

Fostering Intrapreneurial Skills: Trait-Pedagogy Fit in Corporate Training Innovation

Wen-Kuei Wu

National Taichung University of Education, Taichung, Taiwan, ROC

wenkuei@mail.ntcu.edu.tw

Abstract: Corporate intrapreneurship training increasingly relies on innovative pedagogical designs to develop the adaptive influence capabilities that B2B professionals require in complex selling and negotiation environments. Innovative instructional approaches have gained wide adoption on the premise that active engagement leads to deeper knowledge and more sustainable behavioural change. However, whether such innovations benefit all learners equally, or whether their effectiveness depends on the fit between pedagogical demands and individual learning characteristics, remains underexplored in entrepreneurship education research. This study draws on Cognitive Load Theory and March's (1991) exploration–exploitation framework to examine how different teaching approaches interact with learners' exploratory and exploitative tendencies to shape engagement, exhaustion, and training outcomes. Data were collected from 557 B2B sales professionals and corporate intrapreneurs participating in influence tactics training programmes. A scenario-based survey presented participants with nine instructional conditions derived from a 3 × 3 combination of teaching approaches (Cognitivist, Constructivist, Behaviorist) and salesperson influence tactics (Professional-oriented, Motivation-oriented, Consequentialism-oriented). Data were analysed using Covariance-Based Structural Equation Modelling, Moderated Multiple Regression, Multi-Group Analysis, and exploratory K-Means clustering. Results reveal a dual-pathway mechanism: both exploratory and exploitative tendencies are positively associated with engagement, which facilitates training outcomes, while the exploitative trait is additionally associated with learning exhaustion under high-demand conditions, generating a significant negative indirect effect on behavioural change ($\beta = -0.130$). Multi-Group Analysis further indicates this negative pathway is substantially stronger among exploitative learners ($\Delta\beta = 0.271$, $p < 0.001$), whereas exploratory learners show structurally consistent response patterns. Three-way interaction modelling explains 48.6% of variance in behavioural change and identifies differentiated instructional fits across learner profiles. These findings challenge the assumption that more interactive instructional designs are universally superior and offer an evidence-based framework for aligning corporate intrapreneurship training with individual learner characteristics.

Keywords: Corporate Intrapreneurship, Entrepreneurship Education, Ambidextrous Learning, Teaching Innovation, Cognitive Load, Trait–Pedagogy Fit

1. Introduction

The growing complexity of B2B environments has intensified organizations' interest in professionals who can apply adaptive influence strategies and engage clients through situationally responsive communication. Sales professionals are increasingly regarded as boundary-spanning corporate intrapreneurs who must continuously renew their capabilities for proactive problem-solving and cross-functional coordination (Marin et al., 2023). Salesperson Influence Tactics (SITs) have become a substantive domain of intrapreneurial capability training. Research highlights the role of such tactics in shaping negotiation outcomes, customer trust, and buyer–seller relationship quality (Singh et al., 2020; Dang et al., 2019), spanning professional-oriented information strategies, motivational appeals, and consequentialist commitment-building approaches (McFarland et al., 2006; Hogevoeld et al., 2021).

In response, organizations have increasingly adopted interactive and constructivist training innovations, including Constructivist problem solving, Behaviorist simulations, and Cognitivist schema building (Spiller et al., 2020). Constructivist principles hold that knowledge is most durably acquired through active engagement with authentic problems (Kolb, 2015), while behaviorist principles emphasize structured reinforcement for reliable behavioral responses (Hassad, 2011). However, a critical question remains underexamined: are these innovative approaches equally effective for all learners, or does their effectiveness depend on the fit between cognitive demands and individual learner characteristics? Existing research has focused primarily on curriculum content and broad learning styles (Yeniaras et al., 2024), with limited attention to how instructional innovations may generate learning exhaustion that limits their effectiveness (Brockbank and Feldon, 2024).

This study addresses these questions by integrating Cognitive Load Theory (Sweller et al., 2019) with March's (1991) exploration–exploitation framework, examining how instructional designs interact with learners' ambidextrous tendencies to shape engagement, exhaustion, and training outcomes. Three research questions guide this study: (RQ1) How do exploratory and exploitative traits relate to engagement and exhaustion? (RQ2) To what extent do engagement and exhaustion mediate trait–outcome relationships? (RQ3) Does instructional effectiveness depend on the fit between pedagogical design and learner ambidexterity profiles?

