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Reassessing Performance Appraisal Practices: Implications for Engagement and Performance in Malaysian Universities

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Abstract

This research explores how various performance appraisal practices (PAPs) performance feedback, financial rewards, promotion prospects, recognition mechanisms, and training relate to employee engagement and employee performance within Malaysian Higher Education Institutions (HEIs). Using stratified sampling, data were obtained from 203 HEI employees and analyzed through PLS-SEM. The analysis shows that only training and financial rewards contribute meaningfully to higher engagement levels, while feedback, promotion, and recognition do not appear to shape engagement in a significant way. In contrast, most PAPs demonstrate a positive association with employee performance, with financial rewards emerging as the sole exception. Employee engagement itself also predicts performance positively. These results signal that engagement and performance operate differently in academic workplaces. The study emphasizes the need for educational policymakers and institutional leaders to strengthen promotion procedures, feedback systems, and recognition practices to better support engagement, while using financial incentives strategically to improve performance.

Keywords: Employee performance, Job promotion, Training financial reward, Performance feedback, Performance recognition

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Introduction

Malaysia has experienced considerable shifts in its educational landscape due to the establishment and rapid expansion of higher education institutions [1]. Like many developing nations, Malaysia views internationalization of the education sector as a strategic priority. With rising competition, the sector recognizes the pressure to attract and retain highly competent and skilled employees [2]. One approach commonly employed to strengthen the workforce is the implementation of performance appraisal practices (PAPs), which help clarify expectations, guide improvement, and shape long-term employee performance [3]. Well-designed appraisal systems can enhance employees' confidence, support goal attainment, and ultimately elevate organizational performance by motivating staff to contribute more effectively. In practice, PAPs serve several purposes, including informing salary decisions, identifying development and training needs, planning job rotation, and supporting both organizational and individual performance. For this reason, higher education institutions must remain responsive and adaptive, especially when examining factors that influence retention, turnover intentions, and performance among employees in Malaysian HEIs.

Employee engagement remains a central issue in management research and practice, though scholars continue to debate its conceptual boundaries, antecedents, and outcomes due to the absence of a universally accepted definition [4]. Strong engagement is widely recognized as crucial for sustaining organizational success and growth. This has encouraged the development of HRM systems that enhance employees' competence, commitment, and productivity. Within this broader HRM framework, PAPs provide essential information for shaping key HR decisions [5].

Performance appraisal itself is an important component of personnel management, intended to assess an employee's current performance level, identify strengths and developmental needs, foster engagement, justify rewards or disciplinary actions, encourage improved performance, and highlight training, succession, and selection requirements [6]. In this regard, PA practices are expected to influence engagement levels meaningfully. Yet, despite the central role of HEIs in Malaysia's human capital development, the sector has not fully developed or institutionalized effective employee management practices [7]. Although engagement is widely viewed as critical, its connection to PAPs within Malaysian HEIs remains insufficiently examined.

Previous HR research consistently underscores the importance of PAPs in strengthening engagement. Many studies (e.g. Biswas [8, 9]; Shabbir *et al.* [10]) have explored different determinants of engagement, but the PA system stands out as a particularly influential predictor because it encompasses key factors that shape employees' overall work experience and motivation [11]. Studies by Ameen and Baharom [12], Lim and Ahmad [13], Tessema and Soeters [14], and Wekesa and Makhamara [15] similarly affirm that PAPs substantially influence engagement, emphasizing their importance within HRM.

Academic staff form the core of service delivery in higher education, and institutions rely on their sustained commitment to function effectively [16]. Engaged academics tend to invest effort beyond their formal duties and support wider institutional activities [17]. However, excessive workloads and administrative pressures can lead academics to leave their positions [18]. According to the Ministry of Higher Education [19], Malaysian institutions must consistently maintain high levels of employee engagement if they aim to strengthen their regional standing. Consequently, this study seeks to examine how PAPs influence academic staff engagement and how such engagement, in turn, shapes performance in Malaysian HEIs.

Organizations that adopt suitable PA or HRM practices are more likely to attract engaged and positive-minded employees [20]. Engagement has also been shown to enhance productivity and overall performance [21]. While PAPs are believed to influence engagement, there remains limited evidence on how specific elements such as promotion opportunities, training, recognition, feedback, and financial incentives relate to engagement, particularly in the public sector. Retaining skilled and high-performing employees has become a significant challenge for many organizations seeking to maintain competitive advantage [22]. Drawing on social exchange theory (SET), employee engagement may serve as the mechanism through which HR and PA practices translate into stronger employee performance. Thus, this study investigates how PAPs including promotion, training, recognition, financial rewards, and feedback affect employee engagement, and how engagement subsequently shapes performance within Malaysian HEIs.

Literature review

Constructing PAPs in the present research

Performance appraisal (PA) represents a core element of performance management, serving as a system through which employee performance expectations are set, monitored, and refined [23]. It functions as an organizational tool aimed at influencing employees' attitudes and behaviors [24]. Griffin and Ebert [25] describe PA as a fundamental administrative process used to routinely assess how employees contribute to organizational progress.

Because PA provides essential information for a variety of HRM decisions, it is widely viewed as one of the most critical HR practices within organizational systems [5]. PA outcomes guide decisions related to pay, promotion, identification of training needs, feedback provision, and acknowledgement of strong performance [26]. Since organizational sustainability depends heavily on a committed and motivated workforce, performance appraisal systems take on strategic importance. Given that appraisal practices vary across regions and institutional contexts, the present study conceptualizes PAPs through five elements relevant to the Malaysian HEI environment: financial rewards, performance recognition, job promotion, training, and performance feedback.

Training has been highlighted as a major contributor to employee capability development. Posthuma *et al.* [27] and Zubair and Khan [28] characterize training as a set of activities aimed at strengthening employees' competencies for current and future tasks. For training to effectively enhance performance, organizations must ensure that employees have opportunities to gain new skills in supportive environments [29]. As part of the broader HRM architecture, training is integral to aligning employee capabilities with organizational needs [30]. Appraisal discussions often help employees understand their own performance gaps and identify relevant training opportunities. Training also increases feelings of competence, which can stimulate intrinsic motivation and higher-quality performance [31].

Promotion is another component of PA practices and reflects an employee's movement to a position with greater responsibility and higher compensation [32]. Empirical research consistently shows that promotion opportunities can strengthen productivity, engagement, and overall organizational outcomes [14, 33]. Promotion typically functions as a reward for good performance, reinforcing desired behaviors and signaling career progression.

Performance feedback is equally central to appraisal systems. Prue and Fairbank [34] describe feedback as information provided to employees regarding the quality or quantity of their previous performance. By communicating appraisal outcomes to employees, organizations support informed decision making and promote improvements in productivity. Although Ammons [35] argued that feedback may have limited value in highly demanding situations where employees are already

performing at maximum capacity, most scholars emphasize its importance for shaping engagement and overall effectiveness [36, 37]. Feedback helps employees gauge their progress and identify actions needed to enhance performance [38].

Recognition practices encompass both monetary and non-monetary acknowledgements given to employees for their contributions [39, 40]. Recognition serves as a managerial tool for reinforcing desirable behaviors and is associated with higher levels of satisfaction, motivation, and engagement [41]. When recognition systems are poorly designed, organizations risk lower productivity and dissatisfaction among employees [42]. Workers who perceive their efforts as valued are typically more dedicated and active within the organization.

