



MENTORING, PROACTIVE WORK BEHAVIOR AND EMPLOYEE SKILLS
DEVELOPMENT IN ORGANIZATIONS: A SYSTEMATIC REVIEW

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Abstract

The systematic review aims to synthesize empirical and theoretical evidence on the relationship between mentoring, proactive work behavior, and employee skills development in organizational settings. We draw on Gary Becker's Human Capital Theory (1989), Albert Bandura's Social Cognitive Theory (1986), and Michael Crant's Proactive Behavior Theory (2000) to explain how mentoring and proactive behavior interact to enhance workforce skills and competencies. The review adopted PRISMA guidelines to compile, synthesize and analysed peer-reviewed articles published between 2021 and 2025, retrieved from Scopus, Web of Science, and EBSCOhost databases. Following systematic screening and eligibility assessment, 44 studies met the inclusion criteria and were subjected to narrative synthesis. The review found that mentoring significantly enhances employee skills development, self-efficacy, career progression, and organizational productivity. While proactive work behavior emerged as an important behavioral mechanism through which employees transform mentoring support into learning outcomes through feedback-seeking, continuous learning, and adaptive engagement. This review contributes to Industrial and Organizational Psychology (IOP) and Human Resource Management (HRM) by advancing an integrated understanding of mentoring and proactive work behavior as strategic mechanisms for employee skills development.

Keywords: Mentoring, Proactive Work Behavior, Employee Skills Development, Workplace Learning, and Organizational Development.

1. Introduction

Mentoring has been widely recognized as component of lifelong learning that supports workforce skills development, emerging from informal peer interaction between mentors and mentees to facilitates learning, growth and improved workplace efficiency (OECD, 2025; Zarghoni & Rasool, 2021a). Previous studies established that managers and employers are increasingly adopt mentoring as a process through which employees acquire knowledge and skills embedded in daily work practices (Coetzer et al., 2023). In today's fast-paced knowledge-driven workplace, employee skills development is paramount important, particularly in small organizations where training structures are often limited.

Totara (2023) emphasize that mentoring functions as a structured developmental process that enables employees to develop their skills and advance their careers within an organisational

learning framework. The author further affirmed that mentoring at workplace is usually implemented in both formal and informal, where an employee guides a less experienced colleague to build confidence, skills, and competencies needed to function on-the-job. Moreover, existing literature presented by (Pennefather, 2023) acknowledges that mentoring constitutes an integral part of organizational best practices aimed at enhancing employee skills and capabilities for high-performance work.

Prior research found a significant impact of mentoring on employee development of critical competencies and skills, including analytical thinking skills, problem-solving skills and decision-making adaptability. These skills enable employees to process information, manage workplace pressure, and respond to evolving job demands (Totara, 2023). Consistent with this, existing empirical evidence revealed that 25% of employees in the United States are believed to have benefited from organization mentoring program, which enhances their ability to navigate workplace challenges, build their confidence, as well as increase their resilience (Reeves, 2024). It is worth noting that organizational mentoring stands to benefit from improved employee retention, increased engagement and enhanced performance in the workplace.

Notably, Klamma et al. (2022) argue that mentoring contributes to the employee professional identity and workplace confidence. In today's dynamic workplace, employee skills development has become a strategic priority for sustaining competitiveness, innovation, and effective organizational performance (Yang et al., 2024). Empirical evidence shows that over one-third of the large firms in the United States have adopted mentoring as a form of on-the-job training for their employees (Yang et al., 2024).

Beyond mentoring, this systematic review considers proactive work behavior (PWB) as determinant of employees' skills development and learning engagement process in workplace. Khan (2021) opined that proactive work behavior reflects employees' capacity to anticipate, initiate, and enact change rather than merely responding to situational demands. Thus, proactive work behavior plays a critical role in employees' skills development with the emphasis on team collaborative learning, functioning, and organizational adaptability. Prior research has highlighted that proactive employees actively seek feedback, initiate developmental interactions, and take ownership of their skill development which amplify the effectiveness of mentoring processes (Oprea et al., 2026; Satwika et al., 2025). Similarly, Zheng et al. (2020) noted that individuals who are proactive strive to achieve their goals and career aspiration.

It is important to review factors contributed to PWB to provide bases understanding of the review. However, several previous studies have acknowledged mentoring, organizational learning culture, team collaboration and knowledge sharing are determinant of employees proactive work behavior (Marques & Janik, 2016; Masterson & Stamper, 2003). Furthermore, Marques and Janik (2016) reported that employees willingness to learn have been found to proactive work behavior is influenced by significantly influence their level of proactive engagement in workplace activities. It's on this premise that this review seeks to advance more integrative understanding of mentoring and proactive work behavior by bringing together diverse perspectives to synthesize empirical and theoretical perspectives.

Existing literature tends to examine mentoring, proactive work behavior, and employee skills development in separate ways. This fragmented approach limits a comprehensive understanding of how these constructs interact and jointly contribute to employee skills development outcomes. Against this backdrop, this systematic review seeks to synthesize and integrate existing empirical and theoretical evidence on mentoring and proactive work behavior with the outcomes on employee skills development. The review aims to develop a more holistic understanding of how these factors interact within organizational contexts to enhance employee capability development. This will provide foundation for future research directions.

