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RESEARCH ARTICLE

Informal workplace learning and employability: The mediating role of competency development among financial sector employees in Bhutan

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ABSTRACT

Amidst the rapid changes of this era, time constraints act as impediments to employees' skill acquisition. However, a promising solution emerges in the form of informal workplace learning (IWL). Despite its potential, the precise impact of IWL on employability and competency development has remained an enigma. To unravel this, the present study draws upon the insights of the social learning theory. It delves deep into the impact of IWL on employability, incorporating competency development as a mediating element. The research also examines the potential moderating roles of learning goal orientation (LGO) and self-directed learning orientation (SDLO) in the IWL-competency development relationship. Leveraging data from 512 banking sector participants, the study employs a rigorous deductive design, administering a structured questionnaire through stratified random sampling. Analytical rigor is upheld via Confirmatory Factor Analysis, revealing squared multiple correlations (0.331 to 0.94) and affirming the CFA model's validity and reliability through indices like average variance extracted (AVE) and composite reliability (CR). The hypotheses are subsequently evaluated through structural equation modelling (SEM). Findings reveal a substantial impact of IWL on employability ($\beta = 0.13$), with competency development effectively mediating this relationship ($\beta = 0.30$). While the anticipated moderating roles of LGO and SDLO do not manifest, this research furnishes valuable insights for organizations aiming to bolster their workforce's proficiency and employability via IWL. The study contributes to the discourse on learning strategies amidst the contemporary professional landscape, urging organizations to harness the potential of IWL to foster adaptability and growth.

Keywords: informal workplace learning; competency development; learning goal orientation; self-directed learning orientation; employability; financial institutions; banks; Bhutan; SEM

1. Introduction and background

In a time marked by constant change, employees face the challenge of learning new skills while dealing with limited time. This challenge has brought informal workplace learning (IWL) to the forefront as a practical solution for on-the-job learning. However, the exact impact of IWL on employability and competency development remains unclear. To address this uncertainty, this study aims to explore the intricate connections between IWL, competency development, and employability.

The origins of informal learning can be traced back to luminaries in educational philosophy, including

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John Dewey, Kurt Lewin, and Mary Parker Follett, whose ideas seamlessly resonate with modern theorists like Malcolm Knowles and Wenger. Over time, this concept has seized the attention of researchers and organizations alike, bridging the gap between formal and informal learning through active immersion within the everyday work experiences that span diverse occupations[1].

While the appeal of IWL is evident, its impact on employability and competency development lacks clarity. To shed light on these aspects, the study delves into prior research. Earlier studies focused on cognitive and behavioral strategies for learning, exploring the intricate relationship between knowledge, skills, and attitudes[2]. Scholars such as Wenger[3], Watkins and Marsick[4], and Eraut[5] have emphasized the vital role of informal learning in workplace dynamics.

However, much of the research has emphasized on the social dimension of IWL, overlooking self-directed learning, learning by reflecting and feedback-based learning[6,7]. Similarly, the vital role of competency development in mediating the link between IWL and employability has been underexplored[8,9].

In this context, this study aims to uncover the complexities of IWL, using the octagon model[10]. Which unravels IWL from eight different angles such as experience/action (trying and applying own idea/model learning), feedback (direct/indirect feedback), reflection (anticipatory/subsequent) and intent to learn (extrinsic/intrinsic intent). The study strive to bridge existing gaps by uncovering the nature and impact of competencies nurtured through IWL particularly within Bhutan's dynamic financial sector—a sector undergoing transformation[11]. Though earlier research explored the mediating role of competencies in human resource development and banking sector effectiveness[12]. However, this study seeks to provide empirical insights into competencies fostered through IWL and their influence on employability.

Furthermore, the limited empirical exploration in the public sector, despite its theoretical foundations, motivates to delve into IWL, especially within the educated and skilled workforce[13,14]. Given Bhutan's developing financial sector, a robust learning framework is essential for adaptation. Therefore, the study aims to examine the effect of employees' IWL on competency development, the effect of competency development on employability, and to identify the mediating effect of competency development between IWL and employability. Additionally, the study also investigates the significance of personal characteristics, such as LGO and SDLO, as moderators on the relationship between IWL and competency development, and identify the employee's functional characteristics, such as designation, age, gender, experience, and their nature of involvement in IWL and competency development (see conceptual framework in **Figure 1**).

2. Literature review

2.1. Informal workplace learning (IWL) and competency development

In today's globalized and constantly innovating world, human competence has become a crucial resource and a competitive parameter. However, the required competencies cannot be solely acquired through education, as there is a constant need for change and renewability[15]. Competencies are dynamic and continuously evolving, as Eraut[16] notes. Likewise, Forrier[17] also describes competency development as a process that occurs when a person enters a new situation or task where action is not predetermined and reflects on the results or feedback from a more experienced person. Consequently, IWL and competencies have become more interesting areas of focus than formal education and instruction.