Financial rewards remain one of the most frequently examined aspects of HRM. According to Heathfield [43], pay and financial incentives play a major role in attracting and retaining high-performing employees. Financial rewards, such as performance-related pay, are commonly used to motivate employees to enhance engagement and effort [44, 45]. Shahzad *et al.* [46] likewise report that financial incentives can help retain talented professionals. Organizations must therefore recognize that compensation practices shape employee commitment and the perceived value of staying within the organization.

The concept of employee engagement (EE) traces back to Kahn's influential work [47], in which he describes engagement as the investment of one's authentic self in role-related activities, fostering meaningful connections and active involvement. Shuck's [48] review identifies four major traditions in the study of engagement: Kahn's needs-based model, the burnout–engagement framework by Maslach *et al.* [49], the satisfaction–engagement approach of Harter *et al.* [50], and Saks's [51] multidimensional perspective. Engagement reflects employees' level of commitment and contribution to their organization [52, 53]. Bhattacharya and Mukherjee [54] view engagement as the manner in which employees approach their assigned tasks and interact with colleagues, supervisors, and the broader organization.

Schaufeli and Bakker [55] frame employee engagement within the broader idea of organizational commitment, highlighting three components: continuance commitment, or the willingness to remain with the organization; affective commitment, referring to an emotional bond with the organization; and discretionary behaviors that go beyond basic job requirements and support effective organizational functioning. As employees increasingly represent a crucial organizational asset, Alfes *et al.* [56] argue that engagement helps cultivate loyalty, enthusiasm, and energy among staff, all of which align with organizational goals and strengthen overall performance. Thomas [57] proposed a single-dimensional view of engagement, suggesting that although engagement outcomes manifest behaviorally across physical, cognitive, and emotional domains, the concept can still be understood through a unified lens.

Formulation of the hypotheses

Relationship between Training and Employee Engagement (EE)

Training is widely recognized as a key factor that supports higher levels of employee engagement [58]. Employees who receive adequate training generally demonstrate stronger productivity and commitment than those who do not. As one of the most frequently examined HRM variables linked to EE [59], training shapes employees' perceptions of organizational support. According to Yap *et al.* [60], individuals who view training programs as effective tend to display higher engagement, commitment, and satisfaction than those who perceive training as inadequate. Lam *et al.* [61] also identified a meaningful association between training and development and employees' sense of responsibility toward their organizations. When employees develop stronger organizational commitment, their intention to remain with the organization increases.

Training therefore equips employees with the knowledge and skills required for professional advancement and heightened engagement [21]. Additional evidence shows that employees who undergo relevant training exhibit stronger dedication and occupational commitment [62]. Suan and Nasurdin [63] confirmed that improved training initiatives enhance engagement, while Azeem *et al.* [58] found that effective training programs contribute positively to EE. Paradise [64] likewise reported that training is positively associated with engagement, noting that the quality, frequency, and breadth of learning opportunities strongly influence engagement levels. This aligns with arguments by Bakker and Bal [65], who assert that engaged employees tend to be those who continuously grow and develop within their roles. Based on this literature, the first hypothesis is proposed:

Hypothesis 1: Training has a significant and positive impact on employee engagement.

Relationship between Job Promotion and Employee Engagement

Promotion is considered a central HRM practice that reinforces employees' commitment to their organizations [66]. According to Khan and Iqbal [67], individuals who feel motivated by fair and meaningful promotion opportunities generally demonstrate higher engagement. Findings from Ameen and Baharom [68] further support this, indicating a positive and significant relationship between promotion prospects and EE. When employees perceive promotion pathways as clear and timely, they are more likely to remain loyal and committed.

The connection between promotion and engagement has also been reported in studies linking job promotion directly with EE [67] as well as research showing that promotion opportunities influence employees' willingness to stay and contribute

meaningfully [69]. Holtom *et al.* [70] emphasize that promotion fosters a sense of belonging and strengthens long-term bonds between employees and their organizations.

Brown [71] argues that career growth is essential for fostering engagement, while Mutunga [72] underscores the importance of organizational systems such as recognition, compensation, training, and performance management in enhancing engagement. Offering genuine opportunities for career progression enables employees to invest more effort in their tasks and strengthens their commitment [73]. Beyond motivating improved performance, promotion encourages employees to pursue continued professional growth [74]. Therefore, the following hypothesis is advanced:

Hypothesis 2: Job promotion is significantly and positively related to employee engagement.

Relationship between performance feedback and employee engagement

Prior research (e.g., Brown *et al.* [75]) frames performance feedback as a mechanism that helps employees identify both strengths and weaknesses. Effective feedback steers employees toward clearer task execution and supports the achievement of broader organizational goals. Bakker and Bal [65] also noted a meaningful link between feedback and employee engagement. Additional evidence reinforces this positive association, indicating that feedback serves as an important catalyst for enhancing engagement [76]. Because feedback strengthens knowledge, improves job-related skills, and increases the likelihood of achieving work objectives, it contributes to a more engaged workforce. Conversely, the absence of feedback often leads to anxiety, distorted self-assessments, and misplaced effort [77].

Constructive feedback is also tied to higher levels of engagement and job satisfaction [78], underscoring its central role in performance management systems. According to Ying [79], feedback is most effective when it is timely, developmental, and aligned with performance improvement. Its core purpose is to encourage employees, promote satisfaction, and strengthen collective performance [80]. Marciano [81] emphasized that meaningful feedback signals to employees that supervisors value their efforts, which subsequently boosts engagement. For engagement to flourish, employees must also perceive evaluation and feedback processes as fair, consistent, and supportive [21]. When employees view feedback as sincere and constructive, their engagement tends to rise. Based on this discussion, the following hypothesis is proposed:

Hypothesis 3: There is a significant and positive relationship between performance feedback and employee engagement.

Relationship between performance recognition and employee engagement

Recognition or appreciation for effective performance represents a core component of any strategic reward system. Acknowledging employees' contributions reinforces motivation and strengthens civic engagement within the organization. When employees feel recognized for accomplishing tasks or advancing organizational objectives, they are more likely to deepen their commitment. Scholars such as Kaufman *et al.* [82] have observed that engagement levels increase when employees perceive that their efforts are valued. Recognition that employees deem meaningful is also linked to reduced turnover and improved organizational outcomes [83]. Conversely, insufficient reward systems may weaken engagement [49]. Overall, the literature supports recognition as a strong predictor of engagement.

Saks [51] similarly identified recognition as a key antecedent of employee engagement. Drawing on Kahn [47], employees' engagement levels depend partially on the extent to which they believe they will receive valued returns for their efforts. Engagement is therefore shaped not only by financial rewards but also by how employees interpret the adequacy of those rewards. Scott *et al.* [84] found that financial recognition contributes significantly to engagement, but non-financial recognition can also motivate employees and foster engagement. Mutunga [72] further demonstrated that performance recognition has a considerable impact on levels of engagement. Accordingly, the following hypothesis is proposed:

Hypothesis 4: There is a significant and positive relationship between performance recognition and employee engagement.

Relationship between financial reward and employee engagement

Financial incentives are often viewed as one of the most influential elements in organizational systems because they offer employees direct, material acknowledgment for their work contributions [85]. Compensation therefore functions as a critical driver of engagement, encouraging individuals to invest energy and focus in developing their roles and careers. The extent to which employees feel engaged is closely linked to how appealing and equitable the organization's salary and benefits arrangements appear to them [86]. Saks [51] also classifies pay as a key antecedent of engagement, noting that employees who believe they are well compensated typically experience a sense of reciprocity that motivates them to engage more deeply in their work. In this sense, remuneration becomes an underlying condition that shapes how committed employees feel toward their jobs.