Problem Statement

It is worth noting that mentoring, proactive behavior and employee skills development have emerged as the subject of debate in academic field and policy circle, attracted scholars' attentions across multiple disciplines including such organizational psychology, management, social science, education and engineering. Despite growing interest, existing literature remains theoretically fragmented, particularly in relation to how mentoring and proactive work behavior jointly influence employee skills development. Previous studies often examined these constructs in separate ways, focusing either on mentoring outcomes or the effects of proactive behavior independently, rather than integrating both within a unified explanatory framework. This gap limits the development of integrated strategies workplace learning mechanism for enhancing employee skills and competencies, particularly in a knowledge-driven organizational. Addressing this gap, the present systematic review synthesizes existing evidence and proposes a unified explanation of how mentoring, proactive work behavior, and employee skills development interact within organizational settings. Based on this, we strive to answer the following research questions:

- i. What is the nature and extent of existing research on mentoring?
- ii. What is the research development on proactive work behaviour?
- iii. How do existing theories conceptualize the role of proactive behavior in mentoring and employee skills development?

2. Literature Review

Theoretical Framework

This review is anchored on Gary Becker (1989) Human Capital Theory, Albert Bandura (1986) Social Cognitive Theory (SCT) and Michael Crant (2000) Proactive Behavior Theory to provide a theoretical framework to advances understanding of how mentoring and proactive work behavior interact to influence employee skills development in organizations.

Human Capital Theory

Human Capital Theory (HCT) was advanced by Gary Becker (1989) posits that individuals' knowledge, skills, and competencies constitute a capital that can be enhanced through investment in education, training, and workplace learning. Human Capital Theory (HCT) has been widely applied by researchers to explain mentoring as both a formal and informal learning process for developing employees' skills and capabilities in organizations. Previous studies have consistently demonstrated the application and relevance of HCT in explaining mentoring as a form of workplace learning process, facilitate knowledge transfer and skill acquisition among mentors and mentees (Musengamana & Hou, 2025; Nafukho et al., 2004; Whitcomb, 2026). From this perspective, HCT represents a critical component of human capital, because it helps to determine organizations' investment in training as well as providing enabling environment for learning that

may lead skills development. However, employees' ability to respond to work-related challenges, as results of skills gained either from superior or co-colleagues. Regarded as true reflections of organization good mentoring framework.

In light of the above discussion, HCT provides a useful lens for understanding how mentoring as a form of informal learning can translate into employee's skills development to improved organization job performance and productivity outcomes. However, Marginson (2019) presented a limitation of HCT that it fails the test of realism, due to weaknesses of method, absence of organization leadership and heterogeneous nature of organization, constitute major limitations for its application for mentoring employees for skills development. Despite these limitations, HCT remains a foundational theory for understanding how mentoring contributes to employee skills development.

Social Cognitive Theory

Social Cognitive Theory (SCT) developed by Albert Bandura (1986), provides a comprehensive understanding on how organizations adopt mentoring as a form of informal training to develop employee on skills. The theory explains how interaction of human behavior, personal factors, and environmental influence in shaping learning and performance (Bandura, 1986). Schunk and DiBenedetto (2023) emphasizes the importance of applications SCT for mentoring and instruction in the social environment, particularly in workplace. It is worth noting that social cognitive theory provides explanatory foundation for proactive work behavior. Hobfoll et al. (2018) argue that employees who actively engage in learning processes tend to conserve and expand personal resources such as knowledge, and confidence, which enhance workplace adaptability and performance. This view corroborated with the views of Satwika et al. (2025) who emphasize that employees who invest cognitive and behavioral resources often protect against resource loss and gaining an advantage. In addition, Satwika et al. (2025) and Pervaiz et al. (2021) further noted that social cognitive theory help individuals, particularly employees to participate in goal-setting activities at various workplaces. Thus, SCT provides a critical understanding between mentoring processes and proactive behavioral engagement in explaining employee skills development.

Proactive Behavior Theory

Proactive Behavior Theory (PBT), as proposed by Michael Crant (2000) is crucial for explaining how employee take self-initiated aimed at improving circumstances, anticipating challenges, and driving organizational change. Research on employee proactive behavior at work has received considerable scholarly attention across multiple fields. The review aims to explore perspectives and opinions of researchers in adopting PBT to explain proactive work behavior in their studies, to show uniqueness of the theory as well as its interaction on employee skills development. Recent scholarship reinforces the relevance of proactive behavior in workplace learning and development processes. Literature evidence shows that managers and business owners are now encouraged employees proactiveness, consciousness, resilience, and given freedom during decisions at workplace (Assinger, 2023). This in turn, build confidence at work, as they are aware of their actions in both positive and negative outcome on organizations productivity. To this end, proactive behavior theory enriches this review by explaining how organizations an entity responding to employee skills development. This is in accordance with the assertion of Crant and

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Chen (2024) who were of the view that employee that engage in proactive activities usually fulfill basic job satisfaction.

3. Methodology

This systematic review adopted Preferred Reported Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009), to identify research questions, relevant studies, select literature, map data, compile, summarize, and report results, and consultation (Page et al., 2021).

1: Identifying Research Questions

By answering the research questions below, the present review contributes literature, topic-based framework that synthesizes dispersed evidence and offers a conceptual roadmap for future theoretical development and empirical assessment of mentoring and proactive behavior at work, with the outcomes on employee skills development.

RQ1. What is the nature and extent of existing research on mentoring?

RQ2. What is the development of research on proactive work behaviour?

