



Configurational Paths to Newcomers' Work Adaptability in High-Tech Enterprises: A Fuzzy-Set Qualitative Comparative Analysis

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Abstract

Newcomer work adaptability is essential for employees to effectively integrate into organizations, particularly in high-tech enterprises characterized by rapid technological change and dynamic work environments. Although previous studies have examined the effects of organizational socialization strategies and employee proactivity on newcomer adjustment, limited attention has been paid to how these factors jointly combine to facilitate work adaptability. Drawing on configurational theory and person–environment fit theory, this study investigates the configurational pathways through which organizational socialization strategies and employee proactivity contribute to newcomer work adaptability. Using survey data from 419 newcomers in high-tech enterprises in Jinan, China, this study employs fuzzy-set qualitative comparative analysis (fsQCA) to identify configurations leading to high and non-high work adaptability. The findings reveal that no single condition is necessary for achieving high work adaptability. Four configurations lead to high adaptability, demonstrating multiple equifinal pathways, while five configurations associated with non-high adaptability indicate causal asymmetry. Furthermore, organizational socialization strategies and employee proactivity jointly shape newcomer adaptability through different combinations of conditions. This study extends organizational socialization research by adopting a configurational perspective and provides practical implications for organizations to develop differentiated socialization practices and enhance newcomer adjustment.

Keywords: Organizational Socialization Strategies, Employee Proactivity, Work Adaptability, Fuzzy-Set Qualitative Comparative Analysis (FSQCA), Configurational Theory, High-Tech Enterprises

Introduction

Newcomer adjustment has become an important topic in human resource management as organizations increasingly seek to attract, retain, and develop talent. Successfully transitioning into a new organization requires newcomers to understand job expectations, acquire role-related knowledge, establish workplace relationships, and adapt to

organizational environments. Previous research has demonstrated that effective organizational socialization is closely associated with important adjustment outcomes, including role clarity, task mastery, social integration, and job performance (Bauer et al., 2007; Saks et al., 2007). Recent studies further suggest that newcomer socialization is shaped not only by organizational socialization practices but also by newcomers' proactive behaviors and their surrounding social contexts (Bauer et al., 2025). Understanding how organizational support and individual initiative jointly contribute to newcomer work adaptability is therefore important for explaining why newcomers may experience different adjustment outcomes even when they enter similar organizational environments.

Organizational socialization strategies provide newcomers with essential resources to reduce uncertainty and facilitate adjustment. Prior research generally distinguishes three dimensions of socialization strategies: scenario strategy, content strategy, and social strategy (Van Maanen & Schein, 1979; Jones, 1986; Cable & Parsons, 2001). These strategies provide different forms of support through which organizations can help newcomers understand their roles, acquire relevant knowledge, and develop workplace relationships. Nevertheless, newcomers are not passive recipients of organizational support. They may actively seek information and feedback and build relationships to influence their own socialization experiences. Thus, work adaptability may depend not only on the availability of organizational socialization resources but also on how these resources combine with newcomers' proactive behaviors. A key issue is whether different combinations of organizational strategies and individual proactivity can lead to similarly favorable adaptation outcomes.

Despite extensive research on newcomer adjustment, existing studies have predominantly adopted variable-oriented approaches to examine the independent or net effects of organizational socialization strategies and proactive behaviors on adaptation outcomes (Cai et al., 2025; Pang et al., 2026). Although these approaches help identify the relevance of individual factors, they provide less insight into how multiple organizational and individual conditions operate together. In particular, it remains important to understand whether high work adaptability can emerge through different combinations of socialization resources and employee proactivity, and whether the combinations associated with non-high work adaptability differ from those associated with high adaptability. This issue is especially relevant to high-tech enterprises, where newcomers must learn job requirements, establish working relationships, and respond to changing work environments, while organizations may provide different combinations of socialization support. Without examining these conditions jointly, it may be difficult to capture the variety of pathways through which newcomer work adaptability develops.

The configurational perspective provides a useful approach to addressing this limitation. Rather than treating each factor as an isolated predictor, configurational approaches examine how multiple conditions combine to produce an outcome. They emphasize conjunctural causation, equifinality, and causal asymmetry, recognizing that different combinations of conditions may be associated with the same outcome and that the configurations associated with the presence of an outcome need not simply be the reverse of those associated with its absence (Fiss, 2011; Pappas & Woodside, 2021). Fuzzy-set qualitative comparative analysis (fsQCA) is suitable for investigating these complex relationships because it identifies configurations of conditions associated with particular outcomes (Kumar et al., 2022).

Applying fsQCA can therefore provide a more differentiated understanding of how organizational socialization strategies and employee proactivity jointly relate to newcomer work adaptability.

Building on this perspective, this study examines scenario strategy (SCS), content strategy (CTS), social strategy (SS), and employee proactivity (EP) as four antecedent conditions associated with newcomer work adaptability (WA). Drawing on configurational theory and person–environment fit theory, the study addresses three research questions: (1) What combinations of organizational socialization strategies and employee proactivity are sufficient for high work adaptability? (2) Which combinations of these conditions are associated with non-high work adaptability? and (3) To what extent do the configurations associated with high and non-high work adaptability demonstrate causal asymmetry? To address these questions, the study analyzes survey data from 419 newcomers in high-tech enterprises in Jinan, China.