Empirical work reinforces this pattern. Scott *et al.* [84] reported that compensation components including base pay, salary progressions, and benefits exert a meaningful influence on employees' levels of engagement. Employees who receive

competitive financial rewards tend to be more willing to exert effort and maintain higher levels of performance. Accordingly, the following hypothesis is proposed:

Hypothesis 5: There is a significant and positive relationship between financial reward and employee engagement.

Relationship between PAPs and employee performance

Performance appraisal practices (PAPs) typically cover promotion opportunities, performance feedback, training, financial rewards, and recognition [11, 87]. These systems are widely regarded as mechanisms that contribute directly to how well employees perform [13, 15]. Training is a central component of appraisal systems and continues to grow in importance in contemporary organizations [88]. Studies show that training helps employees strengthen their capabilities, which ultimately improves organizational outcomes. Lee and Lee [89] emphasize that training, coupled with financial rewards and supportive workplace practices, enhances both efficiency and performance. Hafeez and Akbar [90] similarly demonstrate that employees with more training tend to perform at a higher level.

Promotion prospects also play a decisive role in shaping performance. Employees commonly seek advancement, and their motivation to perform is influenced by the belief that good performance increases their likelihood of being promoted [3]. Research by Peter [91] and Zago [92] underscores a positive association between promotion practices and perceived performance, while Khan *et al.* [93] show that promotion opportunities can boost performance outcomes.

Performance feedback represents another essential feature of appraisal systems. Gomez-Mejia [94] argues that feedback is fundamental to improving performance and contributes to satisfaction with appraisal processes. Akinbowale *et al.* [95] observed that when feedback is effectively communicated and applied, employees' performance improves. Findings from Dahling *et al.* [96] and Paul *et al.* [97] also support the idea that structured feedback enhances performance by clarifying strengths and weaknesses and opening avenues for targeted development.

Recognition is likewise integral to performance improvement. Reward systems that acknowledge good work and provide opportunities for growth strengthen employees' motivation and commitment. Mollel Eliphas *et al.* [11] found a strong link between appraisal-based recognition and employee competence, arguing that both recognition and feedback contribute to higher productivity. Urbancová and Linhartová [98] also note that recognizing top performers inspires employees with lower performance levels to improve.

Financial rewards serve as additional drivers of performance. Kampkötter *et al.* [99] identify salary as a major motivator because it conveys appreciation and strengthens employees' attachment to the organization. Thwala *et al.* [85] highlight the strategic importance of pay, while Armstrong and Murlis [100] emphasize its influence on overall workplace satisfaction. Shahzad *et al.* [46] report a positive relationship between compensation practices and performance, suggesting that higher pay is linked to improved performance partly because employees are motivated to maintain their positions. Based on this evidence, the following hypotheses are offered:

H6: There is a significant and positive relationship between training and employee performance.

H7: There is a significant and positive relationship between job promotion and employee performance.

H8: There is a significant and positive relationship between performance feedback and employee performance.

H9: There is a significant and positive relationship between performance recognition and employee performance.

H10: There is a significant and positive relationship between financial reward and employee performance.

2.2.7. Relationship between employee engagement and employee performance

Research consistently points to a strong connection between how engaged employees feel and how well they perform at work. Anitha's [86] investigation into the drivers of engagement showed that engaged employees tend to demonstrate higher performance levels. Ameen and Yahaya [101] also reported that engagement meaningfully shapes employees' work behavior and performance outcomes. Earlier work by Saks [51] found that individuals who experience greater engagement are also more likely to report higher organizational commitment, satisfaction with their jobs, and stronger organizational citizenship behaviors, all of which are predictors of better performance.

Engagement is often associated with sustained improvements in work quality over time. Barbier *et al.* [102] observed that engaged employees tend to increase their performance levels as their sense of connection and responsibility toward their jobs grows. Shuck [48] further argued that workers across different sectors, from services to manufacturing and nonprofit organizations, display greater effort and creativity when they are engaged, largely because they become more invested in their roles and approach problems with more intentionality. Andrew and Sofian [103] similarly concluded that engagement plays a central role in encouraging employees to contribute positively to organizational goals, supporting better attitudes, stronger performance, and clearer direction in meeting performance expectations. Based on these insights, this study proposes the following hypothesis:

H11: There is a significant and positive relationship between employee engagement and employee performance.

Development of the theoretical framework

The conceptual model developed for this study, represented in **Figure 1**, is grounded in a theory-testing approach. Within the context of academic staff in Malaysian HEIs, the framework illustrates the way performance appraisal practices (PAPs) shape employee engagement, which in turn contributes to employee performance. The model is informed by Social Exchange Theory (SET), which offers a useful lens for understanding how HR and appraisal systems influence employee behavior.

According to SET, employees are likely to reciprocate positive organizational actions with desirable work attitudes and behaviors. When institutions provide fair promotion opportunities, timely financial rewards, meaningful recognition, consistent training, and constructive performance feedback, employees perceive these actions as investments in their well-being. In response, they are more inclined to show loyalty, stronger commitment, deeper engagement, and higher-quality performance, particularly in service-oriented roles typical of academic settings. This study adopts SET as the underlying rationale for examining how PAPs and engagement collectively contribute to performance within higher education institutions.

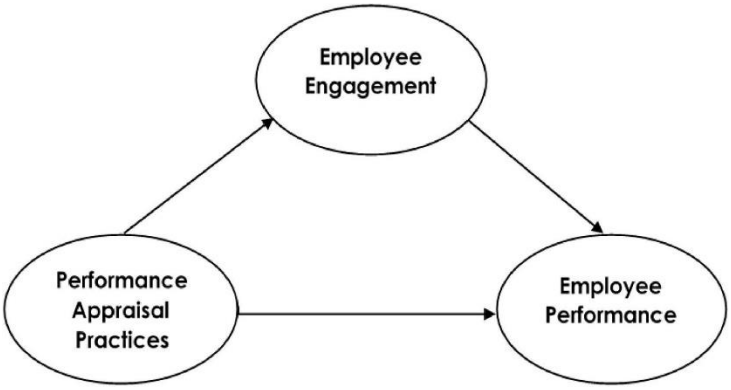

Figure 1. The theoretical framework

Materials and Methods

Population of the study

This research targeted the academic staff of Malaysian higher education institutions (HEIs) as the study population. The sample size was determined using Krejcie and Morgan's [104] table. A stratified sampling technique was applied to ensure representation across different strata, specifically distinguishing between public and private universities in Malaysia. The population within each stratum was calculated by dividing the total population by the number of strata. The proportion of participants selected from each stratum was then determined by dividing the estimated sample size by the population size and multiplying by 100. Subsequently, the exact number of respondents from each stratum was identified by multiplying the population of each stratum by the calculated proportion.

Finally, systematic sampling was employed to select individual participants within each stratum. This process involved determining the sampling fraction for each stratum by dividing the population size of the stratum by the total population. Questionnaires were then distributed to the selected respondents. Written informed consent was obtained from all participants prior to the study, which was conducted online. Data analysis was carried out using Smart PLS 4 for variance-based structural equation modeling (VB-SEM), chosen for its robustness in analyzing complex research models [105]. Ethical approval for this study was granted by the Ethics Clearance Committee at Universiti Teknologi Malaysia.