2. Theoretical Background and Hypotheses

2.1 Intrapreneurial Influence Tactics and Pedagogical Approaches

Influence tactics refer to strategies individuals use to shape the attitudes or behaviors of others. Their theoretical foundations trace to frameworks distinguishing compliance, identification, and internalization as mechanisms of attitude change (Kelman, 1961), later extended to B2B contexts encompassing Professional-oriented, Motivation-oriented, and Consequentialism-oriented orientation (McFarland et al., 2006; Frazier and Summers, 1984; Yukl and Tracey, 1992). These competencies require learners to integrate conceptual knowledge with situational judgment and interpersonal sensitivity, placing distinctive demands on working memory and attentional resources (Sweller et al., 2019). Cognitivist approaches emphasize schema building; behaviorist approaches rely on reinforcement and modelling; constructivist approaches prioritize active problem solving and co-construction of understanding (Kolb, 2015; Bailey, 2017; Hassad, 2011). Each places different cognitive demands on learners and may suit different learner profiles to varying degrees.

2.2 Exploratory and Exploitative Learning Traits

March's (1991) distinction between exploration and exploitation has been extended to organizational ambidexterity, where firms simultaneously manage evolutionary refinement and revolutionary innovation (Tushman and O'Reilly, 1996). Exploitative learning refines existing knowledge for efficiency, while exploratory learning experiments with novel approaches and pursues new possibilities (Schildt et al., 2005). At the organizational level, exploitation is associated with imitation strategies, while exploration fosters more innovative positioning (Ali, 2021). At the individual level, exploitative learners assimilate new content into existing routines and may struggle with open-ended or ambiguous instructional environments, whereas exploratory learners are more comfortable with novelty and improvisation. Recent B2B research supports this distinction: Yeniaras et al. (2024) found that exploitative learners show greater sensitivity to demands conflicting with established routines, with stronger associations with emotional exhaustion. The present study extends this to the instructional design context.

Both traits are expected to be associated with learning engagement, defined as a positive motivational state involving vigor, dedication, and absorption (Kahn, 1990; Schaufeli et al., 2002). Engagement is more likely to be sustained when instructional designs support learners' sense of autonomy and competence (Ryan and Deci, 2000) and when learners possess sufficient self-efficacy to persist through challenges (Bandura, 1986).

H1: Exploratory learning tendency is positively associated with learning engagement. H2: Exploitative learning tendency is positively associated with learning engagement.

2.3 Cognitive Load and Learning Exhaustion

Cognitive Load Theory posits that learning deteriorates when instructional demands exceed working memory capacity (Sweller, 2011; Gerjets et al., 2009), including conditions of excessive novelty, poor structure, or simultaneous information demands (Sweller et al., 2019; Paas and Ayres, 2014). In training contexts, cognitive overload manifests as learning exhaustion: emotional depletion and reduced capacity for sustained engagement (Maslach and Leiter, 2008). This transition is shaped by learners' appraisal of whether demands exceed personal resources (Brockbank and Feldon, 2024), and once exhausted, learners' ability to retain and apply knowledge is compromised, regardless of initial engagement (Feldon et al., 2019). Kirschner et al. (2006) demonstrated that minimally guided constructivist instruction tends to impose excessive working memory demands, producing inferior outcomes compared to structured approaches. These costs may be especially pronounced for exploitative learners, who rely more heavily on existing frameworks and whose gap between familiar patterns and novel instructional demands may be greater.

H3: Exploitative learning tendency is positively associated with learning exhaustion under high cognitive demand and low-structure conditions.

2.4 Engagement and Exhaustion as Parallel Mediators

Learner traits influence training outcomes through parallel mediating pathways. Engagement facilitates knowledge improvement, proactive attitudes, and behavioral change by sustaining investment in learning. Exhaustion impairs these outcomes by depleting both cognitive and motivational resources, as cognitive overload carries a motivational cost that diminishes willingness to sustain effort and transfer learning (Feldon et

al., 2019). This dual-pathway dynamic is consistent with the Job Demands-Resources framework, where high demands simultaneously activate engagement among resourceful learners and generate exhaustion when resources are exceeded (Bakker and Demerouti, 2008).