This study makes three contributions. First, it extends newcomer socialization research by integrating organizational socialization strategies and employee proactivity within a single configurational framework. This shifts the focus from the isolated effects of individual factors to the combinations of organizational resources and newcomer agency associated with work adaptability. Second, by identifying configurations associated with both high and non-high work adaptability, the study illustrates equifinality and causal asymmetry in newcomer adjustment. It thereby clarifies why the conditions associated with high adaptability should not automatically be assumed to be the mirror image of those associated with non-high adaptability. Third, by examining newcomers in high-tech enterprises, the study provides context-specific insights for organizations seeking to tailor socialization support to different combinations of organizational conditions and newcomer proactivity. These insights can help managers consider not only which socialization resources to provide but also how organizational support and newcomer initiative may work together in facilitating adaptation.

Theoretical Analysis and Model Development

Theoretical Analysis

Configurational Theory

Configurational theory suggests that organizational outcomes are usually shaped by the combined effects of multiple conditions rather than by the independent influence of a single factor. Its core principles include equifinality, causal asymmetry, and conjunctural causation, indicating that the same outcome may be achieved through different combinations of conditions, while the presence and absence of an outcome may correspond to different causal structures (Fiss, 2011). Unlike variable-oriented approaches that focus on the net effects of individual variables, a configurational perspective is more suitable for examining organizational phenomena characterized by complexity and multiple pathways. Fuzzy-set qualitative comparative analysis (fsQCA) further translates this theoretical logic into set-theoretic analysis, enabling researchers to identify different combinations of conditions associated with specific outcomes (Pappas & Woodside, 2021).

Newcomer work adaptability involves multiple factors related to organizational environments and individual behaviors, and its formation cannot be sufficiently explained by a single antecedent condition. Therefore, this study adopts configurational theory as the

overarching analytical framework and considers organizational socialization strategies and employee proactivity as interconnected conditions to examine multiple pathways through which newcomer work adaptability emerges.

Person–Environment Fit Theory

Person–environment fit theory proposes that individuals' attitudes, behaviors, and adjustment outcomes are closely related to the degree of compatibility between personal characteristics and their work environments (Kristof, 1996). Such fit extends beyond person–organization relationships and also involves the alignment between individuals and job demands, social environments, and organizational resources. Recent research further highlights that person–environment fit is dynamic and may change as individuals gain organizational experience and adapt to new work contexts (Vleugels et al., 2023).

For newcomers, work adaptability requires achieving alignment across multiple domains, including job tasks, organizational environments, and workplace relationships. Organizational socialization resources represent external environmental conditions, whereas employee proactivity reflects individuals' agency in responding to and utilizing these resources. Recent evidence suggests that newcomer proactivity is closely associated with perceived person–environment fit and subsequently relates to work attitudes and outcomes (Soares et al., 2025).

Therefore, person–environment fit theory provides a theoretical foundation for simultaneously considering organizational and individual conditions in newcomer adaptation, while configurational theory offers a logical framework for examining how these conditions combine in different ways to form newcomer work adaptability. Together, these two perspectives provide the theoretical foundation for the configurational model developed in this study.

Antecedent Conditions of Newcomer Work Adaptability

Organizational Socialization Strategies

Organizational socialization strategies represent important mechanisms through which organizations help newcomers acquire work-related information, understand organizational norms, and establish workplace relationships (Van Maanen & Schein, 1979; Jones, 1986). Cable and Parsons (2001) conceptualized organizational socialization strategies into three dimensions: scenario strategy, content strategy, and social strategy. These three dimensions reflect the contextual, task-related, and relational resources provided by organizations during the socialization process and jointly constitute important organizational conditions for newcomer adaptation. Previous research has demonstrated that formal socialization practices facilitate newcomers' role clarity, task mastery, and social integration (Frögéli et al., 2023).

Employee Proactivity

Employee proactivity reflects newcomers' tendency to actively seek information, request feedback, build relationships, and engage in problem solving during the socialization process. Zhao et al. (2023) demonstrated through a meta-analysis that newcomer proactive behaviors are closely associated with socialization outcomes, including role clarity, task mastery, and social integration. Cai et al. (2025) further indicated that proactive socialization

behaviors are shaped by multiple factors at organizational, interpersonal, and individual levels. In addition, Pang et al. (2026) found that newcomer proactivity provides additional explanatory value for newcomer learning beyond organizational socialization strategies. Accordingly, this study incorporates employee proactivity (EP) as an individual-level antecedent condition together with organizational socialization strategies in the configurational analysis.

Configurational Relationship Between Organizational Socialization Strategies and Employee Proactivity

Organizational socialization strategies represent organizational-level socialization resources, whereas employee proactivity reflects individual-level agency during the adjustment process. These two types of conditions possess different resource attributes and may jointly contribute to newcomer work adaptability through various combinations.

Configurational theory suggests that organizational outcomes generally emerge from combinations of multiple conditions, and different combinations may produce the same outcome while demonstrating causal asymmetry (Fiss, 2011). fsQCA further enables researchers to identify multiple combinations of conditions that are sufficient for producing specific outcomes (Pappas & Woodside, 2021; Kumar et al., 2022). Therefore, this study considers scenario strategy (SCS), content strategy (CTS), social strategy (SS), and employee proactivity (EP) as configurational conditions, with work adaptability (WA) as the outcome condition, to identify alternative pathways leading to high newcomer work adaptability.