RQ3. How do existing theories conceptualize the role of proactive behavior in mentoring and

Identifying Relevant Studies

In pursuit of methodological rigorous, we extensively searched for peer-reviewed articles across reputable academic databases including Scopus, Web of Science, and EBSCOhost. These databases were purposively selected, because it enables researchers' access to thousands of high-quality research outputs across the globe. DistillerSR (2023) justified the claim for using these databases to ensure broad scholarly coverage of indexing of high-quality peer-reviewed and robustness of the review process. The literature search was conducted between 28th - 29th March 2026, to identify relevant studies published between 2021 and 2025.

We focused our search strategy on previous research discussing mentoring, proactive behavior and employee skills development. Boolean operators were used to refine the search string with the combinations of key words across selected databases: ("mentoring" OR "coaching") AND ("proactive behaviors" OR "proactive work behaviors") AND ("employee skills development" OR "workforce skills development"). Harari et al. (2021) reported that a well-designed literature search is crucial for the quality and accuracy of systematic literature reviews. Thereby, influencing it findings and conclusions. In addition, we based our search string on articles published within the following fields of Psychology, Business, Accounting, Management, and Social Science.

Selecting literature based on inclusion and exclusion criteria

We set out our inclusion and exclusion criteria, to streamline the data generated from the databases. Table 1 presents the inclusion and exclusion criteria used for the selection of studies for this review. Calderon Martinez et al. (2025) views justified the inclusion and exclusion criteria, that studies selected were relevant and high-quality studies aligned with the review objectives.

Table 1: Inclusion/Exclusion Criteria

Criteria	Inclusion	Exclusion
Topical relevance	Studies examining mentoring, proactive behavior, and employee skills development.	Studies not addressing any of the core variables
Population	Employees, managers, mentors in organizational and workplace settings	Non-working populations without workplace relevance.
Context	Organizational settings such as public, private, SMEs, large firms.	Non-organizational settings such as classroom-based mentoring only.
Study design	Empirical studies such as quantitative, qualitative, and mixed methods relevant theoretical/conceptual papers.	Studies with unclear methodology.
Outcomes	Skills development, competencies, learning outcomes, job performance related to skills.	Studies do not focus on skills development or learning outcomes.
Publication type	Peer-reviewed journal articles.	Editorials, opinion papers, blogs, dissertations/ theses.
Time frame	Published between 2021-2025	Studies published before 2021
Language	English-language publications	Non-English publications

Source: Self-designed by Authors.

Selection Process and Data Extraction

The identified studies were imported into EndNote referencing manager software and duplicates records were removed. The risk bias was assessed by independent reviewer, who evaluated the methodological quality, sample selection, measurement validity, and potential reporting bias of the included studies to ensure reliability of the review findings. This helps us to ensure accuracy and consistency in our data. Furthermore, we mutually resolved discrepancies observed by reviewers through one-on-one discussion. After thorough screening of records, the breakdown of records extracted from databases shown in Table 2.

Table 2: Breakdown Research Search from the Database

Database	Search terms	Records
Scopus	"mentoring" OR "coaching") AND ("proactive behaviors" OR "proactive work behaviors") AND ("employee skills development" OR "workforce skills development")	1309
Web of Science	"mentoring" OR "coaching") AND ("proactive behaviors" OR "proactive work behaviors") AND ("employee skills development" OR "workforce skills development")	687
EBSCOhost	"mentoring" OR "coaching") AND ("proactive behaviors" OR "proactive work behaviors") AND ("employee skills development" OR "workforce skills development")	836
Total		2832

To ensure robustness of the review process, DistillerSR (2023) reported that it's important to use multiple database for literature search to have comprehensive peer-reviewed articles. 2832 records from the initial search across four databases used and the breakdown as follows: Scopus:

1309, Web of Science: 687, and EBSCOhost: 836. Therefore, we identified 487 duplicate records before screening through EndNote. Inclusion and exclusion criteria were applied to removed 1841 articles that are not related to the title, objectives and scope. Furthermore, 460 reports were excluded due to wrong outcome, wrong setting, no direct focus and non-reviewed. 44 studies were included in the review, and this was done by reviewing the title, abstract, methodology and findings of each article presented in Figure 1 and Table 3.

