

Predicting Organizational Ambidexterity from Knowledge Management Capability and Strategic Flexibility: The Mediating Role of Organizational Learning

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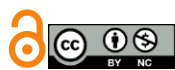
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ABSTRACT

Objective: This study aimed to predict organizational ambidexterity based on knowledge management capability and strategic flexibility and to examine the mediating role of organizational learning in these relationships.

Methods and Materials: This quantitative, cross-sectional, correlational study was conducted among 312 employees and managers working in medium-sized and large organizations in Canada. Participants were recruited through convenience and professional network sampling and completed standardized self-report measures assessing knowledge management capability, strategic flexibility, organizational learning, and organizational ambidexterity. Data were analyzed using Pearson correlation coefficients, confirmatory factor analysis, and structural equation modeling. The measurement model was evaluated through factor loadings, Cronbach's alpha, composite reliability, a average variance extracted, and standard goodness-of-fit indices. Mediation effects were tested using bootstrapping with 5,000 resamples, and statistical significance was set at $p < .05$.

Findings: Knowledge management capability significantly predicted organizational learning ($\beta = .43, p < .001$) and organizational ambidexterity ($\beta = .22, p = .001$). Strategic flexibility also significantly predicted organizational learning ($\beta = .38, p < .001$) and organizational ambidexterity ($\beta = .27, p < .001$). Organizational learning had a significant positive effect on organizational ambidexterity ($\beta = .41, p < .001$). The indirect effect of knowledge management capability on organizational ambidexterity through organizational learning was significant ($\beta = .18, 95\% \text{ CI } [.12, .25], p < .001$), as was the indirect effect of strategic flexibility through organizational learning ($\beta = .16, 95\% \text{ CI } [.10, .22], p < .001$). The model explained 52% of the variance in organizational learning and 64% of the variance in organizational ambidexterity.

Conclusion: Knowledge management capability and strategic flexibility are important predictors of organizational ambidexterity, and organizational learning partially mediates both relationships, indicating that organizations are more likely to achieve ambidexterity when they effectively manage knowledge, remain strategically adaptable, and convert these capabilities into continuous learning processes.

Keywords: Organizational Ambidexterity; Knowledge Management Capability; Strategic Flexibility; Organizational Learning; Structural Equation Modeling

1 Introduction

Organizations increasingly operate in environments characterized by technological acceleration, intensified competition, volatile customer expectations, rapid knowledge obsolescence, and recurrent disruptions in markets and supply networks. Under such conditions, long-term survival depends not only on the ability to exploit existing resources efficiently but also on the capacity to explore new opportunities, technologies, products, and strategic directions. This simultaneous pursuit of exploitation and exploration is generally conceptualized as organizational ambidexterity. Ambidextrous organizations are able to refine established competencies while developing new ones, preserve operational efficiency while encouraging experimentation, and maintain current performance without sacrificing future adaptability. The importance of this capability has become particularly evident in contexts shaped by digital transformation, Industry 4.0, innovation pressure, and uncertainty, where firms are expected to remain efficient and responsive at the same time (Przytuła et al., 2022; Sahoo et al., 2024; Ürü et al., 2024). Organizational ambidexterity has therefore become a central concept in contemporary strategic management because it offers a framework for understanding how firms can manage competing organizational demands without allowing one orientation to undermine the other.

The strategic value of ambidexterity is supported by a growing body of research showing that it contributes to innovation, organizational performance, sustainability, agility, and competitive advantage. Evidence from emerging-market firms suggests that ambidexterity can enhance performance when organizations successfully align existing operational capabilities with adaptive and exploratory behavior (Latukha et al., 2022; Pereira et al., 2022). Similar findings have been reported in studies emphasizing middle managers, continuous improvement, and organizational agility, indicating that the ability to combine exploratory and exploitative orientations may strengthen organizational responsiveness and business outcomes (Alamsjah & Asrol, 2023). Ambidexterity has also been identified as an important mediator linking strategic orientations and capabilities to supply chain performance, innovation, and sustainability outcomes (Alkhalwaleh & Shawabkeh, 2023; Jum'a et al., 2025). At the individual and leadership levels, recent research has further demonstrated that cognitive flexibility, leadership orientations, and psychological drivers can shape the extent to which

organizations achieve ambidextrous behavior (Kardes et al., 2026; Samimi et al., 2025). These findings suggest that organizational ambidexterity is not an isolated structural characteristic but rather the outcome of interconnected strategic, cognitive, informational, and learning-related capabilities.

Despite its recognized importance, organizational ambidexterity is difficult to achieve because exploration and exploitation depend on substantially different organizational logics. Exploitation is associated with refinement, efficiency, implementation, predictability, and the use of established knowledge, whereas exploration involves experimentation, variation, risk taking, search, and the acquisition of unfamiliar knowledge. Organizations that overemphasize exploitation may become efficient in the short term but vulnerable to technological and environmental change, while those that focus excessively on exploration may expend resources without converting experimentation into reliable performance. Ambidexterity therefore requires organizational mechanisms that permit the integration or balancing of these competing demands. Research has shown that cultural conditions, intellectual capital, organizational systems, and contextual arrangements all play important roles in enabling firms to sustain this balance (Adusei et al., 2022; Fiaz et al., 2021; López-Zapata & Ramírez-Gómez, 2021). In addition, work on strategic alliances has demonstrated that ambidexterity frequently develops through complex combinations of internal and interorganizational mechanisms rather than through a single managerial practice (Zahoor et al., 2023). Accordingly, understanding the organizational antecedents that make ambidexterity possible remains an important theoretical and empirical challenge.

One of the most important antecedents of organizational ambidexterity may be knowledge management capability. In knowledge-based perspectives of the firm, organizational knowledge represents a strategic asset whose value depends not simply on its possession but on the organization's ability to acquire, organize, share, integrate, and apply it. Knowledge management capability therefore refers to the systematic organizational capacity to manage knowledge flows and convert dispersed individual and collective knowledge into coordinated action. Effective knowledge management can support exploitation by improving the use of accumulated experience, standardizing effective practices, reducing duplication, and enhancing operational efficiency. At the same time, it can support exploration by facilitating access to new information, combining

heterogeneous knowledge, generating new interpretations, and allowing employees to identify emerging opportunities. This dual contribution makes knowledge management particularly relevant to organizational ambidexterity. Conceptual work has directly linked knowledge management systems to ambidextrous organizational capability, emphasizing that knowledge infrastructure and knowledge processes can provide the informational foundation required for simultaneous exploration and exploitation (Alharbi, 2023).

Empirical evidence also supports the strategic role of knowledge resources and knowledge management in ambidextrous organizations. Research in knowledge-intensive firms has shown that knowledge assets can foster innovation ambidexterity and improve firm performance when organizations are capable of mobilizing intellectual resources effectively (Asiaei et al., 2023). Similarly, research under conditions of uncertainty indicates that knowledge management may improve organizational performance through organizational ambidexterity, suggesting that knowledge becomes particularly valuable when organizations must simultaneously maintain existing operations and respond to changing conditions (Restuputri et al., 2024). Information acquisition capability has also been associated with ambidexterity and innovation outcomes in Industry 4.0 contexts, demonstrating that the ability to obtain and use information is increasingly important for organizations operating in digitally intensive environments (Sahoo et al., 2024). Research on big data analytics further suggests that analytical and knowledge-related capabilities can strengthen innovation ambidexterity by enhancing the organization's capacity to interpret complex information and deploy it strategically (Liao et al., 2023). These studies collectively indicate that knowledge management capability may represent a fundamental mechanism through which organizations develop the informational and cognitive resources required for ambidextrous action.