Initially, IWL was characterized as learning from experience, while competencies were often viewed as the ability to meet job standards[18]. Studies have shown that individuals in managerial positions often learn through doing their job, rather than through introspection, leading to the development of competencies such as leadership, relationship building, and quantitative analysis. However, this study assumes that employees seek

traditional vertical career paths, and thus the necessary competencies non-managers must develop to become managers are depicted.

This representation alone is inadequate as it ignores the current career path paradigm of employability. As the literature on IWL and competencies continues to evolve, two distinct trends have emerged: self-directed learning and learning from others, as well as vocational or social competencies[19]. This study emphasizes that to develop competence, individuals must be willing and prepared to learn.

Several studies have identified that IWL contributes to competency development, particularly in the areas of functional or professional competence. For example, Rowold and Kauffeld[20] and Decius[10] found that informal learning at work, such as discussions with colleagues, led to the development of self-reported work-related competence. Social learning approaches, learning from feedback, and supervisor support have also been identified as influencing professional competencies[21–23]. Similar ideas have been put forward by Haemer[24], Moore and Klein[25]. Haemer[24] identified that learning strategies such as trial and error, help seeking, and reflection were the major contributors of competency development. However, like most of the studies this study also included both formal and informal learning to examine the influence on competency development. The studies of Moore and Klein[25] on informal learning at workplace has also identified sharing knowledge and interacting with others, as the most frequently used IWL method. Indicating IWL does influence competence development, but it depends on the support received from supervisor and the management.

However, most of the research on IWL has focused on the social approach, with less attention given to experiential learning, learning from feedback, learning by reflecting, and learning intent. To address this gap in the literature, this study hypothesizes that:

- H_1: Employees' informal workplace learning affects their competency development.

The study aims to examine the combined effects of these four factors/characteristics of IWL on competency development, which cannot be separated in real-life situations.

2.2. Competency development and employability

The importance of learning at work in enhancing employability and competitiveness is widely acknowledged, supported by empirical evidence that underscores the critical role competencies play in shaping employability outcomes[26]. These competencies, which encompass knowledge, skills, and abilities (KSAs), contribute to superior performance at work, defining the notion of competence. This competence is quantifiable and reflective of attributes that drive excellence in job roles.

The process of competency development is integral to this framework, involving the progressive enhancement or beneficial transformation of an individual's competencies[27]. This development aligns with the broader concept of employability, defined as an individual's ability to sustain current roles or transition into new positions within or outside an organization[28]. To address the evolving demands of employability, continuous learning is essential, both on a personal level and within the context of the workplace. Since foundational skills acquired during career entry fall short in accommodating the multifaceted requirements of employability, hence necessitating targeted and consistent learning throughout one's professional trajectory.

This realization is underscored by the dynamic nature of the job landscape, which demands ongoing skill evolution for professionals across diverse fields[29]. Evidence from Vos et al.[30] substantiates this by establishing a positive correlation between employee participation in competency development initiatives and perceived employability. However, this study predominantly focuses on the perception of competency support rather than the actual progression of competencies.

Further insights from Serim et al.[31] suggest that the fairness and relevance of competency models implemented by organizations exert a significant influence on employability outcomes. While these studies provide valuable perspectives, De vos et al.[27] approach the issue from an organizational standpoint. Their findings highlight the organization's role in fostering a conducive environment and supplying practical tools for competency development. Nevertheless, they underscore that the onus of investment in self-development ultimately rests with the employees. This perspective reveals a gap in understanding the role of self-direction in competency development.

Similarly, Serim et al.[31] primarily focus on workers' perceptions of competency models rather than delving into their individual competencies and the resultant employability outcomes. The research of Froehlich et al.[9,32] introduces the proactive learning paradigm, emphasizing the significance of seeking information, feedback, and assistance in enhancing professional competence, anticipation, optimization, and personal flexibility. Building upon this, the notion emerges that learning from others' experiences and feedback can exert a positive influence on both individual competence and employability.

Given the scarcity of empirical evidence directly examining the link between competency development and employability, it becomes essential to formulate hypotheses for further exploration. Therefore, the study hypothesizes that:

- H_2: Competency development is positively related to employability.

