

Impact of E-Recruitment and E-Performance Appraisals on Job Satisfaction: The Moderating Role of Digital Literacy among Non-Academic HR Staff in State Higher Education Institutions in Colombo.

G.N. Pushpa mallika¹, A.H.U. Perera² and D.M.D.D.N. Dissanayake³

¹Assistant Registrar, Faculty of Business, University of Moratuwa, Sri Lanka

²Senior Lecturer, Department of HRM, The Open university of Sri Lanka

³Lecturer (Unconfirmed), Department of HRM, The Open university of Sri Lanka

²ahper@ou.ac.lk, ³dinusha.d.dissanayake026@gmail.com

Abstract: This study aims to investigate the relationship between e-recruitment, e-performance appraisals, and the job satisfaction of non-academic staff who serve in HR divisions of state Higher Education Institutions in Colombo, while also examining the moderating effect of digital literacy. It looks more closely at how digital literacy influences this relationship. A structured questionnaire was used to gather data from 47 respondents who were chosen from a sample of 100 non-academic HR employees as part of a quantitative study design. SPSS (Version 23) was used to analyze the data to evaluate regression, correlation, validity, and reliability. The results demonstrate that e-recruitment significantly improves work satisfaction, but e-performance reviews and digital literacy have no discernible impact. The study concludes that, unless properly executed, digital transformation is insufficient to increase job satisfaction on its own. Policymakers and university administrators can use the findings to improve HR policies in Sri Lankan HEIs.

Keywords: *Digital Literacy, E-Performance Appraisal, E-Recruitment, Higher Education Institutions, Job Satisfaction, Non-Academic Staff*

Introduction

In Sri Lanka, higher education institutions (HEIs) are vital to the country's growth since they generate knowledge and trained human capital. The majority of state-run higher education institutions (HEIs) are centered in Colombo and are subject to government control. Universities and associated institutions work together under administrative frameworks. These universities struggle with human resource management, especially when it comes to non-academic staff, despite their stellar academic records and widespread recognition. Non-academic staff members are crucial to maintaining efficient institutional operations, particularly those employed in HR departments. To increase efficiency and transparency, several organizations have embraced digital HR practices including e-recruitment and e-performance appraisal systems as a result of technological advancements. Although digital transformation will improve employee performance (Raman, 2019). Additionally, the degree of digital literacy among staff may affect how effective these systems are. Thus, the purpose of this study is to investigate if digital literacy has a moderating effect on the relationship between e-recruitment and e-performance appraisal and job satisfaction.

Problem Statement

State Higher Education Institutions (HEIs) have issues with non-academic staff performance and job satisfaction. Many state HEIs have implemented technology-driven HR practices, such as electronic recruiting (e-recruitment) and electronic performance appraisal (e-performance appraisal) systems, in response to global trends and the increasing focus on digital transformation. The goal of these solutions is to improve worker involvement, efficiency, and transparency. Nevertheless, despite their widespread use, there is little empirical data regarding the effectiveness of these digital HR techniques in raising non-academic HR employees' work satisfaction in Sri Lankan state HEIs. Furthermore, it is yet unknown how digital literacy influences the relationship between digital HR practices and job satisfaction. Despite the widespread belief that digital literacy increases the efficiency of technology-based systems, its true effect on worker satisfaction in this setting has not been thoroughly investigated. Azam., et.al (2024) pointed out that Information Technology (IT) could reduce administrative costs, increase productivity. Thus, there is a substantial study gap regarding the impact of e-performance appraisal and e-recruitment systems on job satisfaction among non-academic HR staff in state HEIs, as well as whether digital literacy enhances these relationships. (Ghosh & Tripathi, 2018). The Job Characteristics Model and Technology Acceptance Theory serve as the foundation for this study, which explains how e-performance evaluation and e-recruitment systems affect non-academic HR employees' job satisfaction. The Job Characteristics Model explains how digital HR systems change work design through increased autonomy, feedback, and efficiency, while

Technology Acceptance Theory explains employees' adoption of these systems through perceived utility and simplicity of use. Employees' capacity to successfully use digital HR technology and find fulfillment in expanded employment roles is strengthened by digital literacy, which acts as a moderating capability. To make well-informed judgments on the implementation of digital HR practices that improve employee happiness and organizational performance, legislators and university administrators must close this gap.

