sectors, this study's findings could be instrumental in advancing digital integration in academic contexts. The insights obtained could also support government initiatives to enhance arts and science education and aid teachers in preparing future generations. This study provides valuable information on how digital HRM interacts with teacher commitment and performance, enriching our understanding of HR practices in the educational realm and guiding organisational improvements.

4.2 Inference of the analysis

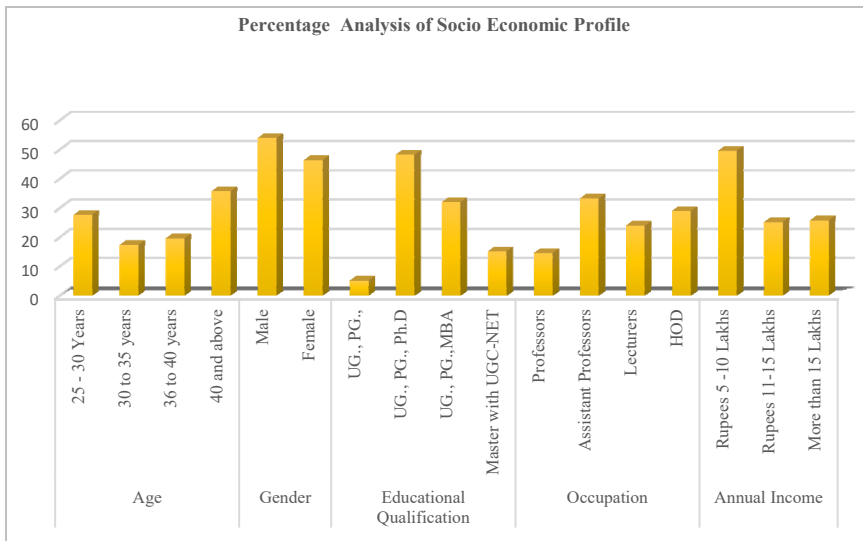
The simple percentage analysis revealed interesting patterns among the respondents (Figure 1). It was observed that most of the respondents were male, and notably, individuals above 40 constituted the highest proportion among the participants. The sample also consisted of many faculties with doctorate degrees and assistant professors. Furthermore, the highest annual income reported by the respondents fell within the range of 5 to 10 lakh. The collected data was subjected to other statistical tools to gain a deeper understanding of the relationships between variables, including path analysis with multiple regressions for the dependent variables. These analytical approaches aimed to provide a comprehensive and insightful examination of the factors influencing digital HRM, organisational commitment, and performance among academicians.

However, it is essential to acknowledge certain limitations within this research. While the study has provided valuable insights, there may be opportunities for more extensive investigations and further exploration. Given the complexity and depth of the topic, scholarly researchers may find value in delving deeper into specific aspects or conducting longitudinal studies to assess the long-term impact of digital HRM on academic performance and commitment. The simple percentage analysis has offered valuable initial findings, highlighting key characteristics of the respondent sample. Including additional statistical tools, such as path analysis and multiple regressions, has allowed for a more nuanced understanding of the interrelationships between the variables under study. Nonetheless, this study presents an important stepping stone in the exploration of digital HRM, organisational commitment, and performance among teachers. Further research by scholarly experts in this field could lead to more comprehensive insights and a deeper understanding of the subject matter.

4.3 Regression analysis

The R-value shows a moderate correlation (0.577) between the dependent variable (performance assessment score) and the independent variables digital HRM and organisational commitment (Table 1). The R square value (0.333), expressed in percentage, explains that 33.3% of the variation in the Overall performance score is due to the independent variables. The F value (27.942). F-statistic is used to find whether the multiple correlation (R) value is significant or not. The associated significance level ($P < 0.01$) shows that R is fairly significant at 1%. The t-test statistic calculated for the regression coefficients shows that variables like communication, appraisal, and transparency significantly influence the overall performance score of the respondents at either 5% or 1% level; at the same time, the variables like training, affective commitment, continuance commitment, and normative commitment are not significantly influencing the overall performance score of the respondents at either 5% level or 1% level.