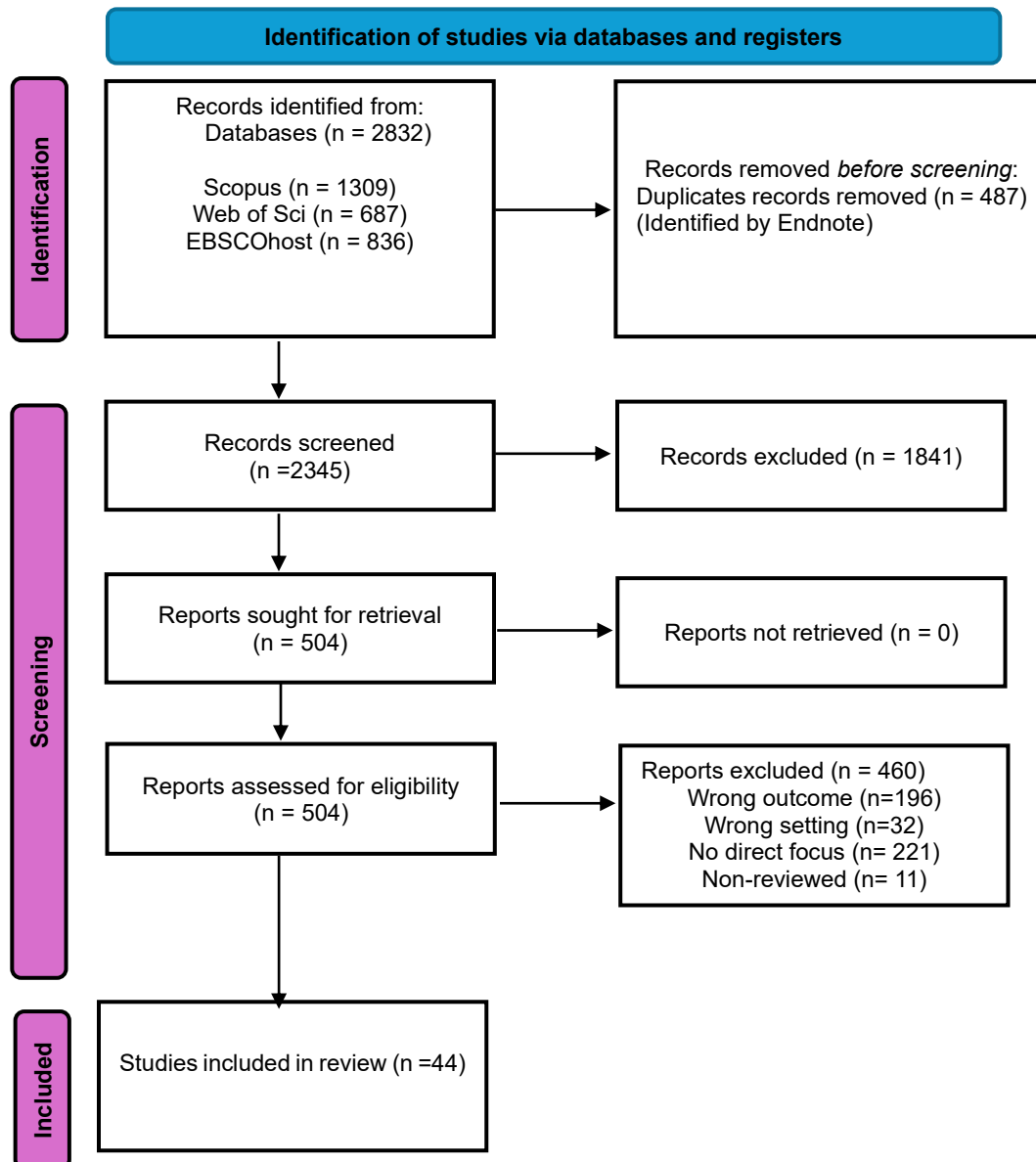


Figure. 1: PRISMA Framework flow diagram for study selection (2021–2025).

Table 3: List of Articles eligible for the Review

S/N	Authors	Title/ Focus Area	Methodology	Sample size	Findings	Country
1.	Rechter and Avnimelech (2025)	“Intensive personal mentoring: accelerators’ secret sauce”	Quantitative	N=779	“Regression analyses indicate that having a mentor remained a significant predictor of building business networks”	Israel
2.	Kusno and Barry (2025)	“The mediating role of Coaching and Mentoring in the relationship between Self-Efficacy and Employee engagement: The Moderating Effect of Management Support”	Quantitative	N=120	“Findings reveal that coaching and mentoring positively influence self-efficacy, management support, and employee engagement”	Indonesia
3.	Kedrowicz (2025)	“The impact of a research mentoring program on graduate trainees’ perceptions of mentoring competencies”	Quantitative	N=29	“Results show that participants perceptions of mentoring exhibiting moderate skill levels across all competencies skills”	USA
4.	Kakyo et al. (2025)	“The stakeholders’ role in informal mentoring: a qualitative descriptive study of nurses and midwives working in acute care settings”	Qualitative	N=35	“It was revealed that the stakeholders’ played role significant in nurturing nurses and midwives through informal”	Ugandan
5.	Zhang et al. (2025)	“Mutual generation in the workplace: the impact of proactive behavior on employees”	Quantitative	N=312	“The findings indicate that coworkers’ proactive behavior triggers focal employees’ concern with maintaining a positive image in front of their peers. This concern, in turn, enhances their work	China

					effort and interpersonal citizenship behavior."	
6.	Gowers et al. (2025)	"A qualitative study of coach mentoring dentists in difficulty from a mentor perspective"	Qualitative	N=11	"Qualitative result revealed that coach mentor believed in the reactionary coach mentoring has impact on dentists"	UK
7.	Wang (2025)	"Can intergenerational leadership resolve the innovation dilemma caused by pay mental discount? – A dual mediation model of workplace Well-being and proactive behavior. "	Quantitative	N=483	"Empirical results revealed that: pay mental discount significantly inhibit employee innovative performance; both proactive behavior and workplace well-being partially mediate this relationship; intergenerational leadership negatively moderates the effects of pay mental discount on workplace well-being and proactive behavior. "	China
8.	Xu et al. (2025)	"Ambiguous by a paradoxical leader: How and when paradoxical leadership hinders employee proactive behavior"	Quantitative	N=682	"The results of study show that paradoxical leadership reduces employee proactive behavior by creating ambiguity for both employees' perceived leader roles and their own roles."	China
9.	Chen et al. (2024)	"How does the needs-supplies fit of developmental job experience affect employees' proactive behavior?"	Quantitative	N=682	"The results show that the individuals' needs for developmental job experience	China