The increasing importance of digital technologies further strengthens the connection between knowledge capability and organizational ambidexterity. Digitalization generates large quantities of information, but information alone does not create organizational value unless firms have the capabilities required to interpret, disseminate, and integrate it into decision-making processes. Big data analytics, artificial intelligence, and smart manufacturing systems therefore create strategic value partly because they strengthen the organization's ability to transform information into actionable knowledge. Research has

demonstrated that big data analytics can contribute to innovation performance through strategic capabilities and organizational ambidexterity (Alaskar et al., 2024). Likewise, artificial intelligence capability has been linked to product and service creativity when combined with strategic agility, illustrating that advanced technological resources must be complemented by adaptive organizational capabilities (Ameen et al., 2024). Studies of smart manufacturing SMEs similarly show that digital innovation depends on organizational mechanisms that enable firms to continuously adjust and reconfigure their knowledge and operational systems (Giudice et al., 2021). Thus, in contemporary organizations, knowledge management capability should be understood not merely as an administrative support function but as a dynamic strategic capability with direct relevance to organizational ambidexterity.

A second major antecedent of organizational ambidexterity is strategic flexibility. Strategic flexibility refers to the organization's ability to recognize environmental changes, revise strategic priorities, reallocate resources, and adopt alternative courses of action in response to emerging threats and opportunities. Flexible organizations are not rigidly committed to a single configuration of resources or strategic routines; instead, they maintain sufficient strategic options to adjust their behavior as environmental conditions evolve. Such flexibility is highly relevant to ambidexterity because exploration and exploitation require continuous resource allocation decisions. Organizations must determine when to reinforce current competencies and when to invest in new capabilities, markets, products, or technologies. Strategic flexibility provides the adaptive capacity necessary to modify this balance over time. Research on dynamic capabilities has consequently positioned flexibility, agility, and resource reconfiguration as essential mechanisms for achieving organizational ambidexterity (Al-Amrany, 2026; Johannes et al., 2021).

The relationship between strategic flexibility and ambidexterity is also evident in research on competitive advantage and organizational adaptation. Strategic agility and digital transformation have been shown to contribute to competitive advantage in SMEs when firms are able to coordinate rapid decision making with ambidextrous organizational behavior (Ürü et al., 2024). Studies of manufacturing flexibility further suggest that absorptive capacity and innovation spillovers strengthen organizational responsiveness by increasing the range of feasible strategic

and operational choices available to the firm (Pinheiro et al., 2021). At the leadership level, cognitive flexibility has also been associated with firm ambidexterity, indicating that the capacity to shift perspectives and interpret strategic problems from alternative frames can influence organizational responses to competing demands (Samimi et al., 2025). In a related way, technological and strategic capability research has shown that firms achieve stronger innovative outcomes when they combine adaptive strategic orientations with mechanisms that support simultaneous exploitation and exploration (Alaskar et al., 2024; Ameen et al., 2024). These findings reinforce the proposition that strategic flexibility is not only a response to uncertainty but also an enabling condition for organizational ambidexterity.

However, the existence of knowledge management capability and strategic flexibility may not be sufficient to guarantee ambidextrous outcomes. Organizations may possess extensive knowledge resources and flexible strategic options but still fail to convert them into coordinated exploratory and exploitative behavior. The effectiveness of these capabilities depends on whether the organization can learn from experience, exchange interpretations, modify assumptions, and institutionalize newly acquired knowledge. This highlights the importance of organizational learning as a potential mediating mechanism. Organizational learning refers to processes through which organizations acquire information, interpret experience, share knowledge, revise mental models, and incorporate lessons into routines and practices. A learning organization is therefore capable of transforming knowledge and strategic adaptation into sustained behavioral and structural change. Research has increasingly emphasized that organizational learning plays a central role in explaining how firms move from possessing resources and capabilities to achieving ambidextrous outcomes (Lissillour & Rodríguez-Escobar, 2022; Singer-Coudoux et al., 2024).

The theoretical relationship between organizational learning and ambidexterity is especially compelling because exploration and exploitation are themselves forms of organizational learning. Exploitative learning builds on existing routines, accumulated knowledge, and established capabilities, whereas exploratory learning expands the organization's knowledge base through experimentation, discovery, and new combinations. Organizational learning processes therefore provide the mechanism through which firms can coordinate these two orientations rather than treating them as mutually exclusive. Research on learning organizations has shown that learning-oriented structures

and intellectual capital can contribute to organizational ambidexterity and entrepreneurial orientation (Sağlam & İyigün, 2022). Similarly, organizational learning has been identified as a mechanism through which transformational leadership can foster ambidexterity and venture growth (Kim & Lee, 2021). During periods of disruption such as the COVID-19 pandemic, strategic learning capability was also found to be especially important for maintaining innovation ambidexterity, suggesting that organizational learning becomes even more valuable under conditions of uncertainty (Islam & Munir, 2022). These findings indicate that learning is likely to function not merely as an independent predictor of ambidexterity but as a pathway through which broader organizational capabilities generate ambidextrous behavior.

Recent scholarship has also emphasized that the relationship between learning and ambidexterity is complex rather than universally linear. Organizational learning can strengthen the benefits of ambidexterity, but excessive or poorly coordinated ambidexterity may create tensions, resource competition, and implementation difficulties. Research examining high-performance human resource practices has suggested that organizational learning can moderate or condition the consequences of ambidexterity, demonstrating that the performance value of simultaneously pursuing exploration and exploitation depends on the organization's capacity to absorb and institutionalize learning (Wang et al., 2024). Literature reviews similarly emphasize that learning processes help organizations navigate the inherent dualities of ambidexterity by creating shared interpretations and linking exploratory knowledge to exploitative routines (Singer-Coudoux et al., 2024). This perspective suggests that organizational learning may serve as the connective mechanism through which knowledge management capability and strategic flexibility are translated into balanced exploratory and exploitative behavior.

The broader literature provides additional evidence that ambidexterity functions as part of a network of mediating relationships rather than as an isolated organizational attribute. For example, organizational ambidexterity has been shown to mediate relationships between environmental proactivity and SME performance (Könönen & Joensuu-Salo, 2025), between strategic orientation and supply chain performance (Alkhawaldeh & Shawabkeh, 2023), and between digital or analytical capabilities and innovation outcomes (Alaskar et al., 2024). In sustainability-oriented contexts, ambidexterity has also been associated with green innovation and supply chain sustainability (Jum'a et al.,

2025), while green knowledge sharing has been linked to ambidexterity within serial mediation mechanisms connecting leadership and green innovation (Zada et al., 2025). These findings demonstrate that the effects of organizational capabilities often operate through intermediary processes and that the pathways connecting antecedents to ambidextrous outcomes deserve more focused attention.