2.3. Mediating role of competency development

The modern landscape of employability places a premium on individuals taking a proactive stance towards their professional development to ensure continued job security, learning, and future career growth. According to Van Der Heijden et al.[6] and Downs et al.[33], key predictors of employability encompass job-related formal learning, interactions with supervisors, and networking both within and outside the organization. Notably, networking demonstrates a positive association with attributes such as occupational competence, flexibility, and anticipation and optimization. The study by Gerken et al.[34] further supports the significance of informal learning, highlighting that social informal learning, including external information seeking and feedback integration, contributes to employee employability. However, on the other hand his study demonstrates that formal learning does not exhibit a clear relationship with employability outcomes.

Although both Van Der Heijden et al.[6] and Gerken et al.[34] explore the interplay between formal and informal learning, their focus primarily centers on the social dimension of informal learning, inadvertently overlooking the role of self-initiated learning. Moreover, the intertwined investigation of formal and informal learning introduces complexities that challenge a clear understanding of the precise connection between IWL and employability.

Existing literature echoes the assertion that IWL serves as a foundational element in fostering employability. Yet, only the study conducted by De Vos et al.[27] delves into the antecedents and consequences of competency development that too through an organizational lens. This research highlights the organization's potential to establish a conducive environment and provide practical tools for competency development. However, it underscores that the onus of competency enhancement lies squarely on the shoulders of the employees themselves. This revelation emphasizes the necessity for a more comprehensive analysis of the specific role played by self-driven learning in the journey of competency development.

While the literature alludes to plausible links between IWL competency development, and employability, the intricate relationship between IWL, employability outcomes, and the mediating impact of competency development remains enigmatic. This study seeks to address this gap by formulating the following hypothesis:

- H_3: Competency development mediates the relationship between IWL and employability.

2.4. Informal workplace learning and employability

The literature provides insights into the relationship between IWL and employability. B. Van Der Heijden et al.[6] investigated social informal learning activities among non-academic staff in Dutch universities and found that interactions with supervisors and networking within and outside the organization are strong predictors of employability components. Gerken et al.[34] studied proactive social informal and formal learning activities among faculty members in a Dutch university, revealing that social informal learning, such as seeking external information and responding to feedback, was related to employability. Further, Lecat et al.[35] emphasized the impact of informal learning, particularly the use of feedback, on employability. However, these studies mainly focused on the social aspect of informal learning, neglecting self-learning, and included both formal and informal learning, making it challenging to establish the exact relationship between IWL and employability. Despite the theoretical foundation linking IWL and employability, causal relationships remain untested[9]. While these studies underscore the importance of employee employability for both organizations and individuals, they also highlight the role of IWL in fostering employability. Based on this literature, the study hypothesizes that IWL is positively related to employability.

- H_4: Informal workplace learning relates positively to employability.

2.5. Moderating effect of self-directed learning orientation and (SDLO) and learning goal orientation (LGO)

Bandura's[36] social cognitive theory highlights those individual characteristics and motivation play an important role in learning and behavior, rather than solely relying on external environmental factors. In the context of IWL, personal factors such as LGO and SDLO have been identified as key factors influencing competency development[37]. Individuals with a high LGO are motivated to develop their competencies by learning new and complex tasks, maintaining their focus on the task, and continuing to develop their skills and abilities[38]. Previous studies have found a positive relationship between LGO and learning efforts[39] and that managers with a high LGO tend to try new things to overcome challenging situations[40].

Similarly, SDLO has been recognized as a crucial character trait for adults to engage in self-directed learning, defined as approaching learning activities actively and independently while persistently overcoming obstacles and setbacks in the work-related learning process[41]. Employees with high SDLO show learning initiative and identify learning opportunities, promoting opportunities for IWL[42]. Workers with high SDLO acquire more new skills and exhibit more learning behaviors at work, viewing learning as their own responsibility to keep up with changes[43,44].

Therefore, the present study hypothesizes that workers with a high LGO and SDLO are more likely to benefit from IWL, leading to improved competency development. Specifically, H_{5a} posits that LGO strengthens the positive effect of IWL on competency development, while H_{5b} suggests that SDLO strengthens the positive effect of IWL on competency development. Overall, these findings emphasize the importance of personal characteristics and motivation in promoting effective learning and competency development in the workplace.

- H_{5a}: Learning goal orientation strengthens the positive effect of IWL on competency development.
- H_{5b}: Self-directed learning orientation strengthens the positive effect of IWL on competency development.

2.6. The conceptual framework of the study

Figure 1, presented below, serves to elucidate the intricate nexus involving IWL, competency development, and employability, thus constituting the focal point of inquiry within the proposed study. The investigation of IWL is approached through the utilization of the octagon model as developed by Decius[45]. The model consists of four main dimensions further divided into eight namely: intrinsic/extrinsic intent to learn, vicarious/direct feedback, (experience) trying and applying own idea/model learning and finally anticipatory/subsequent reflection. On a parallel trajectory, the exploration of competency development is pursued by discerning three distinct categories of competencies: professional, personal, and social competencies. Employability, a multifaceted construct, encompasses dimensions of flexibility, anticipation and optimization, occupational expertise, and corporate sense[28].