					and organizations' supplies affect proactive behavior"	
10.	Yang et al. (2024)	"Influence of mentoring on the proactive behavior of new employees: moderated mediation effect of agreeableness"	Quantitative	N=540	"Findings revealed that mentoring positively affected the new employees' proactive behavior through the balanced psychological contract."	China
11.	Ben Ayed et al. (2024)	"Affective commitment and proactive behavior: the roles of Autonomous Motivation and Team Communication Climate"	Quantitative	N=918	"It was revealed that affective commitment and proactive behavior influenced autonomous motivation and team Communication"	Canada
12.	Saxena (2024)	"Mentoring at work: a talent development tool for Gen Y and Gen Z"	Qualitative	N=10	"Findings revealed that firms that adapt mentoring as a modern way of talent development competitive edge advantage employee's productivity"	India
13.	Joo and Cruz (2024)	"Formal Mentoring and Protégés' Leadership Development: The Roles of Protégés' Informal Mentoring Networks, Political Skill, and Gender"	Quantitative	N=100	"Result indicated that a higher level of formal mentoring is positively associated with the quality of protégés' informal mentoring networks"	South Korea
14.	Jung and Kim (2024)	"The experience of good mentoring focused on overcoming turnover intention among millennial nurses"	Qualitative	N=22	"The result indicated that mentoring has helped to prevent turnover intention among millennial nurses"	South Korea
15.	Awad et al. (2024)	"Entrepreneurial leadership, nurses' proactive work behavior,	Quantitative	N=450	"The result of this study revealed that nurses	Egypt

		and career adaptability: a structural equation model. "			perceived moderate mean scores of all variables; entrepreneurial leadership (140.84 ± 11.94), proactive work behavior (46.02 ± 5.85), and career adaptability (85.55 ± 10.35)."	
16.	Guo et al. (2024)	"The interaction effect of regulatory focus and negative feedback on proactive behavior: the mediating role of perceived insider status"	Quantitative	N=334	"The results show that regulatory focus moderates the indirect effects of negative feedback on proactive behavior through perceived and it effect is stronger among employees with a higher prevention focus"	China
17	Gao et al. (2024)	"Workplace gossip erodes proactive work behavior: anxiety and neuroticism as underlying mechanisms"	Quantitative	N=334	"The findings reveal negative workplace gossip reduces employees' proactive work behavior"	China
18.	Prummer et al. (2024)	"The role of mentoring in developing leaders' emotional intelligence: exploring mentoring types, emotional intelligence, organizational factors, and gender"	Quantitative	N=139	"The findings underscore the significance of peer mentoring practices value for personal and organizational well-being."	South Africa
19.	Zia et al. (2024)	"The impact of psychological empowerment on innovative work behavior: a moderated mediation model of informal learning and proactive behavior"	Quantitative	N=130	"The results reveal that psychological empowerment indirectly affects innovative work behaviour through informal learning"	Pakistan

20.	Niazi et al. (2024)	"Exploring the factors affecting career progression in informal faculty mentoring sessions within mentor and mentee relationships: a qualitative study. "	Qualitative	N=15	"It was revealed that mentor and mentee relationships affecting career progression in informal faculty mentoring sessions study"	Pakistan
21.	Qiang et al. (2023)	"Does paradoxical leadership influence employees' proactive work behavior? A study based on employees in Chinese state-owned enterprises"	Quantitative	N=540	"The study found that paradoxical leadership can effectively enhance employees' proactive work behavior"	China
22.	Said and Kamel (2023)	"Linking e-leadership to innovative and proactive work behaviors in tourism higher education institutions: a moderated mediation model using SEM"	Quantitative	N=300	"The results of revealed that e-leadership has been proven to affect innovative and proactive work behavior among academic staff"	Egypt
23.	Boonyarit (2023)	"Linking self-leadership to proactive work behavior: A network analysis"	Qualitative	N=256	"Findings showed positive associations between self-leadership and two forms of Proactive work behavior"	Thailand
24.	Boudrias et al. (2023)	"Are wellbeing dimensions differentially related to employee proactive behavior? The joint moderating effects of knowledge job demands and empowering leadership"	Quantitative	N = 602	"Finding shows that interaction between knowledge job demands, and empowering leadership predict proactive behavior"	Thailand
25.	Fay et al. (2023)	"Creating meaning by taking initiative: Proactive work behavior fosters work meaningfulness"	Quantitative	N=391	"The results confirmed that the active role employees proactive work behavior promotes work meaningfulness."	Germany

26.	Mehmood et al. (2023)	"The Nexus Between High-Involvement Work Practices and Employees' Proactive Behavior in Public Service Organizations: A Time-Lagged Moderated-Mediation Model"	Quantitative	N=542	"The findings revealed that a moderated-mediation model was applied in public service influenced high-involvement work practices and employee proactive behavior"	China
27.	Al-Garaawi and Rashid (2023)	"Analysis of the relationship between the proactive behavior of the employees and the strategic consequences: an analytical study"	Quantitative	N=117	"Results shows that the employee's proactive behavior impact on the strategic consequences"	Iraq
28.	Peng et al. (2023)	"Perceived overqualification and proactive behavior: The role of anger and job complexity"	Quantitative	N=473	"Results revealed that individuals' anger toward the organization mediated the relationship between pperceived over-qualification and proactive behavior"	China
29.	Malik (2022)	"Measuring the impact of learning organization on proactive work behavior: mediating role of employee resilience"	Quantitative	N=320	"The results shows that employee's perceptions of learning organization positively predict proactive work behavior"	Indian
30.	Chang et al. (2022)	"Inclusive Leadership and Employee Proactive Behavior: A Cross-Level Moderated Mediation Model"	Quantitative	N=400	"The results indicated that inclusive leadership significantly affects the employee proactive behavior"	China
31.	Chang and Uen (2022)	"Shaping Organizational Citizenship Behavior of New Employees: Effects of Mentoring	Quantitative	N=242	"The results revealed that mentoring functions and direct supervisor need for achievement were	Taiwan