Other studies have expanded the antecedent domain of ambidexterity by examining organizational citizenship behavior, behavioral ambidexterity, leadership capability, and institutional context. Organizational ambidexterity has been associated with citizenship-related outcomes, suggesting that the construct may affect not only innovation and performance but also discretionary employee behavior (Shehadeh & Mohammed Abed Hussein Al, 2022). Research among micro, small, and medium-sized enterprises has identified organizational antecedents of ambidextrous behavior and linked such behavior to performance outcomes (Susilo et al., 2024). In educational organizations, leadership and organizational capabilities have similarly been connected to institutional performance, highlighting the importance of capability-based explanations across different organizational sectors (Yang et al., 2023). At the same time, studies of international joint ventures have demonstrated that ambidexterity can mediate performance relationships under conditions of environmental dynamism, confirming the importance of considering contextual uncertainty when analyzing ambidextrous organizations (Batra & Dhir, 2023). Together, these findings illustrate the broad relevance of ambidexterity but also reveal substantial variation in its antecedents, mechanisms, and consequences.

Intellectual and human capital perspectives also contribute to understanding why knowledge management and organizational learning should be studied together. Intellectual capital creates potential value through human expertise, organizational systems, relational resources, and accumulated experience, but these resources become productive only when they are mobilized through learning and knowledge-sharing mechanisms. Research has demonstrated that intellectual capital can influence organizational performance through mediating processes rather than exclusively through direct effects (Adusei et al., 2022). Likewise, cultural and intellectual capital configurations have been linked to organizational ambidexterity (López-Zapata & Ramírez-Gómez, 2021). Talent management has also been associated with ambidextrous capability and firm performance, suggesting

that organizations must coordinate human resources with learning and strategic adaptation to exploit existing expertise while developing new competencies (Latukha et al., 2022). These findings further support a model in which knowledge management capability creates valuable informational resources, strategic flexibility allows those resources to be redeployed, and organizational learning converts them into sustained ambidextrous action.

From a dynamic-capabilities perspective, this integration is particularly important. Dynamic capabilities emphasize the ability of organizations to sense changes, seize opportunities, and transform resource configurations in response to environmental shifts. Ambidexterity can be viewed as an organizational manifestation of these dynamic processes because it requires firms to preserve useful existing capabilities while simultaneously reconfiguring resources and developing new competencies. Theoretical work linking dynamic capabilities, open innovation, and ambidexterity suggests that competitive advantage arises when firms continuously integrate internal and external knowledge with adaptive strategic action (Johannes et al., 2021). More recent evidence similarly indicates that dynamic capabilities contribute to organizational ambidexterity in challenging environments (Al-Amrany, 2026). This perspective implies that knowledge management capability and strategic flexibility are complementary rather than independent predictors: the former provides access to and control over knowledge resources, while the latter enables those resources to be reconfigured according to strategic demands.

Although the literature has established important links among knowledge management, flexibility, learning, and ambidexterity, these constructs have often been examined separately or in models emphasizing different mediators and outcomes. Some studies focus on knowledge assets and innovation ambidexterity (Asiaei et al., 2023), others on analytics capability (Liao et al., 2023), digital transformation (Giudice et al., 2021), talent management (Latukha et al., 2022), strategic learning (Islam & Munir, 2022), or leadership-related antecedents (Kardes et al., 2026; Kim & Lee, 2021). Consequently, there remains a need for integrative models that simultaneously examine knowledge management capability and strategic flexibility while specifying the mechanism through which they are converted into organizational ambidexterity. Such integration is especially relevant because both capabilities are likely to operate partly through organizational learning: knowledge management supplies and structures information, strategic

flexibility creates opportunities for adaptation, and learning allows the organization to interpret, internalize, and institutionalize these inputs.

An integrated examination of these relationships can therefore contribute to the literature in several ways. First, it can clarify whether knowledge management capability and strategic flexibility independently predict organizational ambidexterity when considered simultaneously. Second, it can determine whether organizational learning explains part of the relationship between these antecedents and ambidextrous capability. Third, it can provide a more process-oriented explanation of ambidexterity by moving beyond the identification of isolated predictors toward an understanding of how organizational capabilities are translated into exploratory and exploitative behavior. Such a model is consistent with evidence that ambidexterity depends on the interaction of knowledge, learning, strategic adaptation, organizational culture, and managerial cognition (Fiaz et al., 2021; Könönen & Joensuu-Salo, 2025; Restuputri et al., 2024). It is also consistent with the increasing emphasis on organizational adaptability in digitally intensive, innovation-driven, and uncertain environments (Ameen et al., 2024; Zada et al., 2025).

Accordingly, the aim of the present study was to predict organizational ambidexterity based on knowledge management capability and strategic flexibility and to examine the mediating role of organizational learning in these relationships.

2 Methods and Materials

The present study employed a quantitative, cross-sectional, correlational research design to examine the predictive relationships among knowledge management capability, strategic flexibility, organizational learning, and organizational ambidexterity, with particular emphasis on the mediating role of organizational learning. The statistical population consisted of employees and managers working in medium-sized and large organizations in Canada. Participants were recruited from organizations operating in service, manufacturing, financial, technology, and professional sectors in order to provide sufficient organizational diversity and enhance the generalizability of the findings across different occupational contexts. The final sample consisted of 312 participants. Eligibility criteria included being at least 18 years of age, having a minimum of one year of continuous work experience in the current organization, holding either a professional, supervisory,

managerial, or administrative position, and being sufficiently familiar with organizational procedures and practices to evaluate the constructs examined in the study. Employees who had worked in their organization for less than one year, temporary workers with limited exposure to organizational processes, and respondents who submitted substantially incomplete questionnaires were excluded from the final analysis. Participants were selected using a convenience sampling procedure combined with organizational and professional network recruitment. The questionnaire was distributed electronically to eligible participants working in Canadian organizations. Before participation, respondents were informed about the purpose of the study, the voluntary nature of participation, the confidentiality and anonymity of their responses, and their right to discontinue participation at any stage without consequence. Electronic informed consent was obtained before access to the questionnaire was provided. No personally identifying information was included in the analytical dataset. The sample size was considered adequate for the proposed structural equation modeling procedure because it provided a sufficient number of observations relative to the number of observed indicators and latent constructs incorporated into the hypothesized model.

Organizational ambidexterity was assessed using a self-report measure designed to capture the two complementary dimensions of exploration and exploitation. Exploratory activities refer to the organization's capacity to search for new knowledge, experiment with alternative approaches, identify emerging opportunities, develop new products or services, and depart from established routines when environmental conditions require change. Exploitative activities reflect the organization's ability to refine existing competencies, improve established processes, increase efficiency, implement accumulated knowledge, and make effective use of current capabilities and resources. Participants rated the extent to which these activities characterized their organization using a multi-item Likert-type response format ranging from low agreement to high agreement. Higher scores indicated a greater capacity to simultaneously pursue exploratory and exploitative organizational activities. In the present study, organizational ambidexterity was conceptualized as the organization's combined capacity to maintain efficiency and utilize existing competencies while simultaneously pursuing innovation, experimentation, and the development of new capabilities. Scores for the exploration and exploitation dimensions were examined both separately during measurement-model

evaluation and jointly as indicators of the broader organizational ambidexterity construct.

