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AI -Based Digital Training Programs and Employer Branding on Employee Retention with Employee Engagement As a Mediating Variable (Study on Technology Companies in Denpasar City)

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Abstract

Rapid technological change demands organizations to implement innovative strategies in human resource management. This study aims to examine the effect of artificial intelligence (AI)-based digital training programs and employer branding on employee retention, with employee engagement as a mediating variable. The study was conducted using a quantitative approach through a survey of 150 employees from a technology company in Denpasar City. The analysis technique used was Partial Least Squares Structural Equation Modeling (PLS-SEM). The results of the analysis indicate that employer branding has a direct, positive and significant effect on employee engagement and retention, and has a significant indirect effect through engagement. In contrast, AI-based digital training does not have a significant impact on engagement or retention, either directly or indirectly. Employee engagement has been shown to play a significant role in encouraging employee desire to stay with the company. Therefore, strengthening the organization's image as an attractive workplace is a key strategy in increasing employee loyalty, rather than relying solely on technology-based training approaches.

Keywords: Employer Branding, Employee Engagement, AI-Based Digital Training, Employee Retention

I. INTRODUCTION

Various aspects of the workplace have changed as a result of advances in digital technology, including the way human resource (HR) management is conducted. The use of Artificial Intelligence (AI) in employee training and development systems is a major transformation. AI-based digital training offers a more personalized, adaptive, and data-driven approach to improving individual competencies. This technology not only allows for more flexibility in terms of time and location but also provides learning recommendations tailored to the needs of the community. Besides training, a crucial element in employee retention is a company's image as a workplace. The term "employer branding" refers to a company's reputation and perception among current and potential employees. In the competitive digital age, employer branding helps attract new employees and retain existing ones, particularly through a positive work culture, clear career opportunities, and a good work-life balance, all of which are attractive to employees.

However, implementing training programs and company branding don't always have a direct impact on employee retention. Employee engagement is a crucial factor that can bridge the gap between the two. Employee

engagement reflects an employee's level of care, enthusiasm, and emotional connection to their work and the company they work for. Employees who feel professionally and emotionally engaged tend to be more loyal, perform better, and want to stay with the company longer. Therefore, in contemporary HR management, employee engagement is a crucial factor in building a sustainable organizational system. Denpasar, the center of Bali's digital economy, is showing a positive trend in the growth of technology-based companies. The need for highly skilled and adaptable employees is increasing due to the emergence of local startups, information technology companies, and the digital creative industry. However, this increased demand has resulted in increased workforce mobility. High turnover rates in technology companies pose a challenge for HR managers. Instability in employee retention can negatively impact team productivity, organizational efficiency, and costs incurred for recruitment and retraining.

Previous studies have shown that employee retention can be improved through effective training and strong employer branding strategies. However, there is a lack of research on how these two factors interact and how employee engagement, as a mediating variable, influences them. For example, if employees feel disengaged or unappreciated, sophisticated digital training may not be beneficial. Similarly, strong employer branding on the outside but not aligned with the internal environment of the company can lead to dissatisfaction and turnover. Therefore, examining the causal relationship more deeply and empirically in a contemporary organizational context is crucial. This research focuses on technology companies in Denpasar City, as this industry is one of the most impacted by digital transformation and has a dynamic workforce. The direct and indirect effects of AI-based digital training programs and employer branding on employee retention are the objectives of this study. Employee engagement is used as a mediating variable. Consequently, this research is expected to provide a more in-depth understanding of the factors influencing employees' decisions to stay with companies, particularly in the technology sector.

Theoretically, this research will help develop an organizational behavior model that combines technological, organizational culture, and employee psychological factors. Furthermore, the findings can be used by HR professionals to develop training strategies and strengthen the company's image as an ideal workplace. Companies can take more targeted and efficient steps in sustainable human resource management by understanding how employee engagement serves as a bridge between training programs and the employer brand for retention. The phenomenon of high workforce mobility, especially in technology companies in Denpasar City, indicates that employee retention cannot rely solely on financial compensation. Employees, especially the digital-native generation, tend to value continuous self-development and emotional involvement in their work. However, based on initial observations at several technology companies in Denpasar, there is a gap between company efforts in providing training or building a corporate image and their direct impact on employee loyalty. This raises the question: are the digital training and employer branding programs that have been implemented truly effective in increasing employee retention?