Data collection procedure

The unit of analysis for this study was academic staff in Malaysian HEIs, who were required to provide honest responses regarding the research variables. A total of 203 valid questionnaires were collected, representing the study sample. The combination of stratified and simple random sampling ensured that each individual in the population had an equal probability of selection, reducing potential biases. Data were collected via a Google Forms survey, and all 203 completed responses were included in the analysis.

Demographic data were analyzed using SPSS version 29.0, while Smart PLS version 4.0 was employed to test the research hypotheses using PLS-SEM. The study focused on performance appraisal practices (PAPs), specifically financial reward, job promotion, training, performance feedback, and performance recognition. Measurement items for these constructs were adapted from prior studies, including Cheng [5], Danish and Usman [106], Demo *et al.* [107], Forza and Salvador [108], Idaszak and Drasgow [109], Krasman [110], and Spector [111]. Employee performance was measured based on Koopmans *et al.* [112], while employee engagement was adapted from Thomas [57]. **Table 1** presents the measurement items for PAPs, including five items for training, three items for job promotion, four items for performance feedback, six items for performance recognition, and three items for financial reward. Furthermore, employee engagement was measured using six

items, while employee performance was evaluated with fourteen modified items, all employing reflective measurement models [113, 114].

Table 1. Measuring items of Performance Appraisal Practices (PAPs)

Code	Items of Performance Appraisal Practices (PAPs)	Source
Training		
TR1	My organization broadly supports my personal development	Demo *et al.* [107]
TR2	My organization broadly supports my professional development	
TR3	Training programs in my organization are aimed at enhancing my career growth	
TR4	Training programs derived from performance reviews encourage learning and practical application	
TR5	My organization regularly identifies training needs through performance evaluations	
Job Promotion		
JP1	I have access to a formal channel to appeal promotion decisions in my organization	Cheng [5]
JP2	My organization consistently applies established promotion criteria in decision-making	
JP3	Promotion processes in my organization are fair and transparent	
Performance Feedback		
PF1	Carrying out my job responsibilities enables me to evaluate my own performance	Forza and Salvador [108], Idaszak and Drasgow [109], Krasman [110]
PF2	My supervisor (HOD/Dean) consistently provides feedback on my work performance	
PF3	My supervisor frequently informs me about the effectiveness of my job performance	
PF4	My supervisor regularly provides comments on the quality of my work	
Performance Recognition		
PR1	The performance evaluation system in my organization acknowledges my contributions	Danish and Usman [106], Spector [111]
PR2	The performance evaluation system fairly recognizes my efforts	
PR3	I appreciate non-financial rewards, such as merit certificates, for outstanding work	
PR4	I believe my achievements are properly acknowledged	
PR5	Recognition enhances my motivation and performance	
PR6	My Dean/HOD praises me when I deliver strong results	
Financial Reward		
FR1	My compensation is directly tied to my performance outcomes	Cheng [5]
FR2	My organization offers competitive pay and salary increases upon promotion	
FR3	Salary decisions in my organization are based on objective performance data	

Table 2. Measuring items of employee engagement

Code	Items	Source
EE1	I am eager to exert maximum effort to achieve ambitious work objectives	Thomas [57]
EE2	I am committed to fully dedicating myself to fulfilling my job responsibilities	
EE3	I feel excited about exploring innovative approaches to improve my job effectiveness	
EE4	I am passionate about delivering exceptional service quality	
EE5	I consistently go above and beyond to excel in my role	
EE6	I am prepared to apply my complete capabilities to my work	

Table 3. Measuring items of employee performance

Code	Items	Source
EP1	My organization highly evaluates the quality of my work over the past year	Koopmans *et al.* [112]
EP2	I effectively distinguish between primary and secondary issues at work	
EP3	Collaborating with colleagues improves my performance	
EP4	My interactions with others consistently achieve the intended outcomes	
EP5	I generate innovative ideas in my work	
EP6	I proactively address problems when they arise	
EP7	I take the lead in organizing tasks when needed	
EP8	I independently begin new tasks upon completing previous ones	

EP9	I seek assistance when necessary
EP10	I have received praise for my work
EP11	I actively learn from feedback provided on my performance
EP12	I willingly accept challenging assignments
EP13	I believe my organization is satisfied with my performance
EP14	I consider my organization's expectations in carrying out my duties

Demographic information

Table 4 summarizes the demographic characteristics of the respondents. Among the 203 participants, 114 (56.2%) were male, while 89 (43.8%) were female, indicating a relatively balanced gender distribution. This reflects the general composition of academic staff in Malaysian higher education institutions, where there is no significant gender disparity.

Regarding age, the largest group of respondents was aged 50 and above, comprising 94 individuals (46.3%). This was followed by 89 respondents (43.8%) in the 36 to 50 age range. Only 20 respondents (9.9%) were aged between 26 and 35. This pattern may suggest that the majority of academic staff in Malaysian HEIs are more experienced or mature adults, reflecting the demographic structure of the workforce in these institutions.

Table 4. The respondents' demographic information

Demography	Indicators	Frequency	Percentage
Gender	Male	114	56.2
	Female	89	43.8
Age	26-35 years	20	9.9
	36-50 years	89	43.8
	> 50 years	94	46.3
Job titles	Lecturer	21	10.3
	Senior Lecturer	64	31.5
	Associate Professor	58	28.6
	Professor	60	29.6
Educational Qualification	Masters	22	10.8
	Ph.D.	181	89.2
Faculty	Built Environment and Surveying	25	12.3
	Business School	17	8.4
	Engineering	32	15.8
	Management	35	17.2
	Sciences	30	14.8
	Social Sciences and Humanities	54	26.6
	Technology and Informatics	10	4.9
Year of work experience	< 1 year	7	3.4
	1–3 years	6	3.0
	4–5 years	47	23.2
	More than 5 years	143	70.4
Total		**203**	**100**

Concerning the respondents' faculty affiliations, the largest proportion belonged to the Faculty of Social Sciences and Humanities, accounting for 54 individuals (26.6%). This was followed by the Faculty of Management, which contributed 35 respondents (17.2%), and the Faculty of Engineering with 32 respondents (15.8%). The Faculty of Technology and Informatics had the fewest participants, with only 10 respondents (4.9%). This distribution likely reflects the relevance of the research topic to the Social Sciences and Humanities.

Regarding educational qualifications, the majority of respondents, 181 individuals (89.2%), held doctoral degrees. Twenty-two respondents (10.8%) had master's degrees, and there were no respondents with only a bachelor's degree. This indicates that the sample consisted predominantly of highly qualified academic staff.

In terms of professional experience, most respondents had more than five years of work experience, totaling 143 individuals (70.4%). This was followed by 47 respondents (23.2%) with four to five years of experience. Only seven respondents (3.4%) had less than one year of experience, while six respondents (3.0%) had one to three years. These results suggest that the majority of the sample had substantial academic experience.

With respect to academic rank, senior lecturers (or assistant professors) constituted the largest group, with 64 respondents (31.5%). This was closely followed by 60 respondents (29.6%), 58 respondents (28.6%) who were associate professors, and 21 respondents (10.3%) who were lecturers. The diversity in academic positions highlights the varied professional backgrounds of the participants, supporting the generalizability of the study's findings.