H4: Learning engagement is positively associated with training outcomes. H5: Learning exhaustion is negatively associated with training outcomes, partially offsetting the positive effects of the engagement.

2.5 Trait–Pedagogy Fit

Instructional approaches do not have uniform effects across learners (Hattie, 2009). From a trait–situation fit perspective, pedagogical effectiveness depends on the compatibility between instructional demands and learner resources. Macey and Schneider (2008) distinguish trait-like predispositions toward engagement from situationally activated engagement states; in the present context, exploratory and exploitative tendencies represent stable predispositions that interact with instructional conditions to produce varying engagement and exhaustion. Exploitative learners are expected to benefit from structured formats with clear behavioral guidance, while exploratory learners are expected to show more consistent performance across varying instructional conditions.

H6: The relationship between instructional design and training outcomes is moderated by learner ambidexterity profiles.

3. Methodology

3.1 Research Design and Sample

A quantitative scenario-based survey design was employed. Participants evaluated their engagement, exhaustion, and perceived learning outcomes in response to structured training scenarios. Nine scenarios were constructed from a 3×3 framework combining three teaching approaches—Cognitivist, Constructivist, and Behaviorist—with three intrapreneurial influence tactics—Professional-oriented, Motivation-oriented, and Consequentialism-oriented. Participants were asked to respond as if participating in each described training context, drawing on their professional experience.

The sample consisted of 557 B2B sales professionals and corporate intrapreneurs recruited voluntarily through organizational training coordinators across sales-oriented industries. This practice-relevant sample supports the multigroup and moderation analyses employed.

3.2 Measures

All constructs were assessed using validated five-point Likert-type scales. Exploratory and exploitative traits were measured using items adapted from March (1991) and Schildt et al. (2005). Learning engagement was measured using items adapted from Kahn (1990) and Schaufeli et al. (2002). Learning exhaustion was measured using items adapted from Maslach and Leiter (2008). Three training outcome constructs were assessed: Knowledge Improvement (Kwg), Proactive Attitudes (Pro), and Behavioral Change (Chg).

3.3 Analytical Strategy

Data were analyzed using R with the lavaan package. Confirmatory Factor Analysis (CFA) assessed measurement validity. CB-SEM with bootstrapping (5,000 resamples) estimated parallel indirect effects. Moderated Multiple Regression (MMR) and ANOVA examined trait-conditioned scenario effects. Multi-Group Analysis (MGA) compared structural paths across trait-defined groups. K-Means clustering served as an exploratory profiling tool, with solutions validated using within-cluster sum of squares and silhouette coefficients. A Harman single-factor test was conducted to partially assess common method bias; no single factor accounted for a majority of the variance, although the limitation is acknowledged.

4. Results

4.1 Measurement Model

The measurement model demonstrated adequate fit: CFI = 0.954, TLI = 0.946, RMSEA = 0.046, SRMR = 0.054. Cronbach's alpha and composite reliability values ranged from 0.74 to 0.83, with AVE values supporting convergent and discriminant validity.

4.2 Parallel Mediation

Both exploratory and exploitative traits were positively associated with engagement, supporting H1 and H2. The exploitative trait was additionally associated with exhaustion under high-demand conditions, supporting H3. Engagement was positively associated with all outcomes (H4 supported). The indirect effect of the exploitative trait on behavioral change through exhaustion was negative and significant ($\beta = -0.130$, 95% CI excluding zero), while the indirect effect through engagement was positive, supporting H5. The net effect favored exploratory learners, for whom engagement consistently dominated, while for exploitative learners, the exhaustion pathway was of sufficient magnitude to meaningfully offset engagement benefits.

4.3 Trait–Pedagogy Fit

One-way ANOVA found no significant direct effects of the scenario on outcomes ($p > 0.05$), indicating no universally superior instructional design. The three-way interaction among teaching approach, influence strategy, and learner trait was significant ($p < 0.05$), with the full model explaining 48.6% of the variance in behavioral change (adjusted R^2), supporting H6. Clustering analysis identified four distinct profiles (Table 1).