Knowledge management capability was measured through a multidimensional questionnaire assessing the organization's capacity to systematically acquire, create, organize, share, integrate, and apply knowledge. The instrument evaluated the extent to which organizational members had access to relevant knowledge, exchanged expertise and experience, documented important information, used appropriate mechanisms for knowledge storage and retrieval, and applied organizational knowledge to problem solving and decision making. Particular attention was given to knowledge acquisition, knowledge sharing or transfer, and knowledge application because these processes represent central organizational capabilities through which information and experience are transformed into usable organizational resources. Participants responded to the items using a Likert-type scale ranging from strong disagreement to strong agreement. Higher total scores represented stronger knowledge management capability. In the conceptual model, knowledge management capability was treated as an organizational resource that could contribute both directly to ambidextrous performance and indirectly through its influence on organizational learning.

Strategic flexibility was assessed using a questionnaire measuring the organization's capacity to recognize environmental changes and modify strategic actions, resource configurations, and organizational priorities accordingly. The measure included items addressing the ability to respond rapidly to changing market conditions, reallocate resources when necessary, revise strategic plans, adopt alternative courses of action, and coordinate organizational capabilities in response to new opportunities or threats. Strategic flexibility was therefore operationalized as the organization's ability to maintain a sufficiently broad range of strategic options and to shift effectively among those options as circumstances changed. Respondents rated each statement on a Likert-type agreement scale, with higher scores reflecting greater perceived strategic flexibility. The construct was included as a principal predictor of organizational ambidexterity because organizations that can rapidly reconfigure strategies and resources are expected to be better positioned to balance the simultaneous requirements of exploration and exploitation.

Organizational learning was assessed using a multidimensional self-report instrument evaluating the extent to which the organization facilitates the acquisition, dissemination, interpretation, and institutionalization of

knowledge and experience. The questionnaire addressed activities such as learning from previous successes and failures, exchanging information across organizational units, encouraging employees to generate and discuss new ideas, incorporating experience into organizational routines, questioning established assumptions, and modifying practices in response to newly acquired knowledge. Participants indicated their level of agreement with each statement using a Likert-type response format. Higher scores reflected a stronger organizational learning orientation and greater organizational capacity to transform individual and collective experience into organizational knowledge and improved practices. Within the hypothesized model, organizational learning was considered the mediating mechanism through which knowledge management capability and strategic flexibility could be translated into enhanced organizational ambidexterity. This conceptualization assumes that the availability of knowledge and flexible strategic resources does not automatically produce ambidextrous organizational behavior unless organizational members are able to interpret experience, disseminate knowledge, revise existing assumptions, and incorporate learning into organizational actions.

A demographic questionnaire was also administered to collect background information about the participants, including age, gender, educational level, organizational tenure, occupational position, and general organizational sector. The questionnaires were presented in a standardized sequence through an electronic survey platform. Prior to the principal analyses, the internal consistency of each construct and its dimensions was examined using Cronbach's alpha and composite reliability coefficients. Construct validity was evaluated through confirmatory factor analysis, including assessment of factor loadings, convergent validity, and discriminant validity. Average variance extracted values were examined to determine whether the latent constructs accounted for an adequate proportion of variance in their indicators. These procedures were undertaken to ensure that the measurement instruments demonstrated acceptable psychometric properties before testing the structural relationships specified in the research model.

Data analysis was conducted in several stages. Initially, the dataset was screened for completeness, coding errors, missing values, and potentially invalid response patterns. Descriptive statistics, including frequency, percentage, mean, standard deviation, minimum, maximum, skewness, and kurtosis, were calculated as appropriate to summarize participant characteristics and the principal study variables.

The distributional characteristics of the main variables were examined prior to inferential analysis. Potential multivariate outliers were evaluated, and assumptions relevant to multivariate analysis were assessed. Relationships among knowledge management capability, strategic flexibility, organizational learning, and organizational ambidexterity were initially examined using Pearson correlation coefficients. Multicollinearity among the predictor variables was evaluated using tolerance and variance inflation factor indices to ensure that excessive overlap among the independent constructs did not adversely affect estimation of the structural model.

The hypothesized relationships were subsequently tested using structural equation modeling. A two-stage analytical procedure was adopted in which the measurement model was examined before evaluation of the structural model. Confirmatory factor analysis was first conducted to determine whether the observed indicators adequately represented the proposed latent constructs. Factor loadings, Cronbach's alpha, composite reliability, and average variance extracted were examined to assess indicator reliability, internal consistency, and convergent validity. Discriminant validity was also evaluated to establish that knowledge management capability, strategic flexibility, organizational learning, and organizational ambidexterity represented empirically distinguishable constructs. Model adequacy was assessed using multiple goodness-of-fit indicators rather than relying on a single statistic. These included the chi-square to degrees-of-freedom ratio, comparative fit index, Tucker–Lewis index, incremental fit index, root mean square error of approximation, and standardized root mean square residual. Values within commonly accepted ranges were interpreted as evidence that the proposed measurement and structural models adequately represented the observed data.

After establishing an acceptable measurement model, the structural model was tested to estimate the direct effects of knowledge management capability and strategic flexibility on organizational learning and organizational ambidexterity, as well as the direct effect of organizational learning on organizational ambidexterity. The mediating role of organizational learning was examined by estimating the indirect effects of knowledge management capability and strategic flexibility on organizational ambidexterity through organizational learning. Bootstrapping with 5,000 resamples was used to evaluate the statistical significance of indirect effects because this procedure does not require the assumption of normality for the sampling distribution of

mediated effects. A mediation effect was considered statistically significant when the corresponding bootstrap confidence interval did not include zero. Standardized path coefficients were reported to indicate the magnitude and direction of relationships among the latent constructs. The coefficient of determination was also calculated for the endogenous variables to determine the proportion of variance in organizational learning and organizational ambidexterity explained by the proposed predictors. All statistical tests were conducted at a significance level of .05, and the results of the measurement and structural models were interpreted jointly to determine whether the empirical data supported the hypothesized predictive and mediating relationships.

3 Findings and Results

A total of 312 employees and managers from medium-sized and large organizations in Canada were included in the final analysis. Of the participants, 165 (52.88%) were men, 141 (45.19%) were women, and 6 (1.92%) identified otherwise or preferred not to report their gender. With respect to age, 62 participants (19.87%) were between 18 and 29 years of age, 103 (33.01%) were between 30 and 39 years, 88 (28.21%) were between 40 and 49 years, and 59 (18.91%) were 50 years of age or older. Regarding educational attainment, 29 participants (9.29%) held a college diploma or equivalent qualification, 156 (50.00%) held a bachelor's degree, 101 (32.37%) held a master's degree, and 26 (8.33%) held a doctoral degree. In terms of occupational position, 151 participants (48.40%) were employed in professional or administrative positions, 82 (26.28%) held supervisory positions, and 79 (25.32%) occupied managerial positions. Organizational tenure also demonstrated adequate variation, with 82 participants (26.28%) reporting fewer than 5 years of experience in their current organization, 97 (31.09%) reporting 5 to 9 years, 69 (22.12%) reporting 10 to 14 years, and 64 (20.51%) reporting 15 years or more. Participants represented a range of organizational sectors, including services ($n = 72$, 23.08%), manufacturing ($n = 61$, 19.55%), finance and related services ($n = 55$, 17.63%), technology and information-based industries ($n = 68$, 21.79%), and professional or consulting services ($n = 56$, 17.95%). This distribution indicated that the sample included participants with diverse demographic, occupational, and organizational backgrounds and was therefore suitable for examining the proposed relationships among knowledge management

capability, strategic flexibility, organizational learning, and organizational ambidexterity.