Results and Discussion

Descriptive statistics

Descriptive statistics were calculated to summarize the respondents' perceptions of performance appraisal practices (performance feedback [PF], financial reward [FR], job promotion [JP], performance recognition [PR], training [TR]), as well as employee engagement (EE) and employee performance (EP). **Table 5** presents the mean values, standard deviations, and minimum and maximum scores for each construct. These findings provide insights into the implementation of PAPs and the perceived levels of engagement and performance among academic staff in Malaysian higher education institutions.

Table 5. Descriptive statistics of the constructs

Constructs	Mean	Min	Max	Standard Error	N
TR	4.523	2.60	5.000	0.617	203
JP	4.476	2.00	5.000	0.661	203
PF	4.473	2.00	5.000	0.633	203
PR	4.537	2.50	5.000	0.566	203
FR	4.489	1.67	5.000	0.637	203
EE	4.570	3.00	5.000	0.540	203
EP	4.532	2.86	5.000	0.541	203

Table 5 presents the descriptive statistics for the study constructs, with observed Likert scale values ranging from 1.67 to 5.00. Among all constructs, employee engagement (EE) recorded the highest mean (4.570) and the lowest standard deviation (0.540), suggesting that academic staff in Malaysian HEIs place strong emphasis on engagement strategies, such as sustained commitment and delivering high-quality services, to achieve optimal employee performance. The low standard deviation further indicates minimal variation in respondents' perceptions regarding the importance of engagement for performance outcomes.

Performance recognition (PR) followed closely, with a mean of 4.537 and a standard deviation of 0.566, highlighting the importance of acknowledging employees' contributions to enhance performance. Training (TR) also showed a high mean of 4.523 with a standard deviation of 0.617, reflecting its critical role alongside performance recognition. Job promotion (JP) recorded a mean of 4.476 and a standard deviation of 0.661, indicating a moderate but meaningful perception of its importance for performance. While job promotions are valued, they appear slightly less critical than training and recognition in driving employee performance.

Financial reward (FR) and performance feedback (PF) had mean values of 4.473 and 4.489, with standard deviations of 0.633 and 0.637, respectively. These results suggest that both monetary incentives and constructive feedback are key elements in fostering engagement and performance among academic staff. Accordingly, Malaysian HEIs should consider strategies to enhance the quality of feedback and ensure appropriate financial rewards to support employee performance.

Sustainability performance also exhibited a relatively high mean (4.318) and a low standard deviation (0.547), suggesting consensus among respondents regarding the current performance levels of academic staff in Malaysian HEIs, aligning with the study's objectives.

Assessment of normality

Normality was assessed using skewness and kurtosis values to evaluate whether the data approximated a normal distribution, as suggested by Kline [115] and Pallant [116]. A symmetrical distribution is characterized by a concentration of scores around the mean, with fewer extreme values. Skewness values within the range of ±1 are considered acceptable for social science research, while Kline [115] recommends a wider acceptable range of ±3. Similarly, kurtosis values between ±3 indicate an appropriate distribution. In the present study, the skewness and kurtosis values for most variables fell within these acceptable ranges, though a few exhibited minor deviations.

Given the presence of some non-normal distributions, partial least squares structural equation modeling (PLS-SEM) was employed for hypothesis testing. PLS-SEM is robust to deviations from normality, making it suitable for examining the proposed relationships among the constructs [117, 118].

Table 6. Results of Skewness and Kurtosis of Normality

Items	N	Excess Kurtosis	Skewness
TR1	203	3.081	−1.747
TR2	203	0.322	−1.140
TR3	203	−0.494	−0.762
TR4	203	−0.598	−0.555
TR5	203	0.577	−1.101

JP1	203	4.744	−1.924
JP2	203	−0.636	−0.584
JP3	203	0.944	−1.026
PF1	203	0.571	−0.942
PF2	203	1.016	−1.157
PF3	203	0.717	−0.910
PF4	203	1.223	−0.988
PR1	203	0.545	−0.893
PR2	203	0.706	−0.957
PR3	203	−0.693	−0.779
PR4	203	0.676	−0.879
PR5	203	−0.431	−0.863
PR6	203	−0.607	−0.565
FR1	203	3.861	−1.597
FR2	203	1.529	−1.156
FR3	203	0.407	−0.831
EE1	203	0.126	−1.204
EE2	203	−0.305	−0.864
EE3	203	−1.051	−0.536
EE4	203	−0.875	−0.414
EE5	203	−0.327	−0.809
EE6	203	−0.422	−0.797
EP1	203	8.283	−2.752
EP2	203	0.584	−0.793
EP3	203	−0.804	−0.638
EP4	203	−1.238	−0.332
EP5	203	−0.798	−0.510
EP6	203	−1.128	−0.295
EP7	203	−1.363	−0.384
EP8	203	−0.688	−0.569
EP9	203	−1.539	−0.427
EP10	203	−0.721	−0.431
EP11	203	−0.359	−0.813
EP12	203	−1.029	−0.272
EP13	203	−0.958	−0.513
EP14	203	−0.816	−0.491

Construct validity

According to Hair *et al.* [119], construct validity can be assessed through content validity, convergent validity, and overall construct validity.

Content validity

Content validity refers to the degree to which the survey items adequately capture the concept they are intended to measure [119]. To ensure accuracy, each item should exhibit higher loadings on its respective construct than on any other constructs. In this study, content validity was established by systematically reviewing existing literature to develop items that reflect the constructs under investigation. Factor analysis was then employed to confirm that all items were appropriately assigned to their corresponding constructs.

As shown in **Table 7**, content validity was verified in two ways. First, the factor loadings for each item were highest on their intended constructs compared to other constructs. Second, the item loadings were statistically significant and strongly associated with their respective constructs, confirming that the measurement items effectively represented the intended concepts [120].

Table 7. Factor loading of the items

	EE	EP	FR	JP	PF	PR	TR
EE1	**0.661**	0.313	0.047	0.077	0.117	0.171	0.227
EE2	**0.598**	0.219	−0.002	0.153	0.129	0.161	0.196
EE3	**0.651**	0.066	−0.051	−0.001	0.033	0.062	−0.024
EE4	**0.668**	0.129	−0.011	0.041	−0.039	−0.039	0.031
EE5	**0.658**	0.246	0.063	0.123	0.176	0.103	0.186