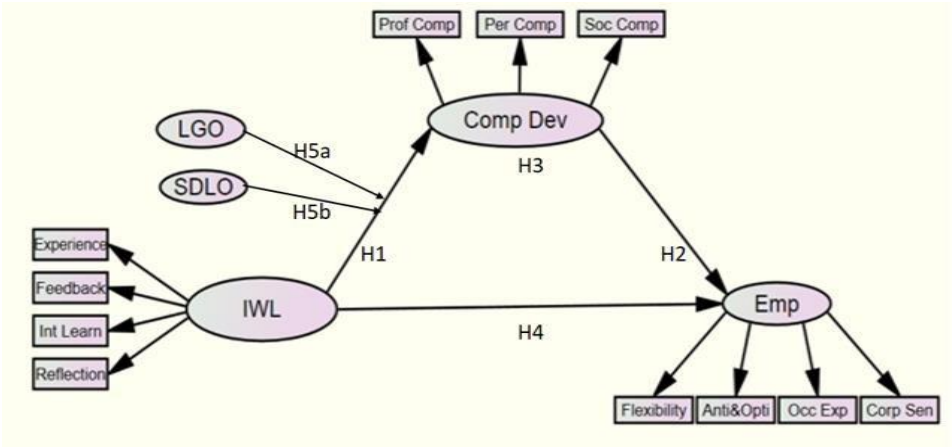

Figure 1. The conceptual framework of the study.

Source: Developed by the researcher.

Furthermore, the study delves into the role of personal attributes as moderators within the interplay between IWL and competency development. Specifically, the examination will encompass aspects such as LGO and SDLO. Beyond this, the study aims to elucidate the influence of employee functional characteristics, including designations, age, gender, and experience, along with their manner of engagement with IWL and competency development activities. Through this comprehensive approach, the study will unravel the intricate dynamics that underlie the connections between IWL, competency development, and employability.

3. Methodology

In this research, a deductive theoretical approach was employed, following Creswell[46]. The data for the study were collected using self-administered survey questionnaires from all five banks located in the capital city of Bhutan, Thimphu. The banking sector was selected for the study as it has a larger number of employees compared to other service sectors, particularly in the capital city.

3.1. Sample

A proportional stratified random sample[47] was used to select the sample size. Following the suggestion of Bentler and Chou[48], a ratio of 5 cases per variable was used, resulting in a final sample size of 515 participants. The researcher divided the total population into five separate strata or groups, each corresponding to a specific bank. To achieve an accurate representation of each stratum, a proportional allocation strategy with 5% margin of error was adopted. This means that the number of participants selected from each bank was determined based on its proportion within the total population of banks. Additionally, the snowball method was used to draw the samples.

3.2. Research instrument

The research instrument in this study was derived from a previous study and adjusted to fit the current research objectives. The research tool comprised six sections: Part A gathered demographic data from respondents, Part B assessed Informal Workplace Learning, which was adapted from Decius[45], Part C gauged competency development, which was adapted from Naim and Lenka[49] and Part D measured Employability, which was adapted from Van der Heijden et al.[28].

3.3. Data analysis

Despite the effort put into the survey, missing data is always a possibility. In this study, subjects with missing data were excluded, resulting in a reduction of the sample size from 515 to 512. The data was tested for normality, with skewness ranging from −0.57 to −1.26 (SE = 0.108) and kurtosis ranging from −0.05 to 2.86 (SE = 0.215)[50] indicating a normal distribution. To avoid multicollinearity issues, tolerance values for independent variables were tested and found to be above 0.10, while VIF values for dependent variables were less than 6[51]. The Kaiser-Meyer-Oklin (KMO) value of 0.95 indicated adequate sample size for each variable[51], and Bartlett's test for sphericity showed an appropriate factorization of the correlation matrix (significance value of < 0.001). The Harman test was performed to check for common method bias, and the total variance for a single factor was 33.926 percent, indicating that CMB did not affect the data[52].