		Functions and Supervisor Need for Achievement”			positively related to new-employee organizational citizenship behavior”	
32.	Choi and Yu (2022)	“Effects of preceptors’ mentoring function on novice nurses’ self-efficacy and organizational commitment: A cross-sectional study”	Quantitative	N=160	“The results showed that mentoring function significantly affected novice nurses’ self-efficacy and organizational commitment”	South Korea
33.	Kumari et al. (2022)	“The interplay between leaders’ personality traits and mentoring quality and their impact on mentees’ job satisfaction and job performance”	Quantitative	N=731	“The findings demonstrated that the openness to experience, conscientiousness, and extroversion has a considerable influence on leaders’ mentoring quality”	Pakistan
34.	Deng et al. (2022)	“Exploring the differential effects of career and psychosocial mentoring on newcomer socialization”	Quantitative	N=465	“The quantitative analysis result revealed that mentoring, job crafting, and tacit knowledge transfer were positively correlated”	China
35.	Cai et al. (2023)	“Would people persist in proactive work behavior? Comparing the motivation and resource-depletion pathways”	Quantitative		“Findings showed that persist in proactive work behavior influence of uncertainty at work”	China
36.	Khan (2021)	“Determinants of Proactive Work Behavior of Employees During the COVID-19 Crisis”	Quantitative	N=282	“The results show that toxic leadership has a significant impact on proactive work behavior of employees”	China
37.	Lai et al. (2021)	“The Role of Team-Member Exchange in Proactive Personality	Quantitative	N=210	“The study results demonstrated that	Taiwan

		and Employees' Proactive Behaviors: The Moderating Effect of Transformational Leadership"			transformational leadership had a stronger moderating effect on challenging proactive behavior than affiliative proactive behavior"	
38.	Mubarak et al. (2021)	"The impact of a proactive personality on innovative work behavior: the role of work engagement and transformational leadership"	Qualitative	N=259	"The findings show that a proactive personality had a positive influence on innovative work behavior directly through work engagement"	Pakistan
39.	Nazir et al. (2021)	"Linking paternalistic leadership to follower's innovative work behavior: the influence of leader-member exchange and employee voice"	Quantitative	N=397	"The findings revealed member exchange had significant influence on employee work behavior"	Pakistan
40.	Xu et al. (2021)	"Distributed Leadership and New Generation Employees' Proactive Behavior: Roles of Idiosyncratic Deals and Meaningfulness of Work"	Quantitative	N=304	"Results indicated that leadership is positively related to proactive behavior of new generation employees"	China
41.	Zarghoni and Rasool (2021a)	"Impact of Mentoring on Employees' Performance"	Quantitative	N=304	"The findings indicated that mentoring programmes are used for impacting and transferring knowledge and career development leading to increased employee performance"	Afghanistan
42.	Garg et al. (2021)	"Reverse mentoring, job crafting and work-outcomes: the	Quantitative	N=369	"Findings demonstrate that reverse mentoring and job crafting are positively	India

		mediating role of work engagement”			related to work engagement”	
43.	Ghitulescu et al. (2021)	“One size does not fit all: the role of mentoring context in proactive individuals' scholarly impact”	Quantitative	N=120	“Results showed that the impact of proactive personality on scholarly impact was more positive for women protégés with women mentors than for all other mentor-protégé pairings”	USA
44.	Cai et al. (2021)	“Mentoring and newcomer well-being: a socialization resources perspective”	Quantitative	N=227	“The findings revealed that mentoring had a positive effect on newcomer well-being through socialization”	China

Source: Reviewed and Analyzed by Authors

4. Results and Data Synthesis

A total of 2832 records were identified from the three search databases. After thorough screening, our systematic review analyzed 44 studies published between 2021 and 2025 that met the inclusion criteria, which directly addressed the review topic and were retained for synthesis. We grouped our results into three thematic categories namely: (Theme 1) nature and extent of existing research on mentoring, (Theme 2) research development on proactive work behaviour and (Theme 3) theories conceptualizing the role of proactive behavior in mentoring and employee skills development.

Theme 1: Nature and extent of existing research on mentoring

Our review identified 19 empirical studies that examined mentoring with outcomes on employee skills development. This demonstrates growing scholarly interest in mentoring across multiple disciplines as an important workplace learning mechanism for employees in dynamic organizational settings. China has the highest research output on mentoring, constituting (21.1%), followed by South Korea (15.8%), Pakistan (15.8%), India (10.5%), and other countries including the United States, South Africa, Uganda, Afghanistan, Israel, and the United Kingdom. This geographical distribution highlights strong global recognition of mentoring as a strategic developmental tool. The review further identified that most authors adopted quantitative research designs in their studies (73.7%), while qualitative approaches accounted for (26.3%) of the reviewed studies. The findings indicate that mentoring has been conceptualized as an independent variable, with researchers primarily examining its influence on employee attitudes and behaviors with the outcomes on skills development.