Research Questions

What is the Impact of E-Recruitment and E-Performance Appraisals on Job Satisfaction with the Moderating Role of Digital Literacy among Non-Academic HR Staff in State Higher Education Institutions?

Sub research questions of the study are as follows,

- What is the impact of E-Recruitment on Job Satisfaction?
- What is the impact of E-Performance Appraisal on Job Satisfaction?
- How Digital Literacy moderates the relationship between E-Recruitment and Job Satisfaction?
- How does Digital Literacy moderate the relationship between E-Performance Appraisals and Job Satisfaction?

Objectives of the Study

The main objective of the study is to examine the impact of E-Recruitment and E-Performance Appraisals on Job Satisfaction with the Moderating Role of Digital Literacy among Non-Academic HR Staff in State Higher Education Institutions.

Specific objective of the study

- To examine the impact of E-Recruitment on Job Satisfaction.
- To examine the impact of E-Performance Appraisal on Job Satisfaction.
- To examine how Digital Literacy moderates the relationship between E-Recruitment and Job Satisfaction.
- To examine how Digital Literacy moderates the relationship between E-Performance Appraisals and Job Satisfaction.

Literature review

Job Satisfaction

The degree of contentment that employees have with their employment is referred to as job satisfaction. It is impacted by things like autonomy, recognition, the workplace, and organizational support (Jalagat, 2016). Bureaucratic processes and a lack of incentives can have a detrimental effect on employee satisfaction in public sector organizations.

E-Recruitment

The term "e-recruitment" describes the process of attracting, screening, and choosing candidates using digital platforms and technologies. It increases productivity, lowers expenses, and expands the pool of talent (Ghosh, & Tripathi, 2018). According to earlier research, efficient e-recruitment platforms increase fairness and transparency, which raises employee satisfaction. However, HR personnel may become frustrated with poorly implemented systems.

E-Performance Appraisal

Using digital technologies to assess employee performance is known as e-performance appraisal. These technologies enhance documentation, lessen prejudice, and offer real-time feedback (Hameed., et.al, 2021). They are supposed to increase job satisfaction, but how well they work relies on corporate culture, fairness, and usability.

Digital Literacy

The capacity to use digital tools and technologies efficiently is known as digital literacy. (Flor., et.al, 2025). Higher digital literacy increases an employee's ability to adjust to technological advancements, increasing productivity and job satisfaction. However, the implementation of digital HR practices may be hampered by a lack of digital capabilities.

Conceptual framework and the hypotheses of the study

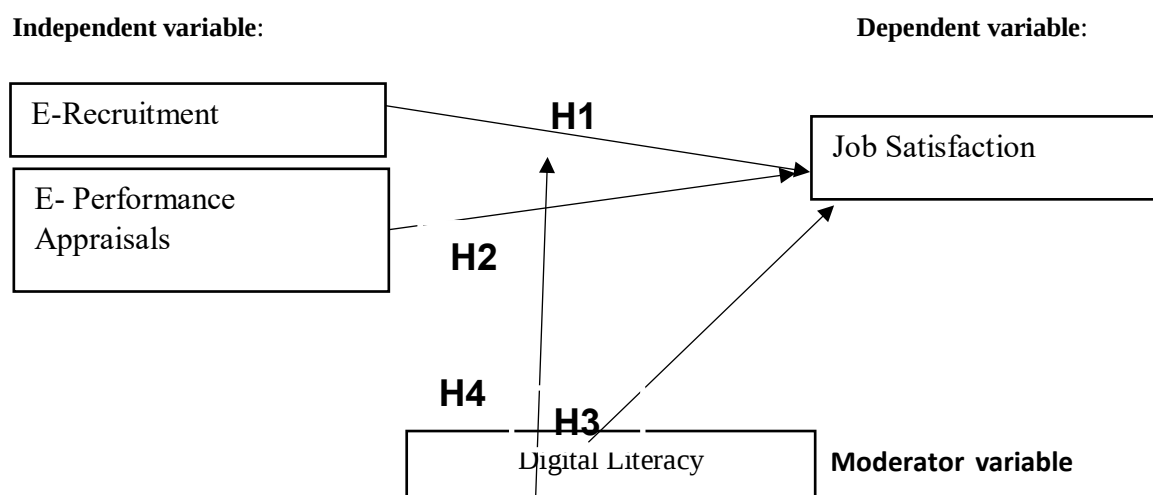


Figure 1: Conceptual framework

Source: Authors constructed, 2026

Hypotheses of the study.