Model Development

Drawing upon configurational theory and person–environment fit theory, this study conceptualizes newcomer work adaptability as an outcome emerging from the interaction between organizational conditions and individual conditions. Organizational socialization strategies represent the socialization resources provided by organizations, including scenario strategy, content strategy (CTS), and social strategy (SS), whereas employee proactivity (EP) represents newcomers' individual agency during the socialization process. Accordingly, this study develops antecedent conditions from both organizational and individual perspectives and considers newcomer work adaptability (WA) as the outcome condition.

Unlike traditional variable-oriented studies that focus on the independent net effects of individual variables, this study examines the joint configurations of multiple conditions and their set-theoretic relationships with work adaptability. Because different conditions may combine in different ways to produce the same outcome, newcomer work adaptability may be achieved through multiple equivalent pathways. Moreover, the configurations underlying high and non-high work adaptability may not be symmetrical (Fiss, 2011; Pappas & Woodside, 2021). Therefore, this study applies fsQCA to identify the sufficiency relationships between different antecedent configurations and newcomer work adaptability.

Specifically, this study treats SCS, CTS, SS, and EP as four antecedent conditions and WA as the outcome set, developing the configurational analytical framework presented in Figure 1.

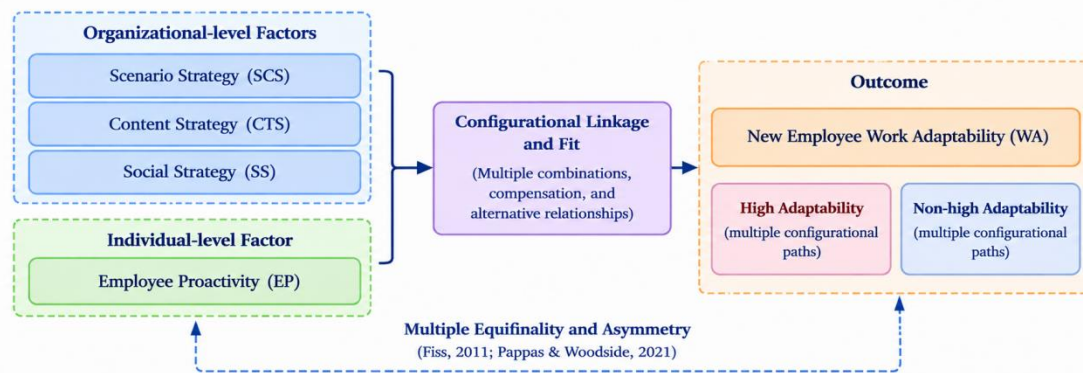


Figure 1 Conceptual Framework of the Study

Research Design

Sample and Data Collection

This study selected newcomers from high-tech enterprises in Jinan, China, as the research context. High-tech enterprises were chosen because they are characterized by knowledge-intensive activities, rapid technological development, and continuously changing work environments. In such contexts, newcomers are often required to quickly acquire job-related knowledge, understand organizational norms, and establish workplace relationships, making high-tech enterprises an appropriate setting for examining newcomer socialization and work adaptability (Bauer et al., 2025). Previous research has indicated that role clarity, task mastery, and social integration represent important outcomes of effective organizational socialization (Bauer et al., 2007).

Following previous research, newcomers were defined as employees who had joined their current organizations within three years (He et al., 2020). This criterion ensured that respondents had sufficient organizational experience to evaluate their socialization experiences, proactive behaviors, and work adaptability.

Before the formal survey, a pilot study was conducted to examine the clarity and appropriateness of questionnaire items. Based on the feedback obtained, minor revisions were made to improve the wording of several items. The formal survey was conducted with the assistance of enterprise contacts. Respondents participated voluntarily, and all responses were collected anonymously. Before completing the questionnaire, participants were informed of the research objectives and confidentiality principles.

A total of 450 questionnaires were distributed. After removing invalid responses based on incomplete answers, extremely short completion time, inconsistent response patterns, and duplicate submissions, 419 valid questionnaires were retained, representing an effective response rate of 93.11%. The final sample consisted of 419 cases, which provided an adequate empirical basis for subsequent fsQCA analysis (Pappas & Woodside, 2021). Moreover, this sample size is consistent with previous fsQCA studies, which generally employ medium-sized samples to identify configurational patterns and explore causal complexity rather than to estimate population parameters. Therefore, the sample size was considered appropriate for examining the multiple combinations of organizational socialization strategies and employee proactivity that contribute to newcomer work adaptability.

Measurement

This study included five core constructs: scenario strategy (SCS), content strategy (CTS), social strategy (SS), employee proactivity (EP), and work adaptability (WA). All constructs were measured using established scales that have been validated in previous studies. To ensure contextual relevance, several items were slightly modified according to the characteristics of newcomers in high-tech enterprises.

Organizational socialization strategies were measured through three dimensions: scenario strategy, content strategy, and social strategy. Each dimension consisted of four items, following the organizational socialization tactics framework proposed by Jones (1986). Scenario strategy reflects organizational efforts to provide contextual information and environmental guidance; content strategy represents the provision of job-related information and role expectations; and social strategy captures organizational support for interpersonal interaction and relationship development.