Several studies consistently found that mentoring significantly contributes to employee performance, skills development, career progression, and organizational productivity (Joo & Cruz, 2024; Kedrowicz, 2025; Prummer et al., 2024; Zarghoni & Rasool, 2021b). Study conducted by Rechter and Avnimelech (2025) found that intensive personal mentoring significantly predicted employees' ability to build professional business networks, while Kusno and Barry (2025) reported that coaching and mentoring positively enhanced self-efficacy, management support, and employee engagement. In the same vein, Choi and Yu (2022) study revealed that mentoring functions significantly improved novice nurses' self-efficacy and organizational commitment. These findings denote that mentoring plays an important role in supporting both individual growth and organizational productivity.

Theme 2: Research development on proactive work behaviour

This systematic review included 17 empirical studies that examined proactive work behaviour (PWB) in relation to employee skills development. The studies were conducted mostly in China, followed by Pakistan, South Korea, and the United States, reflecting growing international interest in understanding the importance of PWB in dynamic organizational setting. The prominent authors reviewed date back to 2021 (Cai et al., 2023; Pervaiz et al., 2021; Xu et al., 2021). However, literature evidence acknowledged Crant (2000) as the earliest foundational scholar who conceptualized PWB as self-initiated aimed at improving work situations and individual performance.

In recent years, research on PWB has gained global attention as a subject of debate with academic field and policy circle. Most of the studies reviewed were published in peer-reviewed scientific

journals and employed quantitative research designs, focusing on workforce competencies and skills development across diverse workplace contexts. We reviewed studies published between 2021-2025 to see how authors across multiple disciplines used PWB either as independent variable or dependent variable through which workplace conditions influence employee behaviour. However, few studies have explored PWB as a mediating variable on workplace interventions (Awad et al., 2024; Ghitulescu et al., 2021; Guo et al., 2024; Nazir et al., 2021; Xu et al., 2025). This suggests that existing research has largely focused on identifying antecedents of proactive behaviour, while studies examining its long-term on employee skills development remain limited. Yang et al. (2024) studies corroborate with the present findings that mentoring positively influenced new employees' proactive behavior through balanced psychological contracts, reinforcing the developmental link between mentoring and proactive engagement. This assertion was in line with the findings of Wang (2025) reported that proactive behavior partially mediates the relationship between workplace well-being and innovative performance, while Zhang et al. (2025) found that coworkers' proactive behavior can stimulate employees' work effort and interpersonal citizenship behavior.

Theme 3: Theories conceptualize the role of proactive behavior in mentoring and employee skills development.

It is worth noting that our review was grounded in theory to advances understanding on how the interaction between the independent variables (mentoring and proactive work behavior) and dependent variables (employee skills development) enhances employees skills translating to high work performance in organizations. We found studies on mentoring and proactive work behaviour employed different theoretical perspectives. Among the reviewed studies, 11 studies adopted human capital theory proposed by (Becker, 1989), emphasizing that mentoring serves as an organizational investment in employees' knowledge, and skills, leading to improved productivity and organizational competitiveness. Furthermore, 6 studies applied social cognitive theory, highlighting how mentoring promotes employee learning through observation and collaboration. Findings from Kusno and Barry (2025) strongly support this perspective, demonstrating that mentoring enhances self-efficacy and organizational commitment, which are critical for employee learning and confidence-building.

Our review finds out that the majority of articles reviewed adopted Michael Crant (2000) proactive behaviour theory, we identified 14 studies explaining how employees actively transform mentoring support into skills development through self-initiated, future-oriented behaviours such as feedback-seeking, continuous learning, and adaptive problem-solving (Al Garaawi & Rashid, 2023; Awad et al., 2024; Boudrias et al., 2023; Fay et al., 2023; Ismail et al., 2018; Qiang et al., 2023; Wang, 2025; Xu et al., 2025). We based our argument on human capital theory, social cognitive theory and proactive behavior theory as the most appropriate theories used for review to provide foundation for theoretical framework for the review. However, we found some studies adopted self-determination theory, conservation of resource theory, broaden-and-build theory, Maslow theory of hierarchy of needs and Herzberg Two-Factor theory to explain proactive work engagement, proactive participation, motivation and employee skills development. Verlinden et al. (2025) justified this claim that organizations who invest resources in mentoring and encouraged proactive behaviour among employees may protect against resource loss.

5. Conclusion

This systematic review has important practical implications for Industrial and Organizational Psychology (IOP) and Human Resource Management (HRM) professionals in public and private organizations. Previous studies established that managers, supervisors and business owners are increasingly adopting mentoring and proactive work behaviour as process through which employees acquire skills and knowledge embedded in daily work practices (Assinger, 2023; Coetzer et al., 2023). First of all, mentoring training should be designed not merely to impart knowledge but to instill organizational values. The review noted that organizations should invest in employees' skills and career development with respect to their performance improvement and career opportunities, so that employees will reciprocate by exhibiting high performance work practices. Second, organizations should create enabling environments that encourage employees to demonstrate proactive work behaviour through self-initiated learning, feedback-seeking, adaptive problem-solving, and continuous professional development. Literature evidence acknowledged that proactive work behaviour has been widely recognized as a component of behavioural mechanism through which mentoring translates into skills development (Cui & Li, 2021), managers should integrate proactive behaviour indicators into employee skills development programmes and leadership training initiatives.