Figure 1 Simple percentage (see online version for colours)



4.4 Path analysis

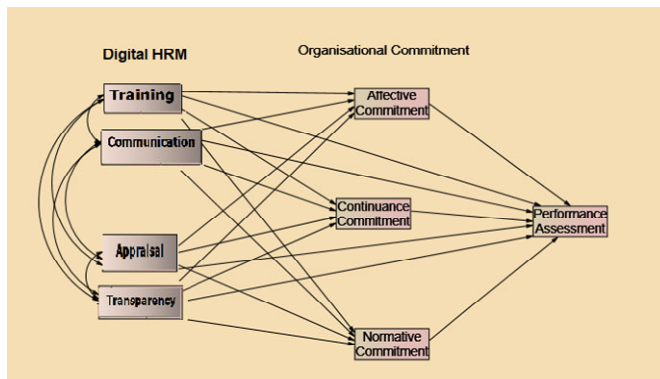
The arrows leading from the digital HRM factors, namely training, communication, appraisal, and Transparency, measure the direct effects of these factors on organisational commitment and performance assessment factors (Figure 2). The direct effects of organisational commitment factors on performance assessment are shown by the leading arrows from the organisational commitment factors to the performance assessment factor. It is also assumed that digital HRM factors have an indirect effect on performance assessment; that is, organisational commitment factors act as a mediating variable to measure the indirect effect of digital HRM on performance assessment. The scores of digital HRM and organisational commitment factors and performance assessment were used in this model to understand their inter-relationships.

Table 1 Regression analysis digital HRM, organisational commitment with performance assessment

<i>Dependent variable: performance assessment</i>					
	<i>Regression coefficients (B)</i>	<i>Std. error</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>
(Constant)	42.541	62.344			
Training	8.899	4.600	0.142	1.835	Ns
Communication	17.857	4.825	0.257	3.711	**
Appraisal	10.538	3.621	0.166	2.920	**
Transparency	8.370	3.464	0.151	2.436	*
Affective commitment	0.320	3.055	0.008	0.103	Ns
Continuance commitment	-3.488	3.925	-0.062	-0.849	Ns
Normative commitment	-0.133	3.243	-0.002	-0.031	Ns
<i>Results of regression analysis</i>					
	<i>R</i>	<i>R Square</i>	<i>F</i>	<i>Sig.</i>	
	0.577	0.333	27.942	**	

Note: **Significant at 5% level (95% Possibility); *Significant at 1% level (99% Possibility), NS: Not significant.

Source: Primary data

Figure 2 Path model showing the relationship between digital HRM, organisational commitment, and performance assessment (see online version for colours)

The above estimates are unstandardised regression estimates. The values given above are the regression estimates of the respective independent variables. Standard errors of respective regression coefficients are given as S.E. Critical ratio is given as C.R., which is the ratio of regression estimate values to S.E. Probability (P) shows which regression coefficients significantly contribute to the dependent variables. **/* under 'Sig.' indicates the respective regression weights are significant at less than 1% or 5%, respectively. Ns indicate the regression weights are not significant. Table 2 shows that among the four digital HRM factors, training, appraisal, and transparency have a significant positive effect on the affective commitment factor of organisational commitment H01 that 'There is a direct positive relationship between digital HRM factors and affective commitment' was accepted to these three factors only.