H₁: E-Recruitment has a significant positive relationship with Job Satisfaction

H₂: E-Performance Appraisal has a significant positive relationship with Job Satisfaction

H₃: Digital Literacy moderates the relationship between E-Recruitment and Job Satisfaction

H₄: Digital Literacy moderates the relationship between E-Performance Appraisals and Job Satisfaction.

Operationalization of Variables

Variable	Dimension	Indicator	Question No.	Literature source/theory
E-Recruitment	System usage for E-Recruitment	Usage of E-recruitment by Non Academic employee	Q1	Al-Harazneh, 2021
		Period of usage	Q2	
		Willingness to use e-recruitment	Q3	
		Finding Errors when use e-recruitment	Q4	
		View of the user	Q5	
	Save Time	How much save time to the organization	Q6	Aboul Ela, 2014
		Time savings compare to traditional recruitment methods	Q7	
		Relationship with Time efficiency and saves time	Q8	
	Sound Organizational Image	Employer brand perception through e-recruitment	Q9	Marques, L. P. R. 2017
		The improvement of image of the organization	Q10	

		Attraction of most suitable candidates	Q11	
E-Performance Appraisals	System Usage	System usage of e-performance appraisals	Q12	Al-Harazneh, 2021
		Experience	Q13	
		User Satisfaction	Q14	
		System Reliability	Q15	
		Perceived Efficiency	Q16	
	Conduct of Appraisals	How appraisal should be conducted	Q17	Afriyie E.O., 2015
		Whether comments are fairly assessed	Q18	
		Accuracy of the evaluation method	Q19	
		Acceptance of the evaluation method	Q20	
		Effective for promotions	Q21	
Digital Literacy	Usage of Computer and internet	High connectivity reliance	Q22	Flor, A., et al 2025.
		Information retrieval for comparison	Q23	
		Advise refusal of sensitive information disclosure	Q24	
		System interfacing	Q25	
		Text-based model	Q26	
		Information access from public platforms	Q27	
	Modern Digital Technology	Professional Development	Q28	Li et al, 2025
		Awareness of Generative AI	Q29	
		Applied AI Use	Q30	
		Perceived Training Need	Q31	
Job Satisfaction	Satisfaction	Satisfaction with Pay	Q32	Paul E. Spector, 1994
		Meaningfulness of Work	Q33	
		Satisfaction with Supervision	Q34	
		Satisfaction with Coworkers	Q35	
		Workload	Q36	
		Satisfaction with Rewards	Q37	
	Satisfaction as a Non-Academic staff member	Ideal Job Alignment	Q38	Bai, K., & Lai, M. Y. (2025).
		Overall Job Satisfaction	Q39	
		Goal Attainment	Q40	
		Job Commitment	Q41	
Demographic factors		Gender	Q42	Robbins & Judge (2019), & Li et al, 2025
		Age	Q43	
		Marital status	Q44	
		Education level	Q45	
		Experience	Q46	

Source: Authors constructed, 2026

Methodology

This study adopts a quantitative research approach based on the positivist paradigm, employing a deductive approach to test hypotheses derived from existing literature. A structured Likert scale questionnaire was used to collect primary data from non-academic HR staff in selected state HEIs in Colombo. The survey included standardized measurement scales adapted from previous studies. The target population consisted of 55 non-academic HR employees. According to the Krejcie and Morgan sampling table, the required size was 47. The sample was collected based on convenience sampling techniques. The response rate was 100%. Data was analyzed using SPSS Version 23. The analysis included Reliability testing (Cronbach's Alpha), Validity assessment and inferential analysis.