Table 1

Descriptive Statistics and Correlations Among the Study Variables (N = 312)

Variable	M	SD	Skewness	Kurtosis	1	2	3	4
1. Knowledge Management Capability	3.67	0.61	-0.32	-0.18	—			
2. Strategic Flexibility	3.54	0.66	-0.21	-0.27	.58***	—		
3. Organizational Learning	3.72	0.58	-0.39	0.11	.64***	.61***	—	
4. Organizational Ambidexterity	3.63	0.60	-0.28	-0.09	.59***	.62***	.68***	—

As presented in Table 1, the mean scores of all principal variables were above the midpoint of the response scale, suggesting that participants generally perceived their organizations as demonstrating moderately high levels of knowledge management capability, strategic flexibility, organizational learning, and organizational ambidexterity. Organizational learning had the highest mean score ($M = 3.72$, $SD = 0.58$), followed by knowledge management capability ($M = 3.67$, $SD = 0.61$), organizational ambidexterity ($M = 3.63$, $SD = 0.60$), and strategic flexibility ($M = 3.54$, $SD = 0.66$). The skewness coefficients ranged from -0.39 to -0.21, while the kurtosis coefficients ranged from -0.27 to 0.11. These values were well within conventional criteria for univariate normality and indicated no substantial deviations from normal distributions among the principal variables. Pearson correlation analysis further demonstrated that all study variables were positively and significantly associated with one another at the .001 level.

Knowledge management capability was positively related to strategic flexibility ($r = .58$, $p < .001$), organizational learning ($r = .64$, $p < .001$), and organizational ambidexterity ($r = .59$, $p < .001$). Strategic flexibility was also positively correlated with organizational learning ($r = .61$, $p < .001$) and organizational ambidexterity ($r = .62$, $p < .001$). The strongest bivariate association was observed between organizational learning and organizational ambidexterity ($r = .68$, $p < .001$), indicating that organizations characterized by stronger learning processes also tended to demonstrate a greater capacity to simultaneously pursue exploratory and exploitative activities. Although the correlations were moderate to relatively strong, none approached a magnitude indicating problematic redundancy among the constructs. Thus, the correlation matrix provided preliminary support for the hypothesized relationships while also suggesting that the constructs remained empirically distinguishable.

Table 2

Measurement Model, Reliability, and Convergent Validity of the Study Constructs

Construct	Standardized Loading Range	Cronbach's α	Composite Reliability	AVE
Knowledge Management Capability	.69–.86	.89	.91	.58
Strategic Flexibility	.68–.84	.87	.89	.56
Organizational Learning	.72–.88	.90	.92	.61
Organizational Ambidexterity	.70–.86	.88	.90	.59

The results of the measurement-model assessment are reported in Table 2. Standardized factor loadings for the indicators of knowledge management capability ranged from .69 to .86, while those for strategic flexibility ranged from .68 to .84. The factor loadings for organizational learning ranged between .72 and .88, and the indicators of organizational ambidexterity produced standardized loadings between .70 and .86. Thus, the observed indicators demonstrated substantial relationships with their corresponding latent constructs, and the overall loading pattern supported indicator reliability. Internal consistency

was also satisfactory for all constructs. Cronbach's alpha coefficients ranged from .87 for strategic flexibility to .90 for organizational learning, exceeding the commonly accepted criterion of .70. Composite reliability coefficients similarly ranged from .89 to .92, providing additional evidence that the indicators associated with each latent variable consistently measured the same underlying construct. The average variance extracted values were .58 for knowledge management capability, .56 for strategic flexibility, .61 for organizational learning, and .59 for organizational ambidexterity. Because all AVE coefficients

exceeded .50, each latent construct explained more than half of the variance in its corresponding indicators, supporting convergent validity. Taken together, the standardized loadings, Cronbach's alpha coefficients, composite reliability estimates, and AVE values indicated that the measurement model demonstrated adequate reliability and

convergent validity. Examination of the relationships among the latent variables also showed that the constructs were sufficiently distinct from one another, supporting the discriminant validity of the measurement model and allowing subsequent evaluation of the hypothesized structural relationships.

Table 3

Goodness-of-Fit Indices for the Measurement and Structural Models

Model	χ^2/df	RMSEA	CFI	TLI	IFI	GFI	AGFI	SRMR
Measurement Model	2.14	.061	.953	.947	.954	.912	.889	.047
Structural Model	2.22	.063	.949	.943	.950	.907	.884	.051

Table 3 presents the goodness-of-fit statistics for both the measurement and structural models. The measurement model demonstrated a chi-square to degrees-of-freedom ratio of 2.14, which was below the conventional upper criterion of 3.00 and indicated an acceptable correspondence between the hypothesized factor structure and the observed covariance matrix. The RMSEA was .061 and the SRMR was .047, both indicating a relatively small degree of approximation error. Furthermore, the CFI (.953), TLI (.947), and IFI (.954) approached or exceeded .95, providing strong evidence of incremental model fit. The GFI was .912 and the AGFI was .889, which also supported the overall adequacy of the measurement model. After establishing an acceptable measurement model, the hypothesized structural

relationships were estimated. The structural model also demonstrated satisfactory fit to the data, with $\chi^2/df = 2.22$, RMSEA = .063, and SRMR = .051. The CFI (.949), TLI (.943), and IFI (.950) were all close to or above the recommended .90 to .95 range, while the GFI (.907) and AGFI (.884) were also within acceptable limits. Although a small reduction in some incremental fit indices was observed when the structural paths were imposed, the differences were minor and the overall fit remained satisfactory. Consequently, the goodness-of-fit results indicated that the proposed structural model provided an adequate representation of the empirical relationships among knowledge management capability, strategic flexibility, organizational learning, and organizational ambidexterity.

Table 4

Direct, Indirect, and Total Effects in the Structural Model

Effect Type	Structural Path	Standardized Effect (β)	SE	95% CI	CR/t	p
Direct	Knowledge Management Capability → Organizational Learning	.43	.06	[.32, .54]	6.83	< .001
Direct	Strategic Flexibility → Organizational Learning	.38	.05	[.28, .48]	7.00	< .001
Direct	Organizational Learning → Organizational Ambidexterity	.41	.05	[.31, .51]	8.00	< .001
Direct	Knowledge Management Capability → Organizational Ambidexterity	.22	.06	[.10, .33]	3.33	.001
Direct	Strategic Flexibility → Organizational Ambidexterity	.27	.05	[.17, .37]	4.80	< .001
Indirect	Knowledge Management Capability → Organizational Learning → Organizational Ambidexterity	.18	.03	[.12, .25]	—	< .001
Indirect	Strategic Flexibility → Organizational Learning → Organizational Ambidexterity	.16	.03	[.10, .22]	—	< .001
Total	Knowledge Management Capability → Organizational Ambidexterity	.40	.05	[.30, .50]	—	< .001
Total	Strategic Flexibility → Organizational Ambidexterity	.43	.05	[.33, .53]	—	< .001

The structural coefficients presented in Table 4 supported all of the principal hypothesized relationships. Knowledge management capability had a positive and statistically

significant direct effect on organizational learning ($\beta = .43$, $p < .001$), indicating that organizations characterized by stronger capabilities for acquiring, organizing, sharing, and