Table 2 Estimate of path coefficients

<i>Variable to</i>	<i>Path</i>	<i>Variable from</i>	<i>Estimate</i>	<i>S.E.</i>	<i>C.R.</i>	<i>P</i>	<i>Sig.</i>
Continuance commitment	<---	Communication	0.174	0.074	2.368	0.018	*
Normative commitment	<---	Transparency	0.065	0.057	1.131	0.258	Ns
Normative commitment	<---	Appraisal	0.122	0.058	2.120	0.034	*
Normative commitment	<---	Communication	-0.019	0.081	-0.236	0.814	Ns
Affective commitment	<---	Transparency	0.209	0.070	3.002	0.003	**
Affective commitment	<---	Training	0.668	0.086	7.733	0.000	**
Affective commitment	<---	Communication	0.172	0.098	1.753	0.080	Ns
Affective commitment	<---	Appraisal	0.335	0.070	4.776	0.000	**
Continuance commitment	<---	Training	0.444	0.065	6.874	0.000	**
Continuance commitment	<---	Appraisal	0.365	0.053	6.952	0.000	**
Normative commitment	<---	Training	0.442	0.071	6.224	0.000	**
Continuance commitment	<---	Transparency	-0.053	0.052	-1.014	0.311	Ns
Performance assessment	<---	Normative commitment	-0.133	2.938	-0.045	0.964	Ns
Performance assessment	<---	Affective commitment	0.320	2.413	0.133	0.895	Ns
Performance assessment	<---	Training	8.899	4.865	1.829	0.067	Ns
Performance assessment	<---	Continuance commitment	-3.488	3.224	-1.082	0.279	Ns
Performance assessment	<---	Communication	17.857	4.791	3.728	0.000	**
Performance assessment	<---	Appraisal	10.538	3.691	2.855	0.004	**
Performance assessment	<---	Transparency	8.370	3.400	2.461	0.014	*

Note: Regression weights for the path model.

Source: Computed

Communication, training, and appraisal are the three factors that have a significant positive effect on the continuance assessment factor of organisational commitment at either 1% or 5% level. The effect of transparency on continuance commitment was negative and not significant. Hence, Hypothesis H02, which states that 'there is a direct positive relationship between digital HRM factors and continuance commitment', is accepted for these three factors. The regression coefficients of training and appraisal on normative commitment were positive and significant at either 5% or 1%. Communication and transparency have no significant effect on normative commitment. Hence, hypothesis H₀₃, which states that 'there is a direct positive relationship between digital HRM factors and normative commitment', is accepted for training and appraisal only.

The regression coefficients of the three digital HRM factors, namely, communication, balance processing, and transparency, have significant positive effects on performance assessment. In contrast, training has a positive regression weight but has no significant effect on performance assessment. Hence, Hypothesis H04', there is a direct positive relationship between digital HRM and performance assessment', was accepted except for training. The regression coefficients of organisational commitment factors, namely normative commitment, affective commitment, and continuance commitment, are -0.133,

0.320, and -3.488 respectively. Normative and continuance commitments have a negative effect, and affective commitment has a positive effect on performance assessment. However, all three regression coefficients were not significant, and hence, Hypothesis H05 that 'There is a direct positive relationship between organisational commitment factors and performance assessment' is not accepted.

5 Findings of the study

The research findings provide a comprehensive understanding of the relationships between various factors within the context of digital HRM, organisational commitment, and performance assessment among academic professionals. The study employed a combination of percentage, regression, and path analyses to unravel these intricate connections. The results shed light on the significance and influence of different variables, contributing to a more nuanced comprehension of the research domain.

5.1 Percentage analysis

The preliminary analysis, conducted through a simple percentage distribution, yielded intriguing insights into the characteristics of the respondents. Notably, a substantial proportion of respondents were male, with a distinct concentration observed among individuals aged above 40 years. Furthermore, the survey revealed a predominance of faculties possessing doctorate degrees and assistant professor roles. Remarkably, the highest reported annual income range fell between 5 to 10 lakhs, indicating the financial dynamics of the academic professionals under scrutiny.

5.2 Regression analysis

The regression analysis delved into the correlations between variables, uncovering noteworthy patterns. The calculated R-value highlighted a moderate correlation (0.577) between the dependent variable, performance assessment score, and the independent variables – digital HRM and organisational commitment. This correlation implies that as digital HRM practices and organisational commitment increase, the performance assessment score also tends to increase proportionally. The R square value (0.333) provided additional insight, indicating that approximately 33.3% of the variation in the overall performance score can be attributed to the variation in the independent variables – digital HRM and organisational commitment. This suggests a substantial influence of these variables on the overall performance outcomes. The F value (27.942), known as the F-statistic, was employed to ascertain the significance of the multiple correlations (R-value). Importantly, the associated significance level ($P < 0.01$) underscored the statistical significance of the correlation at the 1% level. This compelling statistical support accentuates the substantial influence of digital HRM and organisational commitment on the overall performance assessment outcomes.