EE6	**0.673**	0.122	−0.031	0.021	−0.047	0.114	0.046
EP1	0.174	**0.650**	0.512	0.493	0.461	0.502	0.524
EP10	0.252	**0.600**	0.303	0.237	0.244	0.284	0.319
EP11	0.234	**0.653**	0.134	0.188	0.155	0.143	0.125
EP12	0.120	**0.626**	0.025	0.107	0.120	0.110	0.139
EP13	0.177	**0.604**	0.212	0.193	0.162	0.263	0.275
EP14	0.157	**0.663**	0.106	0.206	0.237	0.201	0.199
EP2	0.031	**0.693**	0.123	0.171	0.180	0.164	0.186
EP3	0.131	**0.616**	−0.010	0.081	0.105	0.133	0.048
EP4	−0.031	**0.626**	−0.051	0.089	0.056	0.076	0.034
EP5	0.257	**0.502**	0.140	0.210	0.266	0.273	0.278
EP6	0.223	**0.688**	−0.081	0.085	0.131	0.007	0.083
EP7	0.191	**0.691**	0.051	0.092	0.197	0.171	0.189
EP8	0.203	**0.675**	0.093	0.111	0.170	0.130	0.104
EP9	0.158	**0.351**	0.085	0.171	0.094	0.158	0.125
FR1	0.052	0.289	**0.691**	0.350	0.348	0.369	0.241
FR2	−0.006	0.393	**0.794**	0.347	0.322	0.472	0.452
FR3	0.059	0.298	**0.699**	0.416	0.306	0.330	0.342
JP1	0.083	0.423	0.431	**0.746**	0.484	0.458	0.510
JP2	0.076	0.321	0.320	**0.667**	0.295	0.338	0.255
JP3	0.208	0.399	0.352	**0.784**	0.411	0.405	0.303
PF1	0.115	0.333	0.273	0.390	**0.635**	0.377	0.306
PF2	0.143	0.442	0.380	0.352	**0.775**	0.449	0.403
PF3	0.116	0.362	0.224	0.468	**0.636**	0.377	0.395
PF4	0.142	0.303	0.316	0.287	**0.664**	0.405	0.307
PR1	0.109	0.377	0.371	0.443	0.390	**0.584**	0.296
PR2	0.210	0.267	0.341	0.273	0.296	**0.565**	0.362
PR3	0.055	0.101	0.148	0.168	0.152	**0.610**	0.107
PR4	0.143	0.372	0.324	0.244	0.426	**0.643**	0.323
PR5	0.060	0.165	0.055	0.116	0.032	**0.635**	0.065
PR6	0.076	0.312	0.270	0.332	0.323	**0.582**	0.262
TR1	0.266	0.529	0.391	0.348	0.405	0.405	**0.787**
TR2	0.158	0.332	0.290	0.261	0.274	0.358	**0.636**
TR3	0.130	0.337	0.252	0.233	0.293	0.276	**0.572**
TR4	0.118	0.188	0.250	0.176	0.246	0.168	**0.536**
TR5	0.250	0.424	0.371	0.512	0.446	0.396	**0.714**

The bold values are the factor loading for each item.

Convergent validity

Convergent validity assesses whether multiple indicators effectively measure the same underlying construct [119]. In this study, it was evaluated using three criteria simultaneously: factor loadings, composite reliability, and average variance extracted (AVE). Factor loadings are considered satisfactory when they exceed 0.5, indicating that individual items meaningfully reflect their intended construct.

As presented in **Table 8**, all items achieved statistically significant loadings at the 0.01 level. Additionally, convergent validity was supported through internal consistency measures. Composite reliability scores ranged between 0.716 and 0.790, while Cronbach's alpha values varied from 0.711 to 0.784, all above the 0.7 benchmark recommended by Fornell and Larcker [121]. These results collectively demonstrate that the items reliably converge to represent their respective latent constructs, confirming the adequacy of the measurement model.

Table 8. The convergent validity results

Constructs	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
EE	0.708	0.716	0.539
EP	0.784	0.790	0.554
FR	0.764	0.773	0.532
JP	0.775	0.777	0.539
PF	0.711	0.774	0.562
PR	0.772	0.739	0.552

Training	0.776	0.787	0.530

The convergent validity of the measurement model was further evaluated using the Average Variance Extracted (AVE). AVE represents the proportion of variance in the observed indicators that is captured by the latent construct relative to the variance due to measurement error. Essentially, it indicates how well the indicators explain the underlying construct compared to the noise in the measurements. Following Barclay *et al.* [122], an AVE value of 0.5 or higher is considered sufficient to confirm adequate convergence. In this study, the AVE values ranged from 0.530 to 0.562, indicating that the constructs demonstrated satisfactory convergent validity.

Assessment of the structural model and hypotheses testing

After confirming the validity of the measurement model, the next step involved testing the hypothesized relationships among the constructs. The structural model was analyzed using the PLS algorithm in Smart PLS software. This procedure generated path coefficients, which illustrate the strength and direction of relationships between the latent variables, as depicted in **Figure 2**.

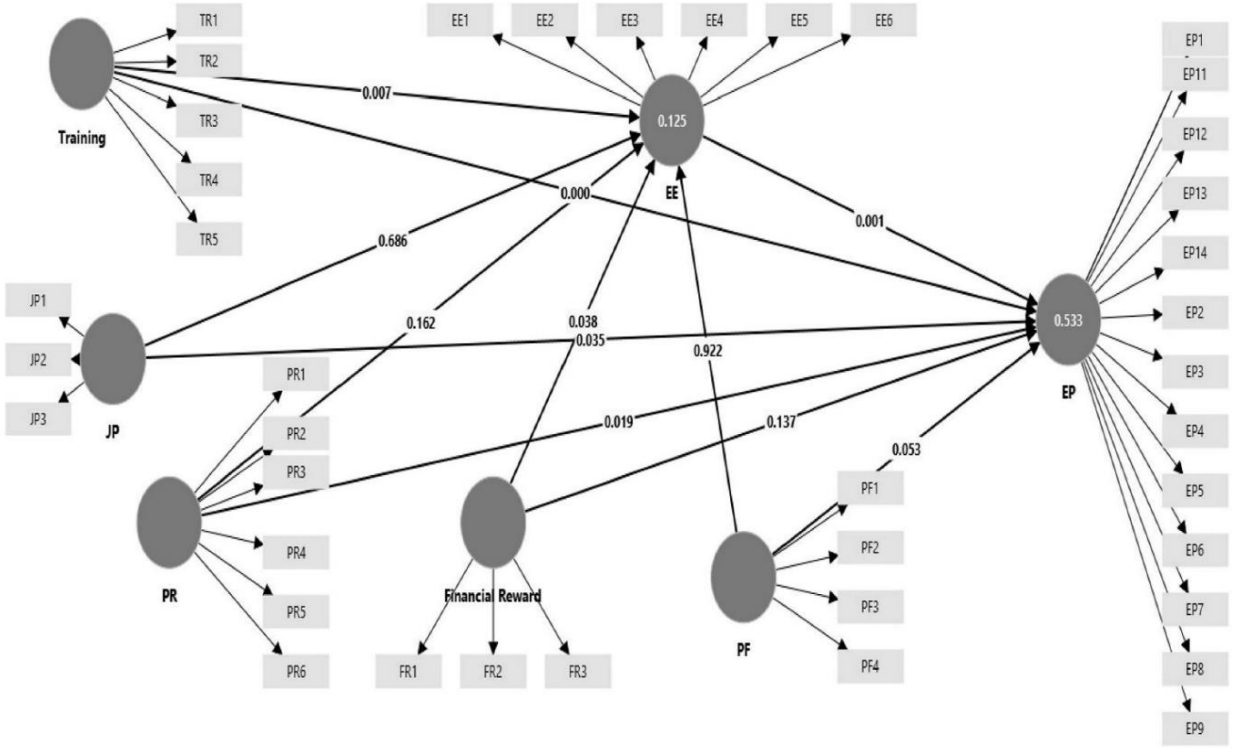

Figure 2. The structural model and hypotheses testing.

Structural model analysis and hypothesis testing

To examine the proposed relationships between performance appraisal practices and employee outcomes, the structural model was analyzed using Smart PLS 4.0 with bootstrapping to test the significance of the paths. Bootstrapping produced the t-statistics and p-values for each hypothesized connection, enabling a rigorous evaluation of which factors influence employee engagement and performance **(Table 9)**.