3.4. Confirmatory factor analysis (CFA)

The five constructs were analyzed together using a second order CFA. Post-hoc modification analysis was conducted based on both modification indices (M.I) and theory, which resulted in covariance changes[53,54]. The X^2 value was 3619.59 with 1623 degrees of freedom and significant difference ($p < 0.001$). Five items with low factor loadings were dropped, namely *LGO1* (0.56), *LGO2* (0.66), *EIL3* (0.50), *PCD2* (0.71), and *PCD5* (0.62), as supported by the theory. As each factor was measured using one item each in the short version, according to the octagon model of IWL by Decius[44]. The squared multiple correlations for all the observations were within the range of 0.331 to 0.94. The post-hoc modification indicated correlations between *e13* and *e14* (0.31), *e49* and *e50* (0.41), and *e51* and *e52* (0.42). The model fit indexes are presented in **Table 1** and the confirmatory factor analysis (CFA) is presented in **Figure 2**.

Table 1. Second order CFA model fit indices of five construct.

Fit measures	Values	Modified model	Cut off points
Chi-square (X^2)	4963.83 ($P < 0.001$)	3619.59 ($p < 0.001$)	$P > 0.05$
X^2/df	2.56	2.23	< 5
NFI	0.81	0.84	≥ 0.90
CFI	0.87	0.91	> 0.80–0.90
IFI	0.87	0.91	≥ 0.90
TLI	0.94	0.90	> 0.85–0.90
RMR	0.03	0.04	≤ 0.05
RMSEA	0.07	0.49	< 0.08

Source: Developed by the researcher.

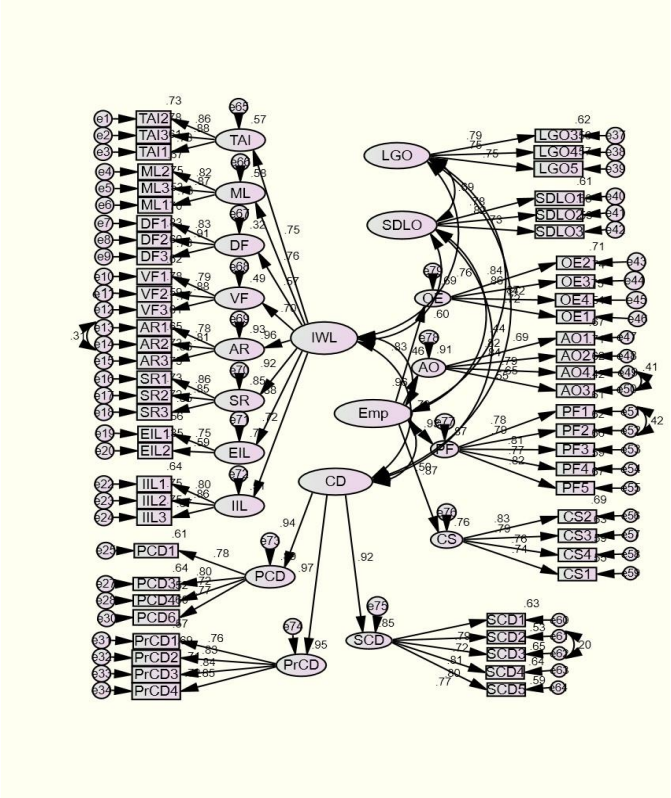

Figure 2. Second order CFA of five constructs.

Source: Developed by the researcher.

3.5. Validity and reliability

The study evaluated the validity and reliability of the CFA model using several measures such as average variance extracted (AVE), composite reliability (CR), average shared variance (ASV), and maximum shared variance (MSV). Convergent validity was assessed by examining the AVE for each construct, which was considered acceptable if it exceeded 0.5[55]. Discriminant validity was established when both MSV and ASV values were lower than the AVE for all constructs[56]. The reliability of the constructs was confirmed if the CR values for all constructs exceeded 0.7. **Table 2** provides a detailed overview of these validity and reliability measures.

Table 2. Validity and reliability test results.

Variables	C	AVE	MSV	ASV
IWL	0.93	0.63	0.57	0.42
CD	0.96	0.89	0.52	0.38
Employability	0.94	0.81	0.25	0.21
LGO	0.81	0.58	0.57	0.42
SDLO	0.82	0.61	0.47	0.33

Source: Developed by the researcher.

3.6. Structural equation modelling analysis (SEM)

In the final analysis, structural equation modelling (SEM) was used to test the hypothesis using a latent variable model. The SEM model included two moderators (SDLO and LGO) and three control variables (age, experience, and designation). Although previous models failed to detect any moderating effects of the moderators, the final model was identified to test the hypothesis. The study examined the direct effects of LGO

on competency development and SDLO on competency development and employability. Age and experience control variables were eliminated to increase degrees of freedom, as they showed no significant effect on competency development and employability. Control variable designation had a significant inverse impact on competency development (−0.13) with a *P*-value of <0.001, while no effect was observed on employability and IWL. Consequently, the designation path to employability and IWL was eliminated. The model fit indices met acceptable standards with X^2/df at 2.3[57], NFI at 0.85[56], CFI at 0.90[58], IFI at 0.90[59], TLI at 0.90[55], RMR at 0.04, and RMSEA at 0.05[58,60]. The model supported hypothesis H_1, H_2, H_3, and H_4.