5.3 Path analysis

The path analysis, a comprehensive tool for dissecting intricate relationships, revealed multifaceted insights into the interplay between digital HRM factors, organisational commitment, and performance assessment.

- Affective commitment: the analysis validated Hypothesis H01, affirming a direct positive relationship between certain digital HRM factors and affective commitment. Specifically, appraisal, transparency, and communication were found to have significant positive effects on affective commitment within organisational commitment.
- Continuance commitment: Hypothesis H02 was substantiated, indicating a positive relationship between specific digital HRM factors and continuance commitment. Internalised moral perspective, appraisal, and communication emerged as significant influencers of continuance commitment within organisational commitment.
- Normative commitment: the study upheld Hypothesis H03 for training and communication, which exhibited positive and significant effects on normative commitment within organisational commitment. However, internalised moral perspective and transparency did not have significant effects.
- Performance assessment: Hypothesis H04 was confirmed for most digital HRM factors, except appraisal. Appraisal, though displaying a positive regression weight, did not achieve statistical significance in its impact on performance assessment. This implies that a direct positive relationship between digital HRM and performance assessment holds, excluding appraisal.
- Organisational commitment and performance assessment: contrary to expectations, Hypothesis H05, proposing a direct positive relationship between organisational commitment factors and performance assessment, was not substantiated. The regression coefficients for normative commitment and continuance commitment indicated negative effects, while affective commitment exhibited a positive effect. However, these effects did not achieve statistical significance.
- Path coefficients and influence: the path coefficients illuminated both direct and indirect effects of exogenous (digital HRM Factors) and endogenous (organisational commitment and performance assessment) variables. Appraisal and training emerged as significant influencers across all three organisational factors. Additionally, communication, training, and transparency of digital HRM significantly influence performance assessment.

These findings collectively contribute to a comprehensive understanding of the complex interactions among digital HRM factors, organisational commitment, and performance assessment within the realm of academic professionals. The nuanced insights from the various analyses shed light on the dynamics at play, offering valuable implications for academia and practice alike.

6 Discussion and summary

This research provides an in-depth exploration of the complex interplay between digital HRM factors and their influence on organisational commitment and performance assessment. The investigation primarily focuses on how digital HRM, a modern approach to managing HR through digital tools and platforms, influences Organisational commitment, which refers to employees' psychological attachment and loyalty towards their organisation. This relationship is pivotal as organisational commitment can significantly impact employee performance, job satisfaction, and overall organisational efficiency.

The study goes beyond the direct impact of digital HRM on organisational commitment and performance assessment by examining the reciprocal effects of these elements. This perspective acknowledges that while digital HRM practices can influence organisational commitment, it, in turn, can significantly affect how employees are assessed and how they perform. The reciprocal nature of this relationship implies a dynamic interaction where each factor continually influences and is influenced by the other.

The research delves into the mediating role of organisational commitment between digital HRM and performance assessment. This aspect is critical as it suggests that the impact of digital HRM on performance assessment is not direct but is mediated through the level of commitment employees feel towards their organisation. A higher level of organisational commitment could enhance the effectiveness of performance assessment, leading to more accurate and fair evaluations of employee performance.

To validate these relationships, the study employed a path model, a statistical tool to illustrate the directed dependencies among a set of variables. This model was meticulously developed to encapsulate the complex interconnections among digital HRM, organisational commitment, and performance assessment. The assessment of the model's goodness of fit was a crucial part of the research, ensuring that the model accurately represents the data and the relationships among the variables.

The model's robustness was affirmed through various established fit statistics, including the Chi-square minimisation (CMIN), goodness of fit index (GFI), normed fit index (NFI), comparative fit index (CFI), and the root mean square error of approximation (RMSEA). These statistical measures provided a comprehensive assessment of the model's fit. CMIN evaluates the discrepancy between the observed and predicted covariance matrices, with lower values indicating a better fit. GFI measures the proportion of variance accounted for by the estimated population covariance, with values closer to 1 indicating a good fit. NFI and CFI are comparative measures that assess the model fit relative to a null model, with values closer to 1 indicating a superior fit. RMSEA assesses the fit per degree of freedom, allowing for the evaluation of model complexity, with lower values indicating a better fit.