In the literature, several previous studies have examined the relationship between training and employee retention (e.g., Smith et al., 2021; Raharja & Dewi, 2022), as well as the influence of employer branding on employee loyalty (Misra & Mishra, 2020). However, the approaches used are generally conventional, failing to accommodate digital transformation in the form of AI-based training. Furthermore, employee engagement, which has significant potential as a mediating variable in this relationship, is often positioned only as an independent or dependent variable in previous studies. This gap indicates that there is still a paucity of research that positions employee engagement as a bridge between digital training programs and employer branding on employee retention, especially in the context of technology organizations in Indonesia. Furthermore, the majority of previous research was conducted in large urban areas such as Jakarta or Surabaya, while studies specifically exploring this phenomenon in a local context such as Denpasar are still very limited. Yet, the dynamics of human resources and organizational culture in Bali have unique characteristics that can influence the effectiveness of HRD strategies. Therefore, this research is crucial in addressing this gap in the literature and providing a practical contribution to the development of adaptive and contextual HR policies in the local technology sector.

The novelty of this study lies in its implicit contribution through the application context of AI-based training as a representation of digital transformation in human resource management. Unlike conventional HRM models, this research integrates the concept of artificial intelligence into employee development frameworks, highlighting how algorithm-driven personalization and adaptive learning mechanisms reshape employee experience and engagement dynamics. Theoretically, this study extends the digital HRM theory by emphasizing that AI-based learning systems not only serve as technological tools but also function as strategic enablers of psychological and behavioral outcomes in human capital management. Hence, this research contributes to enriching the theoretical discourse of digital human resource management by positioning AI-based training as a contemporary determinant of employee engagement and retention in the digital era.

II. METHOD

This study uses a quantitative approach with a causality type (explanatory research) to examine the effect of AI-based digital training and employer branding on employee retention, with employee engagement as a mediating variable. The sample was selected by purposive sampling from employees of technology companies in Denpasar City who had worked for at least six months and had participated in digital training. The number of respondents was 150 people. The research instrument was a closed questionnaire with a 5-point Likert scale. The research variables included AI-based digital training, employer branding, employee engagement, and employee retention, each measured by several indicators. Data were analyzed using Structural Equation Modeling (SEM) based on Partial Least Square (PLS) through SmartPLS software. Validity was tested by the loading factor value

(>0.7), while reliability was tested by the Cronbach's Alpha and Composite Reliability values (>0.7). The mediation test was conducted using the bootstrapping method. The study was conducted from January to March 2025.

III. RESULTS AND DISCUSSION

1. The Impact of AI-Based Digital Training Programs on Employee Engagement

Based on the path analysis results, the direct effect of Artificial Intelligence (AI)-based digital training programs on employee engagement showed no statistically significant results. A coefficient value of 0.089 with a p-value of 0.120 indicates that AI-based training implemented in technology companies in Denpasar City has not had a strong impact on increasing employee engagement. This could be due to several possibilities, one of which is that the training, although digital and modern, has not fully met the expectations and needs of employees psychologically and professionally. Employee engagement is a multidimensional aspect that is influenced not only by technical training, but also by factors such as emotional attachment, the meaning of work, social relationships in the workplace, and perceptions of organizational support. AI-based training generally focuses on the efficiency of material delivery and content personalization, but does not necessarily provide a space for in-depth interaction or a learning experience that can build emotional closeness with the organization. Therefore, when training is designed technically but pays less attention to the aspect of psychological engagement, the results tend to be insignificant in increasing engagement.

Several previous studies support the importance of a more holistic approach to digital training. Research by Prasetyo et al. (2022) shows that technology-based training needs to be designed to align with participants' individual motivations and needs. Similarly, Gunawan and Lestari (2021) emphasize that training technology that ignores organizational culture and learner characteristics tends to fail to generate meaningful engagement. Ahmad et al. (2020) also emphasize that the success of digital training depends heavily on participant engagement during the learning process, including the extent to which they feel valued, receive feedback, and have control over their learning.

Thus, the results of this study indicate that AI-based digital training needs to be complemented by other humanistic and participatory strategies to significantly increase employee engagement. Technology is merely a tool, while meaningful and contextual learning experiences are key to building strong bonds between employees and the organization.

2. The Influence of Employer Branding on Employee Engagement

The results of this study indicate that Employer Branding (EB) has a significant effect on Employee Engagement (EI) with a coefficient value of 0.762, a p-value of 0.000, and a t-statistic of 19.012. This indicates that the stronger the company's positive image as an ideal workplace, the higher the level of employee engagement with the organization. This finding confirms that employer branding not only plays a role in attracting external talent, but also impacts how employees who have joined feel emotionally, cognitively, and behaviorally connected to their work. A good corporate image gives employees a sense of pride in being part of the organization. When employees have a positive perception of the company's reputation, company values, and the company's commitment to their well-being, this naturally increases their level of active participation, loyalty, and engagement in carrying out daily tasks. Consistent employer branding also creates a clear organizational identity, which ultimately helps employees build meaning in their work and strengthens psychological bonds with the organization.