Although the R^2 values for competency development and employability decreased from 0.67 to 0.59 and 0.34 to 0.29, compared to earlier tested models. However, they remained above the threshold of 0.1[61]. Therefore, the SEM model was deemed appropriate for testing the hypothesis and drawing conclusions (See **Figure 3**).

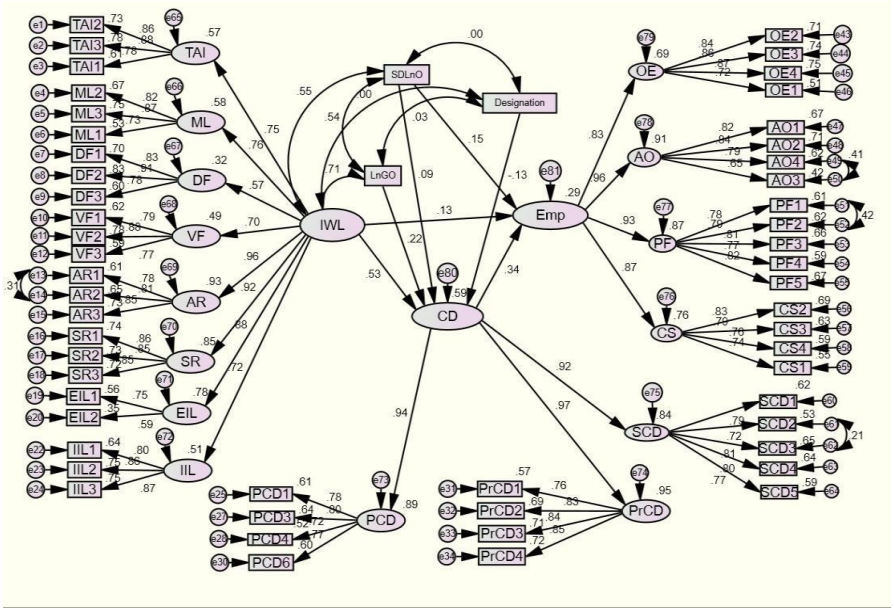

Figure 3. Standardized path coefficients of the structural equation model (SEM).
Source: Developed by the researcher.

4. Discussion of research findings

The core objective of this study was to scrutinize the interplay between IWL and competency development. The outcomes of the research align harmoniously with prior investigations that underscore the paramount significance of IWL in elevating employees' competencies. In the context of the banking sector, the study pinpointed professional, personal, and social competencies as pivotal aspects, substantiating existing research that underscores the relevance of these competencies within financial institutions[10,19,20,24,49,62].

Among the array of IWL methods employed, this study found that reflection and experiential action were the most prevalent, signifying employees' inclination towards extrinsically driven learning goals. Notably, these findings resonate with earlier research, which also identifies reflection as the most effective method for bolstering competencies[23,63–65]. This predilection for reflection is attributed to the autonomy it affords employees, allowing them to shape their learning journey[23,66].

Interestingly, the study revealed a modest impact of learning from feedback on competency development. This suggests potential gaps in feedback provision, or the potential emotional impact of negative feedback leading to its dismissal by employees[67,68]. This finding resonates with parallel research that reports akin

outcomes[23,69]. Additionally, the study proposes that less experienced employees might not substantially benefit from negative feedback, as they are still in their developmental phase, potentially not allowing this feedback to significantly contribute to their perceived competence growth.

The second objective of this study aimed to delve into the intricate relationship between competency development and employability. Within the context of this research, employability was considered the ultimate result of competency development. The outcomes of the study showcased a significant correlation between professionals who enhance their competencies and a corresponding elevation in their employability levels. An intriguing revelation was the emergence of competency development as an unforeseen byproduct of work, contributing to the augmentation of employability. These findings find resonance with the body of research by De Vos et al.[27], van der Heijden[70], and Downs et al.[33], among others. Interestingly, within the scope of enhancing worker employability, the study uncovered that the contribution of professional competency was relatively less impactful compared to personal competence, contradicting initial expectations.

The importance of personal competence, which encompasses abilities such as stress management, meeting deadlines, continuous learning, self-confidence, and creativity, emerged as a robust predictor of employability. While the magnitude of this difference wasn't substantial, it offers an interpretation that employees in the banking sector frequently encounter goals and deadlines that necessitate adherence within specific time frames. This familiarity with meeting deadlines and functioning under pressure is, therefore, a prevalent aspect of their work routine. Another factor influencing this trend is likely the practice of job rotation that banks commonly implement.