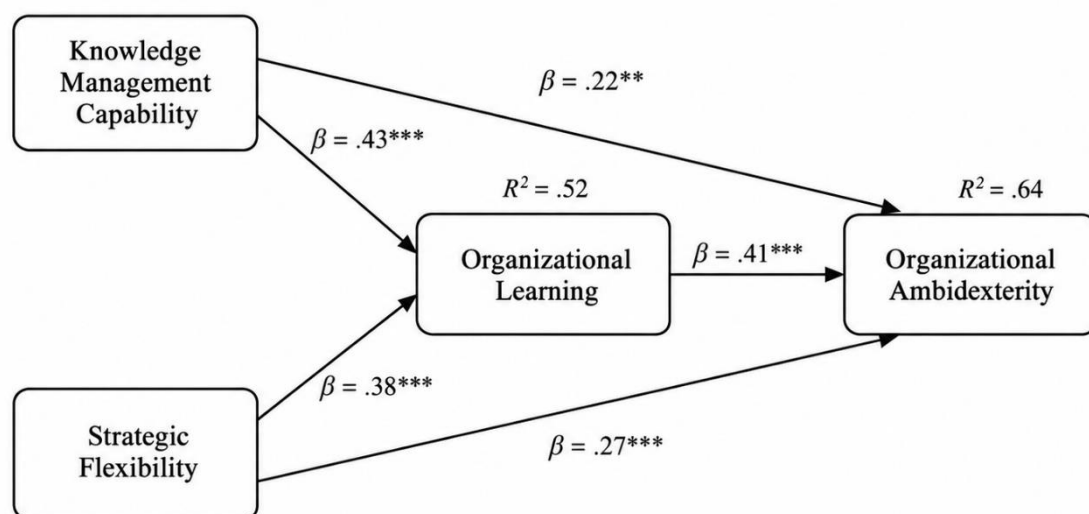
applying knowledge also demonstrated more developed organizational learning processes. Strategic flexibility also significantly predicted organizational learning ($\beta = .38, p < .001$), suggesting that organizations capable of adapting their strategies, reallocating resources, and responding rapidly to environmental change were more likely to promote learning and incorporate new knowledge into organizational practices. Organizational learning, in turn, exerted a substantial positive effect on organizational ambidexterity ($\beta = .41, p < .001$), demonstrating that stronger learning processes were associated with a greater organizational capacity to balance exploration of new opportunities with exploitation of existing resources and competencies. Knowledge management capability also retained a significant direct effect on organizational ambidexterity after organizational learning was incorporated into the model ($\beta = .22, p = .001$), while strategic flexibility continued to exert a significant direct effect on organizational ambidexterity ($\beta = .27, p < .001$). The persistence of these direct paths indicated that knowledge management capability and strategic flexibility influenced organizational ambidexterity through mechanisms extending beyond organizational learning alone.

The bootstrapping analysis provided further evidence for the mediating role of organizational learning. The standardized indirect effect of knowledge management capability on organizational ambidexterity through organizational learning was .18, and its 95% bootstrap confidence interval ranged from .12 to .25. Because this interval did not include zero, the indirect effect was

statistically significant ($p < .001$). Similarly, the indirect effect of strategic flexibility on organizational ambidexterity through organizational learning was .16, with a 95% bootstrap confidence interval of .10 to .22, again excluding zero and confirming statistical significance ($p < .001$). The total effect of knowledge management capability on organizational ambidexterity was .40, whereas the total effect of strategic flexibility was .43. Because the direct effects of both predictors remained statistically significant after the mediator was introduced, organizational learning represented a partial rather than complete mediator of both relationships. This pattern indicates that knowledge management capability and strategic flexibility contribute directly to organizational ambidexterity while simultaneously strengthening ambidextrous capability indirectly by facilitating organizational learning. The structural model explained approximately 52% of the variance in organizational learning ($R^2 = .52$), indicating that knowledge management capability and strategic flexibility jointly accounted for a substantial proportion of differences in organizational learning across the participating organizations. Furthermore, the complete model explained approximately 64% of the variance in organizational ambidexterity ($R^2 = .64$). This level of explained variance demonstrated considerable predictive power and suggested that the combination of knowledge-related capabilities, strategic adaptability, and organizational learning constitutes an important explanatory framework for understanding organizational ambidexterity.

Figure 1

Structural Model of the Study



The structural model illustrated in Figure 1 summarizes the direct and mediated relationships identified in the analysis. Both knowledge management capability and strategic flexibility positively predicted organizational learning, and each variable also maintained a significant direct relationship with organizational ambidexterity. Organizational learning demonstrated a strong positive path to organizational ambidexterity and served as a significant intervening mechanism linking both antecedent variables to the outcome. The strongest direct predictor of organizational learning was knowledge management capability ($\beta = .43$), whereas organizational learning itself represented the strongest direct predictor of organizational ambidexterity ($\beta = .41$). Strategic flexibility nevertheless demonstrated a substantial total association with organizational ambidexterity because it affected the outcome both directly ($\beta = .27$) and indirectly through organizational learning ($\beta = .16$). Knowledge management capability similarly contributed to ambidexterity through a direct path of .22 and an indirect path of .18. Overall, the model indicated that organizations are more likely to achieve ambidexterity when they possess the capability to manage knowledge effectively, maintain strategic adaptability, and convert those capabilities into continuous organizational learning. The significant residual direct paths together with the significant bootstrapped indirect effects confirmed partial mediation and supported the proposed theoretical model.

4 Discussion

The present study examined the extent to which knowledge management capability and strategic flexibility predict organizational ambidexterity and investigated organizational learning as a mediating mechanism in these relationships. The findings supported the proposed model and showed that both knowledge management capability and strategic flexibility had significant positive direct effects on organizational learning and organizational ambidexterity. Organizational learning also had a significant positive effect on organizational ambidexterity. In addition, the indirect effects of knowledge management capability and strategic flexibility on organizational ambidexterity through organizational learning were statistically significant, indicating partial mediation. The model explained 52% of the variance in organizational learning and 64% of the variance in organizational ambidexterity, demonstrating substantial explanatory power. Overall, the findings indicate that organizations are more likely to achieve an effective

balance between exploration and exploitation when they possess strong capabilities for managing knowledge, remain strategically flexible, and are able to transform these capabilities into organizational learning processes.

The positive relationship between knowledge management capability and organizational ambidexterity is theoretically consistent with the knowledge-based view of the firm. Organizational ambidexterity requires firms to make productive use of existing knowledge while simultaneously generating, acquiring, and recombining new knowledge. Knowledge management capability provides the mechanisms through which organizations identify relevant information, distribute expertise, preserve organizational memory, and apply accumulated knowledge to operational and strategic problems. In the present study, stronger knowledge management capability was associated with greater organizational ambidexterity both directly and indirectly, suggesting that effective knowledge processes enable organizations to support exploitation without constraining exploration. This result is consistent with conceptual work proposing that knowledge management systems provide a foundation for ambidextrous organizational behavior by facilitating both the refinement of existing competencies and the creation of new capabilities (Alharbi, 2023). It also accords with evidence showing that knowledge assets contribute to innovation ambidexterity and performance in knowledge-intensive organizations (Asiaei et al., 2023).