These findings align with a study by Backhaus & Tikoo (2021), which emphasized that employer branding is not only a strategy for attracting candidates but also an internal mechanism that strengthens engagement and retention. Another study by Sivertzen, Nilsen, and Olafsen (2020) supports these findings, stating that positive employer branding is strongly correlated with increased employee satisfaction and participation. Furthermore, a study by Theurer et al. (2018) confirmed that a positively perceived workplace brand can increase employee commitment and engagement, particularly in technology-based companies with dynamic and innovative organizational cultures. In the context of technology companies in Denpasar City, these findings are relevant because this sector relies heavily on digital talent, which demands not only material compensation but also attention to organizational values, flexibility, and a pleasant work experience. Therefore, employer branding must be an integral part of HR management strategies, not only in the recruitment process but also in creating a work experience that can continuously increase engagement.

3. The Impact of AI-Based Digital Training Programs on Employee Retention

Based on the results of the path analysis, it was found that the Artificial Intelligence (AI)-based Digital Training Program did not have a significant effect on Employee Retention (ER), indicated by a coefficient value of 0.091, a p-value of 0.276, and a t-statistic of 1.089, which is below the significance threshold of 1.96. This finding indicates that although the company has provided digital training with the latest technological approaches such as AI, it has not provided a significant direct influence on employees' decisions to stay in the organization. One possible cause is that the success of digital training in increasing retention is highly dependent on other factors, such as the relevance of the material to job needs, management support, and employee perceptions of the long-term benefits of the training. Technical training without a personalized approach or strengthening of organizational culture tends to be insufficient in building emotional commitment or employee attachment to the organization.

These results do not entirely align with a study by Meister (2021), which stated that AI-based training programs can enhance adaptive learning experiences and ultimately contribute to increased retention. However, it should be noted that this success often occurs in the context of global organizations with mature digital infrastructure and learning cultures. Meanwhile, according to Cheng & Yi (2022), digital training is only effective in increasing retention when combined with intrinsic motivation strategies, non-material rewards, and a clear career path after training. Another study by Jain et al. (2020) underscores the importance of personalization in AI-based digital learning, where training systems must be able to adapt to the learning style, pace, and needs of individual employees. Without this approach, AI training tends to be seen as merely an administrative tool and fails to create the emotional added value needed to improve retention. Therefore, to optimize the impact of digital training programs on retention, companies need to go beyond simply providing advanced technology. It requires an integration of relevant training content, a humanistic approach, and clear career development policies to ensure employees feel valued, developed, and motivated to stay with the organization long-term.

4. The Influence of Employer Branding on Employee Retention

The results of the structural model test indicate that Employer Branding (EB) has a positive and significant influence on Employee Retention (ER), with a coefficient value of 0.238, a t-statistic of 2.306, and a p-value of 0.021, meaning this relationship is significant at the 95% confidence level. This finding indicates that the stronger the company's image as an ideal workplace in the eyes of employees, the more likely employees are to stay and not look for alternative jobs outside the organization. Employer branding not only shapes the perceptions of prospective employees but also influences the loyalty and engagement of existing employees. A positive company image built through the communication of organizational values, a supportive work environment, and a commitment to employee welfare can create a sense of pride and a strong sense of belonging. Employees who feel valued and an important part of the organization tend to have a greater desire to remain working in the long term.

These findings align with research by Backhaus and Tikoo (2004), which states that employer branding plays a strategic role in creating organizational differentiation that impacts commitment and retention. Research by Tanwar and Prasad (2017) also supports this view, asserting that employer branding dimensions such as career development, recognition, and the company's social value contribute significantly to employees' decisions to stay. Similarly, a recent study by Theurer et al. (2018) showed that employee perceptions of employer branding are positively correlated with job satisfaction and organizational loyalty. In today's digital context, strengthening employer branding is increasingly important as information about a company's reputation is widely disseminated through social media and job search platforms. Therefore, organizations need to consistently build a positive image both internally and externally to increase retention rates, reduce turnover, and create a stable and productive workforce.

5. The Impact of Employee Engagement on Employee Retention

Based on the results of the direct relationship test on the structural model, it was found that Employee Engagement (EI) has a positive and significant effect on Employee Retention (ERR) with a coefficient value of 0.549, a t-statistic value of 5.346, and a p-value of 0.000. This indicates that the higher the level of employee engagement in their work and organization, the more likely they are to stay in the company. Employee engagement reflects the extent to which employees are emotionally and intellectually connected to their work, as well as the extent to which they are willing to put in extra effort to support organizational goals. Employees who feel engaged tend to have higher job satisfaction, loyalty to the company, and a strong desire to remain part of the organization in the long term.