Employee proactivity was measured using the personal initiative scale developed by Frese et al. (1997), consisting of seven items. This scale captures newcomers' tendency to actively identify problems, seek opportunities, and take initiative during the adaptation process.

Work adaptability was assessed using four dimensions: performance proficiency, role clarity, interpersonal relationships, and cultural adaptation. The measurement items were adapted from previous studies on newcomer adjustment and organizational socialization, including Morrison (1993), Chao et al. (1994), and Bauer et al. (2007). These dimensions capture both task-related adaptation and relational/contextual adaptation, reflecting the multidimensional nature of newcomer adjustment. A total of 15 items were used to evaluate newcomers' adaptation across task, role, interpersonal, and cultural domains. All measurement items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Reliability and Validity Assessment

Prior to conducting the fsQCA, the reliability and validity of the measurement scales were assessed to ensure the quality of the calibration and subsequent configurational analysis. As presented in Table 1, all constructs exhibited Cronbach's alpha coefficients above the recommended threshold of 0.70, indicating satisfactory internal consistency reliability. Moreover, the composite reliability (CR) values for all constructs exceeded 0.70, further confirming the reliability of the measurement instruments.

Regarding convergent validity, the average variance extracted (AVE) values of all constructs were above the recommended criterion of 0.50 (Fornell & Larcker, 1981), demonstrating adequate convergence among the measurement items. Following Hair et al. (2019), these results indicate that the measurement scales possess satisfactory reliability and validity. Therefore, the constructs were considered appropriate for subsequent calibration and fsQCA analysis (Pappas & Woodside, 2021).

Table 1

Reliability and Convergent Validity Analysis of Measurement

Construct	Number	Cronbach's α	CR	AVE
SCS	4	0.906	0.910	0.717
CTS	4	0.893	0.895	0.682
SS	4	0.885	0.890	0.669
EP	7	0.943	0.946	0.713
WA	15	0.919	0.969	0.674

Calibration of Variables

This study employed the direct calibration method following Ragin's (2008) calibration procedure, in which three qualitative anchors were established: full non-membership, crossover point, and full membership. Specifically, the 5th, 50th, and 95th percentiles were respectively used as the thresholds for full non-membership, crossover point, and full membership. This approach is consistent with prior fsQCA studies and enables the transformation of continuous variables into fuzzy sets with membership scores ranging from full non-membership to full membership.

As presented in Table 2, the calibration thresholds for scenario strategy (SCS) were 3.25, 4.25, and 5.00 for full non-membership, crossover point, and full membership, respectively. The corresponding thresholds for content strategy (CTS) were 3.00, 4.25, and 5.00, and those for social strategy (SS) were 3.25, 4.25, and 5.00. For employee proactivity (EP), the three calibration anchors were 3.14, 4.14, and 5.00. For work adaptability (WA), the thresholds were 3.53, 4.27, and 4.87. These calibration thresholds were subsequently applied in the fsQCA procedure to identify configurational pathways through which organizational socialization strategies and employee proactivity combine to explain newcomer work adaptability.

Table 2

Calibration Thresholds for Fuzzy Sets of the Study Variables

Variable	Full Non-membership (5%)	Crossover Point (50%)	Full Membership (95%)
SCS	3.25	4.25	5.00
CTS	3.00	4.25	5.00
SS	3.25	4.25	5.00
EP	3.14	4.14	5.00
WA	3.53	4.27	4.87

Robustness Check

To examine whether the calibration scheme influenced the configurational results, this study conducted a robustness check using an alternative calibration approach based on the 10th, 50th, and 90th percentiles as calibration anchors (see Table 3). Compared with the primary calibration procedure using the 5th, 50th, and 95th percentiles, the alternative

calibration retained the same crossover points while adjusting the thresholds for full non-membership and full membership. As shown in Table 3, under the alternative calibration scheme, the full non-membership thresholds were 3.75 for SCS, CTS, and SS, 3.71 for EP, and 3.73 for WA. The full membership thresholds remained 5.00 for SCS, CTS, SS, and EP, while the threshold for WA was adjusted to 4.73. the recalibrated fuzzy-set variables were then used to re-estimate the configurational analysis.

Table 3

Alternative Calibration Thresholds for Robustness Analysis

Variable	Full Non-membership (10%)	Crossover Point (50%)	Full	Membership
SCS	3.75	4.25	5.00	
CTS	3.75	4.25	5.00	
SS	3.75	4.25	5.00	
EP	3.71	4.14	5.00	
WA	3.73	4.27	4.73	

Empirical Results*Necessity Analysis*

Before conducting the configurational sufficiency analysis, this study first examined the necessity of individual antecedent conditions for high work adaptability (WA) and non-high work adaptability (~WA). Following the commonly adopted criterion in fsQCA research, a condition is considered necessary when its consistency score exceeds the threshold of 0.90.

As shown in Table 4, for high work adaptability, the consistency scores of all antecedent conditions ranged from 0.835 to 0.870. Although high employee proactivity (EP) demonstrated the highest consistency score (0.870), it remained below the recommended threshold of 0.90, indicating that no single condition could be regarded as a necessary condition for high work adaptability. For non-high work adaptability, the consistency scores of both conditions and their negations ranged from 0.501 to 0.720, also failing to meet the criterion for necessity.