The analysis revealed that training plays a pivotal role in enhancing engagement among academic staff, indicating that opportunities for skill development and professional growth encourage employees to invest more effort in their roles (H1 supported: $\beta = 0.291$, $t = 2.679$, $p < 0.01$). In contrast, promotional opportunities did not significantly influence engagement (H2 not supported: $\beta = 0.040$, $t = 0.405$, $p > 0.1$), suggesting that simply offering career advancement may not be sufficient to motivate staff in this context.

Similarly, neither performance feedback nor recognition produced a significant impact on engagement (H3: $\beta = 0.026$, $t = 0.096$, $p > 0.1$; H4: $\beta = 0.182$, $t = 1.400$, $p > 0.1$), implying that these practices alone may be insufficient to increase engagement without complementary initiatives, such as mentoring or participative decision-making.

Interestingly, financial rewards emerged as a meaningful predictor of engagement (H5 supported: $\beta = -0.191$, $t = 2.071$, $p < 0.05$), demonstrating that tangible incentives can effectively encourage employees to commit to their work responsibilities. Taken together, these findings suggest that among the performance appraisal practices examined, training and financial compensation are the most effective mechanisms for fostering engagement, whereas other practices, including promotions,

feedback, and recognition, may require additional support or integration with other HR strategies to achieve substantial engagement effects.

Table 9. The Results of the Inner Structural Model

Hypotheses	Sample Mean (M)	Standard Deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
H1: TR -> EE	0.291***	0.109	2.679	0.007	Supported
H2: JP -> EE	0.040	0.094	0.405	0.686	Not supported
H3: PF -> EE	0.026	0.120	0.098	0.922	Not supported
H4: PR -> EE	0.182	0.118	1.400	0.162	Not supported
H5: FR -> EE	−0.191**	0.103	2.071	0.038	Supported
H6: TR -> EP	0.225***	0.063	3.620	0.000	Supported
H7: JP -> EP	0.140**	0.067	2.105	0.035	Supported
H8: PF -> EP	0.145	0.074	1.937	0.053	Supported
H9: PR -> EP	0.190**	0.077	2.347	0.019	Supported
H10: FR -> EP	0.116	0.068	1.489	0.137	Not supported
H11: EE -> EP	0.227***	0.075	3.278	0.001	Supported

***

$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Employee performance and hypotheses testing

The impact of performance appraisal practices (PAPs) on employee performance was assessed using PLS-SEM with bootstrapping. The findings revealed that training had a significant positive effect on employee performance (H6: $\beta = 0.225$, $t = 3.620$, $p < 0.01$), suggesting that staff who receive structured development opportunities tend to perform better. Likewise, job promotion was positively associated with performance, supporting H7 ($\beta = 0.140$, $t = 2.105$, $p < 0.05$), indicating that opportunities for career advancement contribute to improved work outcomes.

Performance feedback showed a marginally positive effect on employee performance (H8: $\beta = 0.145$, $t = 1.937$, $p < 0.1$), implying that receiving feedback can aid employees in refining their tasks, although the impact is less robust. Performance recognition was also a significant predictor of employee performance (H9: $\beta = 0.190$, $t = 2.347$, $p < 0.05$), highlighting the motivational role of acknowledgment in enhancing productivity. On the other hand, financial rewards did not have a statistically significant effect on performance (H10: $\beta = 0.116$, $t = 1.489$, $p > 0.1$), suggesting that monetary incentives alone may not reliably drive academic staff performance in Malaysian HEIs. Finally, employee engagement was found to positively influence performance (H11: $\beta = 0.227$, $t = 3.278$, $p < 0.01$), confirming that engaged employees contribute more effectively to institutional goals.

These results illustrate a nuanced relationship between PAPs and employee outcomes: while training, promotion, and recognition clearly enhance performance, financial rewards alone appear insufficient. The relatively low standard deviations indicate a broad consensus among academic staff regarding these perceptions.

Training and employee engagement

The analysis supports H1, showing that training significantly contributes to academic staff engagement. This aligns with prior research emphasizing that targeted skill development and learning opportunities strengthen employees' commitment to their roles [59, 123]. From the perspective of social exchange theory (SET), providing training signals that the institution values staff growth, which encourages reciprocity through higher engagement. The open and participatory approach in selecting staff for training further reinforces engagement, as employees feel empowered to develop their competencies.

Job promotion and employee engagement

Contrary to expectations, job promotion did not significantly influence engagement (H2 not supported). This finding suggests that the availability of promotion opportunities may not automatically translate into increased engagement among Malaysian HEI staff. While promotion can shape motivation and career aspirations, the results indicate that engagement levels remain relatively stable even when promotions are delayed or limited. This outcome contrasts with prior studies [12, 124] but may reflect contextual factors, such as staff commitment to professional and personal growth independent of formal advancement.

Performance feedback and employee engagement

Similarly, performance feedback was not a significant predictor of engagement (H3 not supported). This diverges from earlier research suggesting that constructive feedback fosters engagement [76, 125]. One possible explanation is that feedback mechanisms within Malaysian HEIs may be inconsistently applied or inadequately monitored, reducing their effectiveness. Staff may perceive feedback as routine or perfunctory rather than developmental, limiting its motivational impact.

Nonetheless, properly structured and timely feedback remains an important tool for aligning expectations, enhancing performance, and promoting engagement when effectively implemented [126].

Performance recognition and employee engagement

Hypothesis four (H4) was not supported, indicating that performance recognition did not have a statistically significant impact on employee engagement. This suggests that academic staff in Malaysian HEIs may not perceive formal acknowledgment of their accomplishments as a primary motivator for engagement. In this context, management appears less focused on routinely recognizing high-quality work, which might explain why recognition does not translate into higher engagement levels. These findings contrast with prior studies that highlight recognition as a key driver of engagement [72, 82] and do not fully align with social exchange theory (SET), which emphasizes reciprocity as a mechanism where one party's positive action elicits a corresponding response from another [51].

A plausible explanation is that universities may be compensating for the lack of recognition through other avenues, such as leadership support, professional development, and financial rewards, which can independently foster engagement [127]. Nonetheless, it is generally accepted that recognition can still serve as a basis for reinforcing exceptional contributions and incentivizing employees to align their efforts with institutional goals [128].

Financial reward and employee engagement

In contrast, hypothesis five (H5) was supported, revealing a significant positive relationship between financial rewards and employee engagement. This indicates that competitive salary packages and appropriate compensation strategies can enhance engagement levels among academic staff. Adequate financial rewards not only motivate employees to perform effectively but also reinforce their confidence in meeting the demands of their roles. These findings corroborate previous research emphasizing the role of pay in engagement [68, 86].

From the lens of social exchange and expectancy theories, employees are likely to reciprocate fair and sufficient remuneration with greater commitment and effort. Therefore, implementing effective financial reward mechanisms is a tangible approach to strengthen engagement and promote a more motivated workforce within Malaysian HEIs.

Training and employee performance

Hypothesis six (H6) was supported, demonstrating that training exerts a significant positive effect on academic staff performance. This aligns with prior research indicating that continuous professional development enhances both individual performance and organizational outcomes [12, 90, 129]. Structured training programs not only help staff acquire new skills and knowledge but also improve job satisfaction, self-confidence, and optimism, which collectively contribute to higher performance levels.

In practice, the performance appraisal system serves as a strategic tool to identify training needs and ensure employees receive the most relevant development opportunities. Staff who undergo targeted training are better equipped to innovate and excel in their roles, which can enhance the competitive standing of the institution. Ultimately, integrating training within the PA framework is a critical driver for sustaining high levels of employee performance.