Conversely, the study observed that social competence made the least contribution to employability enhancement. This could imply that the work processes within banking institutions are regimented, with well-defined procedures to be followed, leaving minimal room for interconnection between employees. This consistency in findings finds alignment with the research by Pylväs et al.[22].

The third objective of this study sought to unravel the mediating role played by competency development, marking a novel empirical exploration of this facet between IWL and employability. Unlike prior research endeavors, the mediating effect of competency development had remained largely uncharted.

The findings of this investigation unveiled a notable revelation: competency development stands as a complete mediator in the association between IWL and employability. This insight underscores that relying solely on IWL is insufficient to enhance employability; the nurturing of competencies must also be pursued. This resonates harmoniously with the theoretical contributions of Boyatzis et al.[71], as well as Deist and Winterton[72]. Furthermore, these results align with Bandura's theory[73] of social learning. The essence of this alignment lies in the notion that individuals are more inclined to embrace a certain career path when they have observed success within that field. The phenomenon of observational/model learning can either encourage the adoption of a similar career or deter it. Thus, the effects of IWL ripple into a person's aspirations and employability expectations, causing fluctuations in their self-assessment of competencies.

The fourth objective of this study was to investigate the impact of IWL on employability. Results indicated that all dimensions of IWL had a significant impact on enhancing employability. Learning through experience and action, as well as reflection, were particularly positively associated with anticipation and optimization, which involve preparing for future changes in a personal and creative way to achieve the best possible outcomes[74]. However, IWL had the least positive impact on two dimensions of employability: occupational expertise and corporate sense. Nonetheless, this finding supports the study's fourth hypothesis. The study's results lead to the conclusion that diverse IWL can significantly improve employability competences, consistent with previous research indicating that informal learning activities can enhance employees'

employability[9,32,35,75,76]. On the other hand, of the four dimensions of employability, occupational expertise and corporate sense had the least explanatory power. Corporate sense involves sharing responsibilities, knowledge, experiences, achievements, feelings, goals, etc. However, it appears that banks in Bhutan do not emphasize instilling a sense of shared responsibility or purpose, and the employees' job descriptions do not require much involvement in this regard, resulting in a lack of corporate sense among most employees.

Moreover, the least variance in employability was accounted for by occupational expertise, and these outcomes are explained by Froehlich et al.[32]. Their rationale posits that the limitations of human working memory, coupled with an extensive array of tasks to complete, can impede the assimilation and retention of new information, thereby obstructing IWL and subsequently diminishing occupational competence. Furthermore, knowledge acquired through informal means might be prone to inaccuracy or errors, resulting in decreased occupational expertise. These intricate results shed light on the interplay between distinct dimensions and specific facets of employability, moderated by organizational and cognitive elements. These findings contribute significantly to the comprehensive comprehension of how nuances within IWL impact employability within a practical environment.

The fifth objective of this study aimed to explore the potential moderating effect of LGO and SDLO on the positive impact of IWL on competency development. While previous research has highlighted the significance of LGO in relation to IWL participation and competency development, the focus has largely been on the direct effect of LGO on these aspects[40,44,77–81].

Contrary to initial assumptions, the findings of this study unveiled that neither LGO nor SDLO played a moderating role in the relationship between IWL and competency development. This unexpected result might be attributed to the intrinsic motivation to learn that appears to be lacking among employees within the Bhutanese banking industry. Raemdonck et al.[43] proposed that employees with an inherent drive to learn are more prone to participating in IWL. However, within the Bhutanese context, this intrinsic motivation to learn seems to be lacking, as evidenced by the low preference for learning from feedback. Decius et al.[44] highlight that "LGO is associated with the tendency to view feedback as a core component of IWL beneficial to learning". This finding aligns with the concept of intrinsic motivation discussed by Pink[82], who suggests that intrinsic drive is linked to becoming better at something personally meaningful or relevant.

From a theoretical standpoint, drawing from Bandura and Walters[73] the notion of learning orientation helps in understanding the impetus behind self-initiated informal learning. According to this theory, a competitive work environment and heightened intrinsic motivation are pivotal for fostering SDLO and LGO. This shows that Bhutanese banking sector lacks competitive work environment and an intrinsic intent to learn.

The final objective of this study aimed to assess the potential impact of control variables, specifically designation, experience, and age, on the three key variables being investigated: IWL, competency development, and employability. The findings unveiled a contradictory association between designation and competency development. This contradicts the outcomes of prior research conducted by Hashim[19], Paloniemi and Hager[83], and Pb[84], who noted that individuals with higher designations typically exhibited elevated levels of competency development. The observed diminished level of competency development, despite evident self-motivation and drive, could potentially be attributed to the prevailing cultural norms of Bhutanese society, which emphasizes values of humility and modesty, thereby influencing individual attitudes[85].