Data analysis

Demographic Profile

This analysis provides a summary of the respondents' demographic characteristics, as well as their responses to the survey questions.

Table 1: Distribution of Respondents by Gender, Age, Marital Status, Educational Qualification and experience of the sample

Variables		Frequency	Percent
Gender	Female	37	78.7
	Male	10	21.3
	Total	47	100.0
Age	20-30	8	17.0
	31-40	18	38.3
	41-50	9	19.1
	51-60	12	25.5
	Total	47	100.0
Marital Status	Married	33	70.2
	Single	14	29.8
	Total	47	100.0
Educational Qualification	Advanced Level	9	19.1
	Diploma level	9	19.1
	Master's level	9	19.1
	Postgraduate level	6	12.8
	Undergraduate level	14	29.9
	Total	47	100.0
Experience	Less than 5 Years	11	23.4
	5-10 Years	11	23.4
	Greater than 10 Years	25	53.2
	Total	47	100.0

This table shows the Distribution of Respondents by Gender, Age, Marital Status, Educational Qualification and experience of the sample. Among the 47 respondents, the majority were female (78.7%). It displays that the

common composition of non-academic HR staff in Higher Educational Institutes of Colombo under administrative, HR, or clerical grades were females.

The largest proportion falls within the 31–40 age category (38.3%), indicating that experienced staff in medium level form the total sample. A majority of respondents are married (70.2%), This suggests that most participants are likely to have family responsibilities, which could affect job satisfaction. The educational background of respondents is varied. The largest group holds an undergraduate degree (29.9%), indicating a moderately well-qualified workforce. Among the 47 respondents, most have substantial experience, with 53.2% having more than 10 years of service.

Descriptive Statistics of Variables

Table 2: Descriptive Statistics of E-Recruitment, E-Performance Appraisals, Digital Literacy and Job Satisfaction

Variable Name	N	Minimum	Maximum	Mean	Std. Deviation
E-Recruitment	47	3.0000	4.8182	3.899420	0.3676821
E-Performance Appraisals	47	2.5000	4.6000	3.374468	0.3980759
Digital Literacy	47	3.0000	5.0000	4.565957	0.4992501
Job Satisfaction	47	2.5000	4.3000	3.200000	0.4010855

The analysis of the main study variables shows that mean of the Digital Literacy (DL_Mean) has the highest average score among respondents, with a mean of 4.57 (SD = 0.50), indicating that staff generally perceive themselves as proficient in using computers and digital technologies. The mean of E-Recruitment (ER_Mean) also received a relatively high mean of 3.90 (SD = 0.37), suggesting that respondents have a generally positive perception of the e-recruitment system. E-Performance Appraisals (EPA_Mean) had a moderate mean of 3.37 (SD = 0.40), reflecting slightly mixed perceptions regarding the usage and effectiveness of e-performance appraisals. Meanwhile, Job Satisfaction (JS_Mean) recorded the lowest mean score of 3.20 (SD = 0.40), indicating that staff are satisfied with their job overall.

Validation of the Measurement Model

Reliability Analysis using Cronbach's Alpha method

Table 3: Cronbach's alpha of variables

Variable	Cronbach's Alpha
E-Recruitment (ER)	0.738
E-Performance Appraisals (EPA)	0.773
Digital Literacy (DL)	0.753
Job Satisfaction (JS)	0.842

Table 3 shows each construct are reliable (0.7>).

Test of Normality

Table 4: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.(p)	Statistic	df	Sig.(p)
ER_Mean	.158	47	.005	.961	47	.123
EPA_Mean	.122	47	.079	.959	47	.195
DL_Mean	.272	47	.000	.803	47	.130
JS_Mean	.168	47	.002	.934	47	.111

a. Lilliefors Significance Correction

According to the Shapiro–Wilk test, e-recruitment ($p = 0.123$), e-performance appraisal ($p = 0.195$), digital literacy ($p = 0.130$) and job satisfaction ($p = 0.111$) were normally distributed, as their significance values exceeded 0.05. These results suggest that the data contains normal.