Utilising these fit statistics ensures a rigorous and reliable assessment of the path model. Their affirmative results strongly validate the hypothesised relationships among digital HRM, organisational commitment, and performance assessment. This robust model not only underscores the significance of digital HRM in shaping employee commitment and performance but also highlights the intricate dynamics between these organisational factors.

The study offers valuable insights into the multifaceted nature of organisational dynamics in the digital age. It elucidates the critical role of digital HRM in enhancing organisational commitment and performance assessment and sheds light on the complex reciprocal effects these elements have on each other. The mediating role of organisational commitment between digital HRM and performance assessment provides a new perspective on employee management strategies. The rigorous validation of the path model through established fit statistics underlines the study's methodological rigour and the reliability of its findings. This research contributes significantly to HRM, particularly in the context of digital transformation, and offers practical implications for organisations aiming to leverage digital tools for effective HRM and performance assessment.

6.1 Unveiling the influences: path analysis

The core objective of this study was to untangle the intricate web of relationships among key variables. The path analysis endeavoured to discern the influence of specific digital HRM factors – appraisal, transparency, training, and communication – on organisational commitment factors: affective commitment, continuance commitment, and normative commitment. Furthermore, it explored the potential effects of organisational commitment on performance assessment, shedding light on the reciprocal dynamics between commitment and performance.

6.2 Validating the model: goodness of fit assessment

The proposed path model was scrutinised through goodness of fit statistics, including CMIN, GFI, NFI, CFI, and RMSEA. These metrics served as critical benchmarks to evaluate the alignment between the hypothesised model and empirical data. The outcomes of these assessments indicated that the proposed model effectively captured the intricate interplay between digital HRM factors, organisational commitment factors, and performance assessment. The model exhibited a strong fit, bolstering its credibility and validity.

6.3 Insights into influence: path coefficients and effects

Estimating path coefficients provided valuable insights into the strengths and directions of the relationships among the variables under investigation. Remarkably, training and appraisal within digital HRM emerged as influential factors across all three dimensions of organisational commitment – affective commitment, continuance commitment, and normative commitment. These findings underscore the critical role of these factors in shaping educators' commitment levels within the organisational context. Furthermore, the study unveiled that performance assessment was notably influenced by communication, appraisal, and transparency among the digital HRM factors. This underscores the importance of open communication channels, transparent appraisal processes, and clearly defined expectations in enhancing teachers' performance assessment outcomes. Interestingly, none of the three organisational commitment factors significantly influenced performance assessment, pointing to a nuanced relationship between commitment and performance. Significantly, the analysis also unearthed that digital HRM factors exerted both direct and indirect effects on performance assessment.

Training emerged as a potent contributor to performance assessment, implying that its impact is channelled through organisational commitment factors. This underscores the cascading influence of effective training practices in nurturing commitment, ultimately leading to improved performance outcomes.

6.4 Implications and avenues for future research

The findings from this study hold far-reaching implications for educational institutions and policymakers. Identifying training and appraisal as consistent influencers of organisational commitment factors underscores the need for targeted interventions to bolster these aspects. By augmenting training initiatives and refining appraisal frameworks, institutions can cultivate a more dedicated and motivated faculty, fostering a positive organisational environment and driving enhanced educational outcomes. Moreover, the study's insights illuminate the pivotal role of digital HRM factors, particularly communication, appraisal, and transparency, in shaping the landscape of teachers' performance assessment. These findings offer practical guidance for institutions to optimise their HR practices, facilitating transparent communication channels and refined appraisal mechanisms aligned with educators' performance aspirations. As this study contributes significantly to the ongoing discourse surrounding digital HRM, organisational commitment, and performance assessment, it also lays the groundwork for future research endeavours. Subsequent investigations could explore the intricate interplay between job satisfaction, well-being, and performance outcomes. Longitudinal studies might offer insights into the enduring effects of digital HRM practices on educators' professional trajectories and student achievements.