Job promotion and employee performance

Hypothesis seven (H7) was supported, indicating a significant positive relationship between job promotion and employee performance. Prior research supports this finding, showing that promotional opportunities serve as a key motivator for employees and are closely tied to performance outcomes [91, 92, 130]. Employees often view promotion as a tangible reward for their dedication, and their efforts are frequently aligned with the expectation of career advancement.

In the context of Malaysian HEIs, promotion is perceived as a means to enhance both financial benefits and overall career progression. For instance, an academic staff member who consistently meets performance expectations over several years may eventually qualify for promotion. However, in practice, delays in promotion implementation and minimal financial increments sometimes reduce the perceived impact of promotion on immediate performance. This aligns with Peter [91], who highlighted that promoted employees may wait one to two years before receiving full benefits. Addressing such delays could strengthen the motivational effect of promotions and further enhance staff performance.

Performance feedback and employee performance

Hypothesis eight (H8) was also confirmed, showing that performance feedback positively influences employee performance. This aligns with previous empirical studies [95, 96, 131], highlighting the role of feedback as a critical mechanism for improving work outcomes. Regular, constructive feedback allows employees to understand their strengths and areas for improvement, which in turn enhances their ability to deliver quality work.

The effectiveness of feedback largely depends on the engagement of supervisors in the appraisal process [132]. When supervisors actively monitor performance, communicate expectations clearly, and provide timely guidance, employees are

more likely to respond positively and improve their performance. Conversely, insufficient feedback can lead to disengagement, reduced motivation, and lower overall performance, which negatively impacts service quality within the institution. Building a consistent and collaborative feedback culture is therefore essential for sustaining high levels of employee performance.

Performance recognition and employee performance

Hypothesis nine (H9) was also supported, revealing a positive effect of performance recognition on employee performance. Consistent with previous findings [11, 68], recognition serves as a powerful motivator that encourages employees to assume greater responsibility and invest extra effort in their tasks. Recognition in Malaysian HEIs often follows merit-based criteria, emphasizing accomplishments aligned with institutional key performance indicators rather than personal connections.

Supervisors play a pivotal role in acknowledging high-performing staff and addressing areas of improvement constructively. Regular recognition—whether verbal praise, awards, or other forms of acknowledgment—not only boosts job satisfaction but also reinforces productive behaviors. By valuing employees' contributions, institutions cultivate a culture of excellence where staff are motivated to maintain high performance levels and deliver superior academic and administrative outcomes.

Financial reward and employee performance

Hypothesis ten (H10) was not supported, indicating that financial rewards did not have a statistically significant impact on employee performance in the context of Malaysian HEIs. Nonetheless, prior studies have highlighted that financial compensation is a key motivator, playing a role in employee recruitment, retention, and performance outcomes [99, 133]. Salary provides employees with tangible recognition for their work and a sense of security, which is typically considered vital in organizational settings [85]. According to expectancy theory, higher financial incentives can, in theory, enhance motivation and efficiency.

The findings of this study diverge from prior research [46, 134, 135], as academic staff appear to maintain high performance regardless of pay levels. In this context, remuneration does not significantly alter the effort, creativity, or productivity of employees. While increases in salary or benefits can encourage motivation and enhance outcomes in other settings, the Malaysian HEI environment seems to rely more on intrinsic motivators, professional responsibility, and engagement for sustaining performance.

Employee engagement and employee performance

Hypothesis eleven (H11) was supported, demonstrating a significant positive relationship between employee engagement and performance. This indicates that higher levels of engagement directly contribute to improved job performance and organizational efficiency. These findings align with prior studies [86, 136] emphasizing that engaged employees are more likely to contribute positively to organizational goals.

Engagement acts as a catalyst for performance by motivating employees to invest their energy, attention, and skills into their work [67, 103]. In higher education settings, fostering engagement among academic staff is therefore essential for enhancing teaching quality, research productivity, and overall institutional performance.

Conclusion

This study provides insights into the relationships among performance appraisal practices (PAPs)—including performance feedback, financial rewards, job promotion, performance recognition, and training—employee engagement, and employee performance. It extends the literature by integrating contemporary strategies for implementing PAPs into a theoretical model that explains how these practices collectively influence both engagement and performance.

The proposed framework offers practical implications for university administrators, enabling them to identify the most effective methods to leverage human capital while optimizing resource allocation. By applying this model, higher education institutions can enhance employee engagement and performance through strategic, hybrid PAP approaches.

Several challenges, such as budget constraints, limited managerial support, lack of awareness, staff resistance, and insufficient expertise, can hinder PAP implementation. Addressing these challenges through systematic application of PAPs can improve employee outcomes. Additionally, this study contributes to existing research by exploring the connections between various PAP dimensions and sustainable employee engagement, ultimately enhancing institutional performance through PLS-SEM analysis.

An integrated performance model was developed to optimize academic staff engagement in Malaysian HEIs. This approach provides a framework for managing potential risks related to talent retention and human resource losses, offering practical guidance for improving performance planning and decision-making at both national and institutional levels.

Implications of the study

This study aimed to examine how performance appraisal practices (PAPs) influence employee engagement through the lens of Social Exchange Theory (SET), while also investigating the effects of these practices—including training, job promotion, performance feedback, performance recognition, and financial reward—on employee performance within Malaysian HEIs. The findings indicate that SET is applicable in this context, as PAPs are directly associated with either employee engagement or performance, or both. This suggests that PAPs play a vital role in promoting desirable workplace behaviors while mitigating negative behaviors by shaping employees' attitudes and commitment.

Although job promotion, performance feedback, and performance recognition were not found to significantly influence engagement, training and financial rewards were sufficient to encourage academic staff to participate actively and perform effectively in alignment with institutional objectives. The study contributes to the literature by providing an integrated understanding of the relationships among PAPs, employee engagement, and performance, particularly among academic staff—a combination that has been scarcely addressed in previous research.

The findings imply that university management can leverage PAPs to foster positive employee behaviors and maximize engagement. Moreover, employee engagement can serve as a mediating factor between PAPs and performance, emphasizing the importance of initiatives that promote engagement to achieve optimal performance outcomes. Overall, supporting training and implementing effective financial reward systems are essential strategies for enhancing both employee engagement and performance in Malaysian HEIs.

Limitations and future recommendations

Despite its contributions to theory and practice, this study has several limitations. The research focused solely on academic staff, which may limit the generalizability of the findings. Since non-academic personnel also contribute to institutional performance, including them in future research would provide a more comprehensive understanding of how PAPs affect engagement and performance.

Additionally, this study examined only a subset of HR practices. Future research could consider a wider range of practices, such as talent management, performance management systems, comprehensive training and development programs, compensation strategies, and workforce planning, to explore their impact on employee engagement and performance. Demographic variables, including age, gender, ethnicity, marital status, job experience, and educational level, were not examined as moderating factors, but they may influence the relationships among PAPs, engagement, and performance and could be incorporated in subsequent studies.

The data collection relied exclusively on online questionnaires, which limited direct interaction with participants. Future research could employ interviews or mixed-method approaches to enhance data quality and provide deeper insights. Finally, while this study included both public and private Malaysian HEIs, analyzing these types of institutions separately could yield a clearer understanding of how contextual differences affect the implementation of PAPs and their outcomes.

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