The findings are also aligned with studies emphasizing knowledge management as a mechanism through which organizations can improve performance under uncertainty. Restuputri et al. showed that knowledge management contributes to organizational performance through organizational ambidexterity, highlighting the importance of knowledge processes in balancing competing strategic demands (Restuputri et al., 2024). Likewise, Sahoo et al. demonstrated that information acquisition capability and organizational ambidexterity are important for innovation and circular economy performance in the context of Industry 4.0 (Sahoo et al., 2024). These findings support the argument that knowledge management capability extends beyond information storage or documentation. Its strategic value lies in enabling organizations to convert dispersed knowledge into coordinated responses, thereby strengthening their ability to pursue operational efficiency while simultaneously experimenting with new approaches. The present results further suggest that the contribution of knowledge management capability to ambidexterity is not solely direct,

because a substantial proportion of its influence operates through organizational learning.

The significant positive effect of strategic flexibility on organizational ambidexterity also supports the theoretical assumptions of dynamic capability perspectives. Strategic flexibility enables organizations to revise priorities, reallocate resources, alter strategic courses, and respond to changes without becoming locked into existing routines. These capabilities are particularly important for ambidexterity because exploration and exploitation require continuous decisions concerning where resources should be allocated and how quickly strategic attention should shift. Organizations with low strategic flexibility may become overcommitted to established competencies and therefore remain trapped in exploitation, whereas highly flexible organizations are better positioned to modify their resource configurations when new opportunities emerge. The present finding is consistent with recent evidence showing that dynamic capabilities contribute positively to organizational ambidexterity (Al-Amrany, 2026). It is also compatible with research linking strategic agility, digital transformation, and ambidexterity to competitive advantage in SMEs (Ürü et al., 2024).

The role of flexibility is further supported by studies examining cognitive and strategic adaptability. Samimi et al. found that cognitive flexibility at the executive level is associated with firm ambidexterity, indicating that the ability to shift frames and reinterpret strategic issues can facilitate simultaneous exploration and exploitation (Samimi et al., 2025). Ameen et al. similarly demonstrated that strategic agility works alongside artificial intelligence capability to enhance product and service creativity (Ameen et al., 2024). Although these studies focus on different organizational levels, they converge on the proposition that adaptive capacity is crucial when organizations face competing demands and environmental uncertainty. The present study extends this logic by showing that strategic flexibility contributes not only directly to organizational ambidexterity but also indirectly through organizational learning. This suggests that flexibility becomes especially valuable when organizations are able to learn from strategic adjustments rather than merely react to change.

A central finding of the study was the strong positive relationship between organizational learning and organizational ambidexterity. Among the direct predictors of organizational ambidexterity, organizational learning demonstrated the largest standardized path coefficient. This finding indicates that ambidexterity depends substantially on

the organization's capacity to acquire, interpret, disseminate, and institutionalize knowledge. Organizational learning facilitates exploitation by strengthening the refinement and dissemination of existing routines, but it also supports exploration by encouraging experimentation, questioning established assumptions, and integrating novel information. This dual function provides a direct conceptual connection between organizational learning and ambidexterity. The finding is consistent with Lissillour and Rodríguez-Escobar, who emphasized the strategic role of the learning organization in supporting ambidexterity (Lissillour & Rodríguez-Escobar, 2022). It also aligns with the review by Singer-Coudoux et al., which highlighted organizational learning as a key mechanism for navigating the tensions inherent in simultaneous exploration and exploitation (Singer-Coudoux et al., 2024).

The present results also correspond with empirical studies demonstrating that learning capabilities are especially important in uncertain and dynamic contexts. Islam and Munir showed that strategic learning capabilities were important for innovation ambidexterity during the COVID-19 period, when organizations were required to maintain continuity while rapidly adapting to disruptive conditions (Islam & Munir, 2022). Kim and Lee similarly found that transformational leadership can strengthen organizational learning in ways that contribute to venture ambidexterity and growth (Kim & Lee, 2021). Sağlam and İyigün further demonstrated relationships among the learning organization approach, intellectual capital, organizational ambidexterity, and entrepreneurial orientation (Sağlam & İyigün, 2022). Taken together, these studies support the interpretation that organizational learning is not simply an additional organizational resource but an active process through which resources and capabilities are translated into ambidextrous behavior.

The significant mediating role of organizational learning represents one of the most important contributions of the study. Knowledge management capability had a significant indirect effect on organizational ambidexterity through organizational learning, while its direct effect remained significant. This pattern indicates partial mediation. In practical theoretical terms, the finding suggests that effective knowledge management provides organizations with access to relevant information and expertise, but these resources produce stronger ambidextrous outcomes when they are processed through organizational learning. Knowledge may be accumulated without being transformed into adaptive behavior if employees do not exchange interpretations,

reflect on experience, revise routines, or institutionalize lessons. Therefore, organizational learning appears to function as a conversion mechanism that translates managed knowledge into the simultaneous refinement of existing operations and pursuit of new opportunities.

This interpretation is supported by research emphasizing the interaction between knowledge-related resources and ambidexterity. Asiaei et al. demonstrated that knowledge assets contribute to innovation ambidexterity and performance (Asiaei et al., 2023), while Liao et al. showed that big data analytic capabilities can be leveraged to improve innovation ambidexterity through intervening mechanisms (Liao et al., 2023). Alaskar et al. similarly found that organizational ambidexterity mediates relationships involving big data analytics, strategic capabilities, and innovation performance (Alaskar et al., 2024). Although these studies use different mediating structures, they collectively reinforce the idea that knowledge-related capabilities rarely produce strategic outcomes automatically. Their effectiveness depends on organizational processes that interpret, integrate, and deploy knowledge. The present study identifies organizational learning as one such process and shows that it explains an important portion of the relationship between knowledge management capability and ambidexterity.

Organizational learning also partially mediated the relationship between strategic flexibility and organizational ambidexterity. This finding suggests that strategic flexibility enhances ambidexterity partly because flexible organizations are more capable of learning from environmental feedback and strategic experimentation. Flexible resource allocation and adaptable strategic choices create opportunities for learning, but the benefits of these opportunities depend on whether organizations systematically interpret their results and incorporate lessons into future behavior. This interpretation is consistent with dynamic capability arguments that sensing, seizing, and transformation processes require continual learning. Johannes et al. emphasized the interrelated nature of organizational ambidexterity, dynamic capabilities, and open innovation in the development of competitive advantage (Johannes et al., 2021). Similarly, Pinheiro et al. showed that absorptive capacity and innovation spillovers contribute to manufacturing flexibility, indicating that flexibility and learning-oriented capabilities are closely intertwined (Pinheiro et al., 2021). The present study extends these findings by demonstrating that organizational learning

is one pathway through which strategic flexibility contributes to ambidextrous capability.

The partial rather than complete mediation observed for both knowledge management capability and strategic flexibility is also theoretically meaningful. The persistence of significant direct effects indicates that these antecedents influence organizational ambidexterity through additional mechanisms beyond learning. Knowledge management capability may directly support ambidexterity by improving access to specialized expertise, facilitating cross-functional coordination, and enabling more efficient resource utilization. Strategic flexibility may directly strengthen ambidexterity by allowing decision makers to reallocate resources between exploratory and exploitative initiatives without requiring extensive structural changes. At the same time, organizational learning amplifies these effects by transforming available knowledge and strategic options into collective routines and adaptive competencies. This combined pattern is consistent with research showing that organizational ambidexterity often emerges from configurations of multiple complementary capabilities rather than a single causal pathway (Pereira et al., 2022; Zahoor et al., 2023).