Overall, no individual antecedent condition was identified as a necessary condition for either high or non-high work adaptability. These findings suggest that newcomer work adaptability does not result from a single determining factor but rather emerges through the interaction and combination of multiple conditions. Therefore, a configurational sufficiency analysis was further conducted to identify alternative pathways leading to different levels of work adaptability.

Table 4

Results of Necessary Condition Analysis

Condition	WA		~WA	
	Consistency	Coverage	Consistency	Coverage
SCS	0.835219	0.746215	0.623195	0.566597
~SCS	0.514904	0.573168	0.720864	0.816574
CTS	0.839890	0.741267	0.639000	0.573905
~CTS	0.517215	0.584704	0.711920	0.818999
SS	0.836375	0.745995	0.612028	0.555512
~SS	0.501662	0.559597	0.720154	0.817479
EP	0.871286	0.747316	0.650121	0.567446
~EP	0.495691	0.581977	0.710501	0.848881

Configurational Sufficiency Analysis

To further uncover how organizational socialization strategies and employee proactivity jointly form newcomer work adaptability through different combinations of conditions, this study employed fuzzy-set qualitative comparative analysis (fsQCA) to examine the configurational pathways leading to high work adaptability (WA) and non-high work adaptability (~WA). Following established fsQCA guidelines (Ragin, 2008; Pappas & Woodside, 2021), the consistency threshold was set at 0.80 and the frequency threshold was set at 2 in the truth table analysis. The frequency threshold was set at 2 because each configuration was required to have sufficient empirical cases while retaining meaningful causal diversity (Ragin, 2008). Boolean minimization was then conducted to identify sufficient configurations associated with different adaptability outcomes (Ragin, 2008).

As presented in Table 5, four sufficient configurations were identified for high work adaptability. The consistency scores of these configurations were 0.855, 0.862, 0.857, and 0.853, respectively, all exceeding the recommended threshold of 0.80, indicating that these configurations met the sufficiency criterion for high work adaptability. The overall solution consistency was 0.807, and the overall solution coverage was 0.825, suggesting that the identified configurations explained a substantial proportion of cases with high work adaptability.

For non-high work adaptability, five sufficient configurations were identified, with consistency scores of 0.915, 0.914, 0.895, 0.908, and 0.898, respectively. The overall solution consistency was 0.834, and the overall solution coverage was 0.777, indicating that multiple combinations of absent or insufficient conditions could constitute pathways associated with non-high work adaptability.

Overall, these findings demonstrate that newcomer work adaptability is characterized by configurational complexity rather than a single-factor explanation. Different combinations of organizational socialization strategies and employee proactivity can lead to similar adaptability outcomes. The specific configurations are discussed in the following sections.

Table5

Results of fsQCA Configuration Analysis for High and Non-high Work Adaptability

Condition	WA				~WA				
	Config .1	Config .2	Config .3	Config .4	Config .A	Config .B	Config .C	Config .D	Config .E
SCS	●	○	●					⊗	⊗
CTS	●	●		●		⊗	⊗		⊗
SS	●		●	○	⊗		⊗		
EP		●	●	●	⊗	⊗		⊗	
Consistency	0.855	0.862	0.857	0.853	0.915	0.914	0.895	0.908	0.898
Raw coverage	0.681	0.701	0.697	0.700	0.591	0.593	0.606	0.591	0.594
Unique coverage	0.029	0.049	0.045	0.049	0.025	0.021	0.022	0.029	0.015
Solution consistency	0.807				0.834				
Solution coverage	0.825				0.777				

Note: ● indicates the presence of a core condition; ○ indicates the presence of a peripheral condition; ⊗ indicates the absence of a core condition; blank spaces indicate that the condition is irrelevant to the configuration. The symbol ~ denotes the negation or absence of a condition or outcome.

Configurations Leading to High Work Adaptability*Integrated Organizational Socialization Support Configuration*

Configuration 1 (SCS × CTS × SS → WA) showed a consistency of 0.855 and a raw coverage of 0.681, representing an important pathway associated with high work adaptability. This configuration indicates that when scenario strategy, content strategy, and social strategy are simultaneously present, newcomers are more likely to achieve higher levels of work adaptability.

This pathway reflects the synergistic effects among different organizational socialization strategies. By providing information about the work environment, job-related knowledge, and interpersonal support within the organization, firms establish a multidimensional socialization resource system for newcomers. Such resources enable newcomers to better understand organizational expectations, acquire task-related knowledge, and develop effective workplace relationships. Therefore, when organizations simultaneously address newcomers' needs for environmental understanding, task mastery, and social integration, higher levels of work adaptability are more likely to emerge.

Content Support and Individual Proactivity-Driven Configuration with Scenario Strategy as a Peripheral Condition

Configuration 2 (SCS × CTS × EP → WA) exhibited a consistency of 0.862 and a raw coverage of 0.701, representing the configuration with the highest coverage among all configurations leading to high work adaptability. The results indicate that content strategy and employee proactivity serve as core conditions, while scenario strategy functions as a peripheral condition in this configuration.

This finding suggests that organizational provision of clear job information, role expectations, and task-related knowledge establishes an essential foundation for newcomer adjustment, whereas employee proactivity further enhances the acquisition and utilization of organizational resources through information seeking, feedback seeking, and learning behaviors.