These findings are consistent with research conducted by Albrecht et al. (2015), which confirmed that job engagement significantly influences retention through increased affective commitment. Saks (2006) similarly stated that employee engagement plays a crucial role in creating strong social and psychological bonds with the organization, ultimately reducing turnover intentions. Furthermore, Shuck et al. (2014) also found that job engagement is a key predictor of reduced turnover intentions, particularly when the organization supports employee well-being and development. In today's highly competitive workforce, companies must prioritize strategies to increase employee engagement as part of their retention policies. This can be achieved through providing an inclusive work environment, recognizing individual contributions, and providing clear career development opportunities. Thus, companies not only retain top talent but also sustainably improve organizational productivity and stability.

6. The Impact of AI-Based Digital Training Programs on Employee Retention through Employee Engagement

Based on the results of the indirect path analysis, it appears that the AI-based Digital Training Program (AI-D) does not have a significant effect on Employee Retention (ER) through Employee Engagement (EI), with a coefficient value of 0.049 and a p-value of 0.139. These results indicate that although AI-based digital training has been implemented, its impact on employee retention efforts has not been clearly seen, either directly or through employee engagement. These results indicate that simply implementing AI-based training is not enough to increase employee retention if it is not balanced with strategies that encourage emotional engagement and organizational commitment. This finding differs from the findings of several previous studies, such as Cheng & Yi (2020), which stated that digitally relevant training can increase a sense of belonging and work commitment, which in turn impacts employees' desire to stay in the organization.

However, not all technology-based training successfully increases employee engagement. De Grip & Sauermann (2022) explain that training that is too technical or not tailored to individual needs and motivations can actually make it feel burdensome, rather than empowering. In other words, the effectiveness of digital training depends heavily on how personalized, applicable, and interactive the training is designed. Furthermore, these results can be linked to research by Kooij et al. (2021), which states that technology-based training will only have a positive impact on retention if accompanied by a participatory managerial approach, such as providing continuous feedback and recognizing individual achievements during the training process. Thus, the results of this study provide important implications for HR management practices: investment in AI-based digital training does not automatically result in high retention. A more holistic approach is needed, including strategies that foster employee psychological and affective engagement, so that training outcomes can be reflected in long-term employee loyalty.

7. The Influence of Employer Branding on Employee Retention through Employee Engagement

The results of the indirect relationship analysis show that Employer Branding (EB) has a significant influence on Employee Retention (ER) through Employee Engagement (EI), with a coefficient value of 0.418 and a p-value of 0.000. This finding provides strong evidence that a positive company image as an attractive workplace not only builds employee engagement but also impacts their desire to remain in the organization. Strong employer branding creates positive perceptions of organizational values, the work environment, and career development opportunities. This strengthens employee identification with the organization and fosters emotional engagement. Backhaus and Tikoo (2020) stated that strategically managed employer branding can strengthen employees' internal perceptions of the organization as an ideal workplace, thereby increasing their sense of belonging and reducing turnover intention.

Furthermore, Biswas and Suar (2021) emphasized that employee engagement is a crucial mediator in the relationship between employer branding and employee retention. When employees perceive themselves as part of a reputable organization, they tend to be more engaged, loyal, and committed to their work. This reinforces the finding that employee engagement is a crucial link between perceptions of a company's brand and the decision to stay. Another study by Theurer et al. (2018) also showed that strong internal branding strengthens an organization's identity in the eyes of employees. Employees who feel proud of their employer's brand demonstrate higher levels of engagement and retention, especially when that branding is accompanied by a consistent and supportive work experience. Therefore, these findings provide managerial implications that investing in employer branding is not only crucial for attracting external talent but also for retaining internal employees by continuously improving their engagement. Organizations need to ensure that the public image aligns with employees' actual experiences in the workplace.

IV. CONCLUSIONS

The results of this study indicate that Employer Branding has a significant impact on Employee Engagement and Employee Retention, both directly and indirectly. The indirect influence through employee engagement is proven to have a stronger contribution to retention, compared to the direct influence. Meanwhile, the AI-based Digital Training Program did not have a significant impact on employee engagement or retention, either directly or through mediation. Furthermore, employee engagement has a significant impact on employee retention, confirming that a high level of engagement is a key factor in retaining the workforce within the organization. These findings emphasize the importance of building a positive company image in the eyes of employees and creating a work experience that can increase emotional attachment and long-term commitment. Therefore, an employer branding strategy integrated with an internal engagement approach is a strategic step in increasing loyalty and reducing employee turnover rates.

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