7 Conclusions of the study

The study's main objective was to ascertain the influence of digital HRM and organisational commitment on academic performance assessment. The findings consistently show that digital HRM has a more substantial and direct impact on performance assessment than organisational commitment factors. This indicates that adopting digital HRM practices, including e-trainings, e-communication, e-performance appraisal, and e-performance tracking, plays a significant role in shaping the efficiency and effectiveness of academic staff. One of the key observations from the study is the role of training initiatives organised by HR in motivating academic staff. These initiatives, facilitated through digital platforms, enhance skill sets and instil a sense of innovation and adaptability in the faculty. The digital nature of these practices enables a more dynamic, responsive, and personalised approach to faculty development, leading to heightened performance levels. Another intriguing aspect of the study is examining the mediating role of organisational commitment in the relationship between digital HRM and performance assessment. The results indicate that although organisational commitment is a factor, its impact is relatively minimal compared to the influence of digital HRM. This is particularly noteworthy as it highlights the changing dynamics in educational environments, where digitalisation is increasingly becoming a more powerful tool for managing and enhancing faculty performance.

Interestingly, the study also reveals that different types of organisational commitment normative, continuance, and affective have varying effects on performance assessment. While normative and continuance commitments appear to have a negative impact, affective commitment shows a positive effect. This differential impact further underscores the complexity of organisational commitment as a factor in performance assessment and reinforces the greater efficacy of digital HRM practices. The study's findings are instrumental in illustrating the dynamic and transformative nature of digital HRM in educational settings. By integrating digital technology into HR practices, educational institutions can cultivate a more engaged, motivated, and efficient faculty. This approach enhances individual performance and aligns faculty efforts with organisational goals, fostering a collaborative and goal-oriented academic environment. The research highlights the crucial role of digital HRM in fostering a culture of passion and commitment among faculty members. Through digital platforms, HR practices can be monitored and optimised more effectively, leading to a more engaged and committed faculty. This, in turn, drives them towards achieving personal and organisational goals, thereby enhancing the overall effectiveness of educational institutions.

The study provides valuable insights into the relationship between digital HRM, organisational commitment, and performance assessment. It emphasises the vital role of digital HRM in surpassing the influence of traditional organisational commitment factors. By adopting and optimising digital HRM practices, educational institutions can significantly enhance faculty performance, passion, and dedication, ultimately contributing to achieving common educational goals. This research is a crucial guide for educational institutions and practitioners, offering strategic directions for leveraging digital HRM to improve faculty performance and institutional effectiveness. It marks a significant step forward in understanding the evolving dynamics of HRM in the context of academia, suggesting a paradigm shift towards digitalisation for optimal performance and institutional success.

7.1 Suggestion for the upcoming scholarly people

- An attempt can be made to study the impact of digital HRM, organisational commitment, and overall performance assessment on schools, government colleges, and even in other fields like hospitals, IT sectors, and multinational companies.
- The relationship between PA and OC needs to be explored further in other contexts, such as public-and private-sector organisations, to generalise the results.
- The more experienced teachers show better teacher commitment than less experienced teachers. Hence, institutions should facilitate programs where more experienced teachers can share their experience and knowledge with less experienced teachers and senior teachers must give teachers orientation programs. Rewards to less experienced teachers may act as a drive or stimulus.
- In the present study, the correlation result shows a significant positive relationship between teacher commitment and digital HRM practices. If there is a larger teacher commitment, it can be expected that the HR policy effectiveness of engineering teachers will increase.

- The teaching performance of teachers needs to be given great attention to improving the excellence of education. Teachers must take the initiative to improve their performance.
- Teachers with lesser performance should be encouraged to add to their academic qualifications and can attend orientation and refresher programs, short-term courses, and awareness programmers. This would certainly improve their teaching performance.
- The millennials are good at developing applications and using the applications and internet concepts. The other people must be provided with proper training on that note.

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