Correlation analysis

Table 5: Summary of Correlations between variables

		ER_Mean	EPA_Mean	DL_Mean	JS_Mean
ER_Mean	Pearson Correlation (r)	1	.368*	.110	.308*
	Sig. (2-tailed) (p)		.011	.461	.035
	N	47	47	47	47
EPA_Mean	Pearson Correlation (r)	.368*	1	.149	.177
	Sig. (2-tailed) (p)	.011		.319	.234
	N	47	47	47	47
DL_Mean	Pearson Correlation (r)	.110	.149	1	.043
	Sig. (2-tailed) (p)	.461	.319		.772
	N	47	47	47	47
JS_Mean	Pearson Correlation (r)	.308*	.177	.043	1
	Sig. (2-tailed) (p)	.035	.234	.772	
	N	47	47	47	47

*. Correlation is significant at the 0.05 level (2-tailed).

E-recruitment showed a moderate positive correlation with e-performance appraisal ($r = .368$, $p = .011$) and with job satisfaction ($r = .308$, $p = .035$), indicating that higher perceptions of e-recruitment were associated with more favorable views of e-performance appraisal and higher job satisfaction. However, digital literacy did not significantly correlate with any of the variables, and e-performance appraisal also showed no significant correlation with job satisfaction. These findings suggest that, within this sample, e-recruitment plays a more influential role than e-performance appraisal or digital literacy in shaping job satisfaction

Regressions analysis

Reporting assumption testing

Multicollinearity

VIF (Variance Inflation Factor) values are between 1 and 5 which indicates that multicollinearity is not a significant problem. While values above 1 show some correlation exist, they are well within the "acceptable" range.

Homoscedasticity

The assumption of homoscedasticity was met, as evidenced by the random distribution of residuals in the scatter plot (Residuals vs. Fitted Values).

Linearity

Linearity in this study confirms that the relationship between independent and dependent variables follows a straight line.

H₁: To identify the impact of E-Recruitment on Job Satisfaction

Table 6: Analysis of Hypothesis H1

B	0.336
p value	0.035
t value	2.173
R Square	0.095

The regression analysis revealed that E-Recruitment (ER) has a significant positive impact on Job Satisfaction (JS), ($\beta = 0.336$, $t = 2.173$, $p = 0.035$). This indicates that the effectiveness of e-recruitment is associated with increased job satisfaction. The model explains 9.5% of the variance in job satisfaction ($R^2 = 0.095$), suggesting a modest but meaningful predictive contribution. Therefore, H1 is supported.

H₂: To identify the impact of E-Performance Appraisal on Job Satisfaction

Table 7: Analysis of Hypothesis H2

B	0.178
p value	0.234
t value	1.206
R Square	0.013

The regression analysis showed that E-Performance Appraisals (EPA) had a positive but statistically non-significant effect on Job Satisfaction ($\beta = 0.178$, $t = 1.206$, $p = 0.234$). Since the p-value exceeds the 0.05 threshold, EPA does not significantly predict job satisfaction in this context. The model explains only 1.3% of the variance in job satisfaction ($R^2 = 0.013$), indicating a negligible predictive influence. Accordingly, H2 is not supported.

H₃: Digital Literacy moderates the relationship between E-Recruitment and Job Satisfaction.

The moderation analysis using PROCESS examined whether Digital Literacy (DL) moderates the relationship between E-Recruitment (ER) and Job Satisfaction (JS). The results indicate that neither ER ($\beta = -1.808$, $p = 0.506$) nor DL ($\beta = -1.737$, $p = 0.433$) had a significant direct effect on JS. The interaction term (ER $\times$ DL) was also non-significant ($\beta = 0.451$, $p = 0.430$) and adding it to the model increased the explained variance by only 1.3% (R^2 change = 0.013, $p = 0.430$). Overall, the model was not statistically significant ($R^2 = 0.108$, $F(3,43) = 1.740$, $p = 0.173$), indicating that Digital Literacy does not moderate the relationship between E-Recruitment and Job Satisfaction in this sample. The moderation analysis showed no statistically significant interaction effect. Several methodological and theoretical explanations supported by prior research can justify this outcome.