Third, the review underscores the importance of designing psychologically supportive workplaces and provides practical guidance for integrating mentoring and proactive work behaviour to boost employee confidence, self-resilience, and intrinsic motivation. In addition, the review advancing interdisciplinary understanding of Organizational psychologists and Human Resource (HR) professionals co-develop evidence-based interventions mentoring frameworks, psychological empowerment programmes, career development pathways and leadership development programmes that can strengthen employees' readiness to engage proactively in workplace learning. Finally, our review suggests that mentoring and proactive work behaviour should be seen as strategic organizational assets, to develop a skilled, adaptable, and resilient workforce capable of responding to changing job demands.

Theoretical contribution

Our systematic review contributes to knowledge and has implications for theory on mentoring and proactive work behavior. The integration of Gray Becker (1989) human capital theory, Albert Bandura (1986) social cognitive theory, and Michael Crant (2000) proactive behavior theory broadens theoretical understanding of how motivation, positive emotions, and investment in education and training influence employee active participation in workplace learning, leading skills development. Combinations of these theories ensure employees' efficiency and organizations job productivity. Scholars often examine mentoring or proactive work behaviour independently and use several theories to present their argument. We used human capital theory, social cognitive theory, and proactive behavior theory for our review jointly examined how investment in employee learning encourages mentoring practice, while proactive work behaviour acts as a critical behavioural mechanism boosting employee's confidence at work and improved their skills, and competencies. Furthermore, we suggest that learning should not be viewed as a passive process where employees merely receive guidance from mentors; rather, organizations should encourage employees to take ownership of their own growth and career development through proactive engagement with learning resources and workplace challenges. This theoretical insight reinforces the need for organizations to cultivate a learning culture where

mentoring, continuous feedback, collaborative learning, and proactive experimentation are embedded in daily work practices.

Limitations

Despite the contributions of this review, several limitations were acknowledged. First, we reviewed 44 empirical studies that were published between 2021 and 2025 that met the inclusion criteria, which directly addressed the review topic. The selected studies were restricted to English-language peer-reviewed articles, which may have excluded relevant studies published in other languages. However, the selected studies provide current global evidence on the interaction between mentoring, proactive work behaviour, and employee skills development across multiple disciplines, restricting the review to recent publications may have overlooked valuable historical theoretical and empirical contributions. Second, we purposively limited our search to three electronic academic databases to Scopus, Web of Science, and EBSCOhost. This decision may have excluded relevant studies published in other reputable databases.

Third, most of the reviewed studies adopted quantitative and cross-sectional survey designs, limiting the ability to establish causal relationships and fully understand how mentoring and proactive work behaviour influence employee skills development over time. Forth, the studies reviewed show geographical concentration in China. This may limit the generalizability of the findings across diverse socio-economic and organizational contexts.

Implications for Future Research Directions

We proposed the inclusion of qualitative, mixed-method and longitudinal designs, to provide more comprehensive understanding of mentoring relationships, proactive work behaviour, and employee skills development across different contexts. In addition, cross-cultural comparative studies between developed and developing countries should also be encouraged, as such investigations may generate transferable workforce development models relevant to Industrial and Organizational Psychology (IOP) and Human Resource Management (HRM). This is particularly important in underrepresented regions such as Africa, where empirical evidence on mentoring and proactive work behaviour remains limited. Furthermore, future studies should employ longitudinal research designs to examine how mentoring and proactive work behaviour evolve over time as well as their influence on employee's skills development.

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The authors declare no conflicts of interest. This manuscript has not been previously published in another journal or under consideration for publication elsewhere. The authors are responsible for the content and writing of the article.

Ethics approval and consent to participate

The study does not involve human participation. The research was conducted in accordance with the ethical declaration of University of South Africa, Pretoria and was approved by the Research Ethics Committee of the College of Economic and Management Sciences (Approval No.14557, dated May 29, 2026).

Author contributions

Dr. Betty Portia Maphala took the lead in writing the manuscript. Dr. Abdullahi Abdulazeez Kolapo carried out methodology including literature search, selection of articles and data

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Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	title page
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	✓
INTRODUCTION			

Section and Topic	Item #	Checklist item	Location where item is reported
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Page 5-6
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Page 6
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Page 7-8
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Page 7-8
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Page 7
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Page 7
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Page 8
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Page 8
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Page 8
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Page 8
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Page 8
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Page 6-7
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Page 6-7
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Page 11-17
	13d	Describe any methods used to synthesize results and provide a rationale for	Page 6

Section and Topic	Item #	Checklist item	Location where item is reported
		the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Page 18-21
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Page 6
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Page 8
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Page 6-7
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Page 11-17
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Page 9
Study characteristics	17	Cite each included study and present its characteristics.	Page 9
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Page 8
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Page 10
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Page 8
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Page 10
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Page 10
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Page 8
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Page 8
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Page 9
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Page 18
	23b	Discuss any limitations of the evidence included in the review.	Page 22

Section and Topic	Item #	Checklist item	Location where item is reported
	23c	Discuss any limitations of the review processes used.	Page 22
	23d	Discuss implications of the results for practice, policy, and future research.	Page 22-23
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Page 6
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Page 8
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	N/A
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Page 23
Competing interests	26	Declare any competing interests of review authors.	Page 23
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Page 11-17

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