The findings also correspond with evidence that ambidexterity functions as a mediating or integrating mechanism in relationships between organizational resources and performance outcomes. For example, Alkhawaldeh and Shawabkeh found that organizational ambidexterity mediated the relationship between strategic orientations and supply chain performance (Alkhawaldeh & Shawabkeh, 2023). Könönen and Joensuu-Salo showed that ambidexterity mediates the relationship between environmental proactivity and SME performance (Könönen & Joensuu-Salo, 2025). Jum'a et al. demonstrated the importance of ambidextrous supply chain capability for sustainability-related outcomes (Jum'a et al., 2025), while Zada et al. connected green knowledge sharing and ambidexterity within a serial mediation model of green innovation (Zada et al., 2025). These studies reinforce the broader interpretation that ambidexterity occupies a central position in organizational capability systems and that its development depends on processes through which resources, knowledge, and adaptive behavior are integrated.

The findings can also be interpreted through intellectual capital and human capability perspectives. Organizational ambidexterity depends on employees' knowledge, relationships, experience, and behavioral willingness to engage in both refinement and experimentation. Adusei et al.

demonstrated that intellectual capital can influence performance through mediating processes (Adusei et al., 2022), while López-Zapata and Ramírez-Gómez linked intellectual capital and organizational culture to ambidexterity (López-Zapata & Ramírez-Gómez, 2021). Latukha et al. similarly showed relationships among talent management, organizational ambidexterity, and firm performance (Latukha et al., 2022). These studies suggest that formal knowledge systems must be complemented by human and organizational capabilities that allow knowledge to circulate and be transformed into behavior. The strong role of organizational learning identified in the present research supports this perspective because learning provides the mechanism by which individual expertise can become collective capability.

The results are additionally compatible with studies examining managerial and behavioral antecedents of ambidexterity. Alamsjah and Asrol showed that middle managers' ambidexterity, continuous improvement, and organizational agility are relevant to business performance (Alamsjah & Asrol, 2023). Fiaz et al. emphasized the role of an ambidextrous organizational culture in product innovation (Fiaz et al., 2021), while Susilo et al. identified antecedents of ambidextrous behavior and linked them with MSME performance (Susilo et al., 2024). Shehadeh and Al-Tarawneh also reported organizational consequences associated with ambidexterity, including organizational citizenship behavior (Shehadeh & Mohammed Abed Hussein Al, 2022). These findings indicate that ambidexterity is reinforced when organizational systems, culture, employee behaviors, and managerial practices jointly support dual forms of activity. The present model contributes to this literature by highlighting knowledge management capability, strategic flexibility, and organizational learning as an integrated capability system.

The high proportion of explained variance in organizational ambidexterity further suggests that the proposed model captures major elements of the organizational processes underlying ambidextrous capability. At the same time, the findings should not be interpreted as implying that greater ambidexterity is always beneficial under all circumstances. Wang et al. cautioned that the relationship between ambidexterity and performance may depend on organizational learning and other contextual factors, raising the possibility that excessive or poorly coordinated ambidexterity can generate tensions and resource inefficiencies (Wang et al., 2024). This qualification is important because organizations must not

simply maximize exploration and exploitation independently; rather, they must coordinate them in a manner appropriate to their context. The present findings suggest that organizational learning may help organizations manage this balance by converting experimentation into accumulated knowledge and ensuring that exploitation remains open to revision.

5 Conclusion

Finally, the findings are consistent with the broader direction of recent research emphasizing dynamic, technological, and psychological determinants of ambidexterity. Giudice et al. demonstrated the importance of adaptive organizational configurations for digital innovation in smart manufacturing SMEs (Giudice et al., 2021), while Kardes et al. highlighted psychological drivers of organizational ambidexterity using advanced decision-modeling approaches (Kardes et al., 2026). Yang et al. showed that leadership and organizational capabilities are related to institutional performance (Yang et al., 2023). Together with the present findings, this literature supports a multidimensional view of ambidexterity in which technological resources, knowledge systems, strategic flexibility, managerial cognition, and organizational learning interact. The present study specifically demonstrates that knowledge management capability and strategic flexibility are important antecedents, but their effects are strengthened when organizations are able to learn systematically and convert knowledge and strategic adaptation into enduring organizational practices.

One limitation of the present study is its cross-sectional design, which prevents definitive causal conclusions regarding the relationships among knowledge management capability, strategic flexibility, organizational learning, and organizational ambidexterity. Although structural equation modeling allowed the hypothesized directional relationships to be tested, the data were collected at a single point in time and therefore cannot establish temporal precedence. The study also relied primarily on self-report data, which may be influenced by common method variance, social desirability, perceptual bias, and respondents' limited access to organization-wide information. In addition, the use of convenience and network-based sampling may restrict the representativeness of the sample, despite the inclusion of participants from different industries and occupational positions in Canada. The study examined organizational constructs through individual perceptions, whereas some

aspects of ambidexterity and strategic flexibility may be more accurately captured through multilevel or objective organizational indicators. Finally, sectoral differences, firm size, environmental dynamism, organizational structure, and technological intensity were not explicitly modeled as moderators and may influence the strength of the relationships identified.

Future research should employ longitudinal designs to determine how knowledge management capability, strategic flexibility, organizational learning, and ambidexterity develop and influence one another over time. Multi-source and multilevel designs would also be valuable, particularly studies combining employee and managerial assessments with objective indicators of innovation, operational performance, resource allocation, and organizational change. Researchers could examine whether environmental dynamism, technological intensity, organizational size, leadership style, digital maturity, or organizational culture strengthen or weaken the proposed relationships. Future studies should also distinguish between exploratory and exploitative learning and examine whether different dimensions of knowledge management contribute differently to these forms of learning. Comparative research across countries, industries, public and private organizations, and small versus large firms could determine the boundary conditions of the model. Experimental or quasi-experimental organizational interventions may further clarify whether improvements in knowledge-sharing systems, strategic planning flexibility, or learning practices produce measurable changes in ambidextrous capability.

From a practical perspective, managers seeking to strengthen organizational ambidexterity should avoid treating knowledge management, strategic flexibility, and organizational learning as separate initiatives. Organizations should establish integrated systems for acquiring, documenting, sharing, and applying knowledge while simultaneously preserving the ability to revise strategic priorities and reallocate resources as conditions change. Managers should create cross-functional learning mechanisms, after-action reviews, internal knowledge-sharing forums, communities of practice, and structured opportunities for employees to reflect on both successful and unsuccessful initiatives. Strategic planning systems should allow periodic reassessment rather than rigid adherence to fixed plans, and resource allocation procedures should permit movement between exploratory projects and established operations. Leadership practices should encourage experimentation without weakening

accountability for current performance, and lessons from exploratory initiatives should be incorporated into routines when they demonstrate value. By combining robust knowledge processes with adaptive strategic decision making and institutionalized learning, organizations can increase their capacity to exploit existing strengths while continuously developing new sources of competitiveness.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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