Compared with configurations relying on comprehensive organizational support, this pathway highlights the complementary relationship between organizational resource provision and employee proactive behavior. Specifically, organizations provide necessary socialization resources, while newcomers actively transform these resources into adaptive capabilities through proactive engagement.

Scenario–Social Support and Proactive Adaptation Configuration

Configuration 3 ($SCS \times SS \times EP \rightarrow WA$) demonstrated a consistency of 0.857 and a raw coverage of 0.697. This pathway indicates that scenario strategy, social strategy, and employee proactivity can jointly constitute a sufficient configuration for high work adaptability even in the absence of content strategy.

This result suggests that newcomers do not necessarily require all types of organizational socialization support simultaneously to achieve effective adaptation. When organizations provide a supportive work environment and facilitate positive social interactions, while newcomers actively acquire resources and regulate their own behaviors, high work adaptability can still be achieved. This configuration highlights the synergistic role of organizational contextual support and individual proactive behavior in facilitating newcomer adaptation.

Content–Social Support and Proactive Adaptation Configuration

Configuration 4 ($CTS \times SS \times EP \rightarrow WA$) showed a consistency of 0.853 and a raw coverage of 0.700. This pathway demonstrates that content strategy, social strategy, and employee proactivity jointly constitute a sufficient configuration associated with high work adaptability. Specifically, task-related information and interpersonal support provided by organizations offer essential resources for newcomers' role transition, while employee proactivity further facilitates the acquisition and effective utilization of these resources. This configuration indicates that even without strong scenario strategy, newcomers can still achieve favorable work adaptability through the combination of task information, social support, and proactive behaviors.

Overall, the configurations leading to high work adaptability demonstrate clear configurational complexity and equifinality. On the one hand, different organizational socialization strategies exhibit synergistic effects, suggesting that comprehensive organizational support can facilitate newcomer adaptation. On the other hand, employee proactivity can complement different forms of organizational socialization resources and provide alternative pathways toward high work adaptability. These findings indicate that there is no single optimal approach for achieving newcomer work adaptability. Instead, high adaptability emerges through different combinations of organizational support conditions and individual proactive behaviors.

Configurations Associated with Non-high Work Adaptability

To further explore the configurational conditions associated with non-high work adaptability ($\sim$ WA), this study conducted an fsQCA analysis by examining the combinations of organizational socialization strategies and employee proactiveness. The results identified five sufficient configurations, with an overall solution consistency of 0.834 and solution coverage of 0.777, indicating that the identified configurations explain a substantial proportion of cases exhibiting non-high work adaptability. As shown in Table 6, non-high work adaptability is characterized by multiple pathways involving the absence of organizational socialization resources and/or employee proactiveness. Specifically, the identified configurations can be summarized into two major categories.

The first category reflects insufficient organizational socialization support. Configurations C ($\sim$ CTS $\times$ $\sim$ SS), D ($\sim$ SCS $\times$ $\sim$ SS), and E ($\sim$ SCS $\times$ $\sim$ CTS) indicate that the simultaneous absence of two organizational socialization strategies forms sufficient conditions for non-high work adaptability. These configurations suggest that when newcomers lack adequate task-related information, contextual guidance, or interpersonal support, they may face difficulties in developing effective workplace adjustment.

The second category represents the combined deficiency of organizational support and newcomer proactivity. Configurations A ($\sim$ SS $\times$ $\sim$ EP) and B ($\sim$ CTS $\times$ $\sim$ EP) demonstrate that insufficient social or informational support, combined with limited proactive behavior among newcomers, constitutes another pathway associated with non-high work adaptability. This finding highlights that newcomer adjustment depends not only on organizational socialization resources but also on employees' active engagement in utilizing available resources.

Overall, the results reveal the asymmetric nature of newcomer adaptation: whereas high work adaptability can be achieved through multiple combinations of sufficient organizational resources and employee proactivity, non-high work adaptability emerges through different configurations characterized by missing socialization resources or insufficient proactive behavior. These findings further emphasize that improving newcomer adjustment requires both supportive organizational practices and active newcomer participation.

Configurational Analysis

By integrating the configurations leading to high work adaptability (WA) and non-high work adaptability ($\sim$ WA), the findings indicate that newcomer work adaptability emerges from different combinations of organizational socialization strategies and employee proactivity rather than through the influence of isolated antecedents. Specifically, four configurations were identified for high work adaptability and five configurations were identified for non-high work adaptability, demonstrating that different combinations of conditions may produce the same outcome.

Regarding high work adaptability, the configurational results show that scenario strategy, content strategy, social strategy, and employee proactivity appear in different combinations across the identified configurations. Some configurations involve the simultaneous presence of multiple organizational socialization strategies, whereas others combine organizational socialization strategies with employee proactivity.

These findings suggest that high newcomer work adaptability can be achieved through multiple pathways involving different combinations of organizational and individual conditions. Although employee proactivity appears prominently in several configurations, it is not a necessary condition across all pathways leading to high work adaptability.

For non-high work adaptability, the identified configurations involve different combinations of absent conditions, including the absence of social strategy and employee proactivity, content strategy and employee proactivity, content strategy and social strategy, scenario strategy and social strategy, and scenario strategy and content strategy. These configurations indicate that lower levels of newcomer work adaptability are associated with different patterns of absent organizational socialization resources and reduced proactive behaviors.