H₄: Digital Literacy moderates the relationship between E-Performance Appraisals and Job Satisfaction

The moderation analysis conducted using “Process” examined whether Digital Literacy (DL) moderates the relationship between E-Performance Appraisals (EPA) and Job Satisfaction (JS). The results showed that neither EPA ($\beta = -1.796$, $p = 0.370$) nor DL ($\beta = -1.402$, $p = 0.330$) had a significant direct effect on JS. The interaction term (EPA $\times$ DL) was also non-significant ($\beta = 0.427$, $p = 0.324$), with the inclusion of the moderator contributing only an additional 2.2% to the explained variance (R^2 change = 0.022, $p = 0.324$). Furthermore, the overall model did not achieve statistical significance ($R^2 = 0.054$, $F(3, 43) = 0.811$, $p = 0.495$). These findings collectively indicate that Digital Literacy does not moderate the relationship between EPA and JS among non-academic HR staff in the selected state HEIs.

Table 8 : Support of Hypothesis

Hypothesis	p-value	Supported?
H ₁ : E-Recruitment positively impacts Job Satisfaction	0.035	Supported
H ₂ : E-Performance Appraisals positively impact Job Satisfaction	0.234	Not Supported
H ₃ : Digital Literacy moderates the relationship between E-Recruitment and Job Satisfaction	0.430	Not Supported
H ₄ : Digital Literacy moderates the relationship between E-Performance Appraisals and Job Satisfaction	0.324	Not Supported

Conclusion and recommendations

Discussion of results

The results show that e-recruitment is essential for improving non-academic HR employees' job satisfaction. Effective and open hiring practices can lessen burden, enhance decision-making, and boost staff trust in company procedures. E-performance appraisal systems, on the other hand, did not significantly affect job satisfaction. This could be brought on by problems like perceived injustice in evaluation procedures, insufficient training, or a lack of user-friendliness. It implies that merely digitizing appraisal systems is insufficient; their implementation and design must be in line with employee expectations. It's interesting to note that digital literacy neither moderates the associations nor has a substantial impact on job satisfaction. This suggests that improving digital abilities by themselves does not ensure higher levels of happiness. To effectively benefit from digital HR practices, employees might need system usability enhancements, organizational support, and appropriate training.

Implications

By emphasizing the varying effects of digital HR practices on job satisfaction, this study adds to the body of knowledge in HRM. It casts doubt on the notion that any kind of digitization benefits workers. For legislators and administrators at universities.

- Since e-recruitment systems have a great impact on satisfaction, concentrate on making them better.
- Make e-performance appraisal systems more transparent and easier to use.
- Instead of depending just on advancements in digital literacy, they offer thorough training and assistance.
- Match business culture and employee demand with digital HR methods

Limitations and Future Research

There are various limitations to this study including the sample size is small (47 responders), Consider only HEIs in Colombo are the focus and A cross-sectional design that fails to capture long-term impacts.

Future studies could, Increase the sample size and geographic reach, To track changes over time, use longitudinal studies and examine other factors including leadership and organizational culture.

Conclusion

Using digital literacy as a moderating variable, this study investigated the effects of e-recruitment and e-performance evaluation on work satisfaction among non-academic HR professionals in state HEIs in Colombo. The results show that e-recruitment greatly increases job satisfaction, whereas digital literacy and e-performance evaluation have no effect. The findings imply that the focus of digital transformation in HR practices should be on efficacy, usability, and employee engagement rather than just implementation. Enhancing hiring practices and making sure that digital tools meet employee expectations should be top priorities for legislators and administrators. In the end, improving job satisfaction in HEIs necessitates a well-rounded strategy that blends technology with human-centered management techniques.

Recommendation

- To increase employee work satisfaction and organizational support, enhance and optimize e-recruitment procedures.
- Since E-Performance Appraisals have little effect on satisfaction, improvements to the appraisal system should concentrate on quality rather than impact.
- Make sure performance reviews are equitable, consistent, have defined competency frameworks, and offer suitable rewards.
- To improve performance, keep improving HR staff skills and digital literacy (DL) tools.
- Understand that training and digital tools by themselves do not greatly increase job satisfaction.
- Discuss additional important factors that influence satisfaction.

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