Furthermore, another plausible explanation can be derived from Albert Bandura's theory[73] of reciprocal determinism, which posits that an individual's self-efficacy, or their belief in their capability to achieve goals, is influenced by various factors including observing others' experiences and verbal encouragement (feedback). Interestingly, the quantitative results of the study indicate that Bhutanese banking employees exhibit a

preference for learning through self-reflection over receiving feedback. This inclination towards introspective learning might elucidate the observed negative correlation between designation and competency development. Essentially, employees within the Bhutanese banking sector seem to possess contentment and humility, potentially leading them to perceive their competencies as less pronounced.

To summarize the outcomes of the hypothesis testing, a comprehensive overview is provided in **Table 3**. Furthermore, **Table 4** delineates the hypotheses tested, their outcomes, and whether they were accepted or rejected, thus encapsulating the pivotal findings of the study.

Table 3. Results of SEM analysis.

		Total effect	Indirect effect	Direct effect	Results
IWL-CD	H_1	0.52***	-	0.52***	Accept
LGO-CD	-	0.21***	-	-	-
SDLO-CD	-	0.09***	-	-	-
Desg-CD	-	−0.13***	-	-	Control effect
SDLO-Emp	-	0.17*	0.03*	0.14*	Partial mediation
IWL-Emp	H_3	0.30*	0.17***	0.13(n/s)	Full mediation
CD-Emp	H_2	0.33***	-	-	Accept
IWL-Emp	H_4	0.30*	-	-	Accept

*** = $p < 0.001$, * = $p < 0.05$ values shown are standardized parameter estimates. All p values of the estimators *ae* below 0.001, except for (SDLO-Emp $p = 0.02$, IWL-Emp $p = 0.009$). Source: Developed by the researcher.

Table 4. Result of the hypothesis test.

Hypothesis description		Accept/Reject
H_1	Employees informal workplace learning affect self-reported competency development.	Accept
H_2	Competency development relates positively to employability.	Accept
H_3	Competency development mediates the relationship between informal workplace learning and employability.	Accept
H_4	Informal workplace learning relates positively to Employability (total effect).	Accept
H_{5a}	Learning goal orientation strengthens the positive effect of IWL on competency development.	Reject
H_{5b}	Self-directed learning orientation strengthens the positive effect of IWL on competency development.	Reject

Source: Developed by the researcher.

5. Conclusion

This study offers significant contributions in three areas: theoretical, methodological, and practical. The theoretical contributions include the development of a model of employability enhancement using the competencies acquired through IWL, the examination of the mediating role of competency development between IWL and employability, and the establishment of a structural relationship between IWL, competency development, and employability. Additionally, the study investigates the moderating effect of LGO and SDLO on the relationship between IWL and competency development and finds that competitive climate has a positive influence on employees' learning behaviors. The study also contributes to the concept of reciprocal determinism of Bandura's social learning theory[73]. Methodological contributions include the use of SEM to study the causal effect and the development and validation of a survey instrument. Practical contributions include the identification of key competencies that enhance employability and the development of interventions to improve IWL and competency development in the banking sector in Bhutan.

The study recommends that banking sectors in Bhutan should encourage IWL to improve employability, particularly through reflection and model learning. Banks should create a competitive environment to foster intrinsic learning intent and encourage more IWL. The study also highlights the need for confidentiality and constructive feedback. Policy makers should promote a feedback culture and develop interventions to promote autonomy, mastery, and purpose to increase intrinsic learning intent.

Although the study was carried out with rigor and meticulous care adhering to the standard best practice of an academic research, the study is also subject to limitations like, not considering the influence of organizational conditions on the relationship between IWL and competency development, methodological limitations, being based on subjective opinions, being specific to the banking sector, and having a lengthy questionnaire that resulted in respondent fatigue.

Future research should focus on organizational and personal conditions that support IWL workplace characteristics that influence it, Bhutanese work culture, feedback culture, and learning intentions. Longitudinal studies and studies in different districts are also recommended to increase the generalizability of the results.

Author contributions

Conceptualization, MSP and FP; methodology, MSP and VR; software, MSP; validation, VR, FP and MSP; formal analysis, MSP; investigation, MSP; resources, MSP and FP; data curation, MSP; writing—original draft preparation, MSP; writing—review and editing, MSP; visualization, VR and MSP; supervision, VR and FP. All authors have read and agreed to the published version of the manuscript.

Conflict of interest

The authors declare no conflict of interest.

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