Overall, the fsQCA results reveal distinct configurational patterns associated with high and non-high work adaptability. The configurations leading to these two outcomes involve different combinations of conditions, indicating that the pathways underlying newcomer work adaptability are characterized by causal asymmetry. These findings provide the foundation for further discussion of the configurational mechanisms underlying newcomer adaptation.

Robustness Tests

To assess the robustness of the fsQCA results, the analyses were re-estimated using the alternative calibration scheme described in Section 3.4 (i.e., the 10th, 50th, and 90th percentiles as calibration anchors). The results are reported in Table 6.

Table 6

Configurations Leading to High and Non-high Work Adaptability: Robustness Analysis

Condition	WA			~WA				
	Config. 1	Config. 2	Config. 3	Config. A	Config. B	Config. C	Config. D	Config. E
SCS	●		●				⊗	⊗
CTS			●		⊗	⊗		⊗
SS		●	●	⊗		⊗		
EP	●	●		⊗	⊗		⊗	
Consistency	0.822	0.821	0.846	0.872	0.871	0.840	0.865	0.850
Raw	0.644	0.642	0.526	0.615	0.623	0.634	0.613	0.622
Unique coverage	0.094	0.092	0.047	0.026	0.026	0.021	0.032	0.017
Solution consistency	0.788			0.769				
Solution coverage	0.783			0.814				

Note: ● indicates the presence of a condition; ⊗ indicates the absence of a condition; blank cells indicate that the condition is not included in the configuration.

For high work adaptability (WA), three sufficient configurations were identified: SCS × EP, SS × EP, and SCS × CTS × SS, with consistency values of 0.822, 0.821, and 0.846,

respectively. Their raw coverage values were 0.644, 0.642, and 0.526. The overall solution consistency was 0.788, with a solution coverage of 0.783.

For non-high work adaptability ($\sim$ WA), five sufficient configurations were identified: $\sim$ SS $\times$ $\sim$ EP, $\sim$ CTS $\times$ $\sim$ EP, $\sim$ CTS $\times$ $\sim$ SS, $\sim$ SCS $\times$ $\sim$ EP, and $\sim$ SCS $\times$ $\sim$ CTS. The consistency values ranged from 0.840 to 0.872, while the raw coverage values ranged from 0.613 to 0.634. The overall solution consistency and coverage were 0.769 and 0.814, respectively.

Although the number of configurations slightly changed under the alternative calibration thresholds, the core causal patterns remained consistent. Specifically, the robustness analysis continued to identify multiple configurations associated with high and non-high work adaptability, and the main conclusions regarding configurational complexity, equifinality, and causal asymmetry remained stable.

Discussion

Configurational Mechanisms Underlying Newcomer Work Adaptability

This study advances newcomer socialization research by demonstrating that work adaptability does not result from the net effect of isolated antecedents but emerges from different configurations of organizational socialization strategies and employee proactivity. The configurational findings reveal multiple pathways through which newcomers can achieve high work adaptability, suggesting that there is no single universal socialization approach applicable across organizational contexts.

The identified configurations highlight the principle of equifinality in newcomer adaptation. Scenario, content, and social strategies do not operate independently as isolated predictors; rather, their effects depend on how they combine with other conditions within a specific configuration. For instance, high adaptability can emerge through comprehensive organizational socialization support, while alternative pathways may involve particular socialization resources combined with individual proactive behaviors. These findings extend traditional socialization research by demonstrating that similar adaptive outcomes may arise from different combinations of conditions.

From a configurational perspective, newcomer work adaptability represents an emergent outcome generated by conjunctural causation. Rather than assuming that a single organizational practice or individual characteristic directly determines adaptation, this study suggests that adaptability develops through the alignment of multiple organizational and individual conditions. Therefore, examining configurations provides a more nuanced understanding of how newcomer adjustment occurs in complex organizational environments.

From a person–environment fit perspective, these configurational patterns further suggest that newcomer adaptability reflects the degree of alignment between newcomers' personal agency and the socialization environments provided by organizations. Organizational socialization strategies represent environmental resources that shape newcomers' adjustment opportunities, whereas employee proactivity reflects newcomers' capacity to actively respond to and utilize these resources. Thus, adaptability emerges not only from the availability of organizational support or individual initiative alone, but from the successful alignment between newcomer characteristics and organizational environments.

The Synergistic Effects of Organizational Socialization Strategies and Employee Proactivity

Beyond identifying multiple pathways, the configurational results further reveal a synergistic relationship between organizational socialization strategies and employee proactivity. The presence of employee proactivity in several high-adaptability configurations suggests that proactive behaviors enhance the effectiveness of organizational socialization efforts by helping newcomers actively engage with and benefit from available resources.

This finding is consistent with social cognitive theory, which emphasizes the reciprocal interaction between individuals and their environments. Newcomers are not merely passive receivers of organizational information; instead, they actively interpret situations, seek feedback, and initiate behaviors that influence their adjustment experiences. Through proactive behaviors, newcomers can maximize the value of organizational socialization resources and accelerate the development of work adaptability.

Importantly, the results also demonstrate that employee proactivity is not a universally necessary condition for achieving high adaptability. The configuration characterized by comprehensive organizational socialization support indicates that strong organizational arrangements may independently provide sufficient resources for newcomer adjustment. Conversely, when organizational support is less comprehensive, proactive behaviors may become more critical by compensating for limited socialization resources.

Therefore, the relationship between organizational socialization strategies and employee proactivity should be understood as complementary and compensatory rather than purely substitutive. Organizational socialization provides the enabling conditions for newcomer adaptation, whereas employee proactivity influences how effectively newcomers access, interpret, and utilize these environmental resources. Under conditions of strong organizational support, newcomers may achieve adaptation through available socialization resources, whereas proactive behaviors become particularly valuable when organizational support is relatively limited. This conditional synergy provides a more nuanced explanation of newcomer adjustment mechanisms.

Causal Asymmetry in Newcomer Work Adaptability

This study further reveals the causal asymmetry between high and non-high work adaptability. High work adaptability is achieved through the presence of different combinations of organizational socialization strategies and employee proactivity, whereas non-high work adaptability is associated with different combinations characterized by the absence of adaptation-supporting conditions.

For example, the simultaneous absence of social strategy and employee proactivity, the absence of content strategy and employee proactivity, and the absence of scenario and content strategies represent distinct configurational paths associated with non-high work adaptability.

These findings suggest that the mechanisms underlying the achievement of high work adaptability are not simply the opposite of those associated with non-high work adaptability. The presence of a particular condition does not necessarily imply that its absence will inevitably result in poor adaptability, and vice versa. Therefore, examining only the formation

mechanisms of high work adaptability may provide an incomplete understanding of newcomer adjustment difficulties.

By simultaneously analyzing configurations leading to both WA and ~WA, this study provides a more comprehensive understanding of the complexity and asymmetry underlying newcomer work adaptability.

Theoretical Implications

One core theoretical advancement lies in expanding organizational socialization research by shifting attention from an organization-centered perspective toward a resource–agency co-construction perspective. Previous research has primarily emphasized how organizational socialization practices facilitate newcomer adjustment by providing information, guidance, and interpersonal support. However, the configurational findings demonstrate that newcomer work adaptability is not solely determined by organizational practices or individual characteristics independently. Instead, adaptability emerges through the joint construction of organizational enabling conditions and newcomer proactive agency. By identifying multiple configurations involving different combinations of socialization strategies and employee proactivity, this study provides a more comprehensive explanation of how newcomers develop adaptability within organizational environments.

Building on the above theoretical expansion, the paper deepens scholarly comprehension of the relationship between organizational socialization strategies and employee proactivity by revealing their complementary and compensatory roles in newcomer adaptation. The findings challenge the assumption that effective newcomer adjustment necessarily requires comprehensive organizational socialization support. The configuration characterized by the simultaneous presence of scenario, content, and social strategies indicates that strong organizational support can provide sufficient conditions for adaptation even without employee proactivity. Conversely, configurations combining content strategy with employee proactivity suggest that newcomers' proactive behaviors can compensate for relatively limited organizational support under certain conditions. Thus, organizational socialization resources and newcomer agency should not be viewed as competing explanations but as flexible and interdependent mechanisms that jointly shape adaptation outcomes.

The final dimension of theoretical contribution centers on enriching the configurational perspective on newcomer adjustment through verifying the analytical value of causal complexity and asymmetry. Rather than identifying universal antecedents of adaptability, this study reveals multiple equivalent pathways leading to high work adaptability and distinct pathways associated with non-high adaptability. These findings highlight that newcomer adjustment is characterized by equifinality and causal asymmetry, showing that similar adaptation outcomes may arise from fundamentally different causal structures. Therefore, this study extends previous variable-oriented research by providing a more nuanced understanding of the complex combinations through which newcomer adaptability develops.

Practical Implications

First, organizations should recognize that newcomer adaptation can be achieved through different combinations of organizational support and individual proactive behaviors rather

than through a single standardized socialization approach. Therefore, managers should develop differentiated socialization practices according to newcomers' specific adjustment conditions.

Second, organizations should establish multidimensional socialization support systems by providing newcomers with guidance regarding work environments, job tasks, and interpersonal relationships. The findings indicate that comprehensive socialization support can independently facilitate newcomer adaptation, whereas specific combinations of organizational resources and newcomer proactivity may also generate favorable adaptation outcomes.

Third, organizations should actively cultivate newcomer proactivity through mentoring, feedback mechanisms, and learning opportunities. Because proactive behaviors enable newcomers to seek information, build relationships, and utilize available resources, encouraging proactive engagement can enhance the effectiveness of organizational socialization practices.

Overall, organizations should move beyond a one-size-fits-all onboarding approach and adopt flexible socialization strategies that match organizational resources with newcomers' proactive behaviors.

Research Limitations and Future Directions

Although this study provides new insights into newcomer work adaptability from a configurational perspective, several limitations should be acknowledged. First, the cross-sectional design limits the ability to capture the dynamic development of newcomer adjustment over time. Future research could adopt longitudinal approaches to explore how organizational socialization experiences and proactive behaviors evolve throughout the adaptation process. Second, the sample was collected from newcomers in high-tech enterprises, which may constrain the generalizability of the findings to other organizational contexts. Future studies could examine different industries, organizational types, and cultural settings to further validate the identified configurations. Third, this study focused primarily on organizational socialization strategies and employee proactivity, while other potential factors, such as leadership support, organizational culture, and psychological resources, were not considered. Future research could incorporate additional individual and contextual variables to develop a more comprehensive understanding of newcomer adaptation mechanisms.

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