Table 1: Optimal Instructional Fit by Learner Profile

Profile	Less Favourable	More Favourable	Engagement	Exhaustion	Change
High-Explore	Motivation-Cognitivist	Motivation-Behaviorist	5.71	Reduced	5.98
Low-Explore	Rigid Consequentialism	Motivation-Constructivist	—	4.47	4.95*
High-Exploit	Unstructured Professional	Consequentialism-Behaviorist	5.65	—	5.90
Low-Exploit	Passive risk	Professional-Behaviorist/Cognitivist	—	—	Restored

4.4 Multi-Group Analysis

For the exploratory trait, no significant path differences were detected between the high- and low-exploration groups ($p > 0.05$), indicating structural consistency across conditions. For exploitative traits, five of the six path comparisons were significant ($p < 0.01$). Most critically, the negative exhaustion–behavioral change path was substantially stronger in the high exploit group ($\Delta\beta = 0.271$, $p < 0.001$), confirming that exploitative learners are more adversely affected by cognitive exhaustion in weakly structured settings.

5. Discussion

5.1 Theoretical Implications

This study extends Cognitive Load Theory (Sweller et al., 2019; Gerjets et al., 2009) to intrapreneurial capability development by demonstrating that cognitive burden and engagement co-occur as opposing mediating pathways. This dual-pathway finding, consistent with the Job Demands-Resources framework (Bakker and Demerouti, 2008), challenges accounts that treat engagement as uniformly positive. High engagement scores may coexist with elevated exhaustion, and downstream effects on behavioral change depend substantially on how instructional design manages cognitive burden. Evaluation frameworks incorporating exhaustion alongside engagement may therefore provide a more complete picture of training effectiveness.

The asymmetry between exploratory and exploitative learners extends Yeniaras et al. (2024), who identified differential moderating roles of these orientations under managerial pressure. The present study demonstrates

that analogous dynamics operate in pedagogical contexts, suggesting that exploitative learners' cognitive sensitivity to high-demand conditions is not situationally specific but reflects a more general vulnerability to instructional misfit. This extends and operationalizes Hattie's (2009) observation about instructional context-dependence, and aligns with Kirschner et al.'s (2006) critique of minimally guided approaches by identifying the individual-level boundary condition under which such costs are most severe.

5.2 Practical Implications

For exploratory learners, motivation-oriented tactics combined with behaviorist approaches balance cognitive stimulation with manageable load. Instructional designs that preserve autonomy and competence further sustain engagement (Ryan and Deci, 2000). For exploitative learners, structural clarity is essential: consequentialism-oriented formats with clear behaviorist guidance reduce the appraisal of demand as exceeding resources (Brockbank and Feldon, 2024), limiting exhaustion onset. For learners low in exploitative tendency, professional-oriented formats sustain involvement but require sufficient scaffolding. For HR managers and training coordinators, pre-programme assessment of learner trait profiles can guide instructional format selection, group composition, and facilitation strategy, enabling more precise alignment of pedagogical demand with learner characteristics.

6. Limitations and Future Research

Several limitations warrant acknowledgement. All outcomes were self-reported within a scenario-based design, limiting causal inference and objective performance verification. Future research should incorporate supervisor-rated indicators, pre- and post-training knowledge tests, and longitudinal tracking. The sample was drawn from B2B sales industries, which may limit generalizability; replication across technology innovation, healthcare, or social entrepreneurship contexts would clarify boundary conditions. The K-means clustering approach involves assumptions about cluster shape and number that may not fully reflect data heterogeneity; latent profile analysis would provide a more rigorous alternative. Finally, ambidextrous traits were treated as stable characteristics, whereas they may be partially situationally activated (Tushman and O'Reilly, 1996); future research examining within-person variability across training contexts could enrich the understanding of trait–pedagogy fit dynamics.

7. Conclusion

This study examined how learner ambidexterity and instructional design jointly shape intrapreneurial capability development in corporate training. Engagement and exhaustion function as concurrent and partially opposing mediating pathways, varying systematically across learner profiles. Pedagogical effectiveness was determined not by the degree of interactivity alone, but by the fit between instructional demands and learner characteristics. Sustainable intrapreneurial capability development requires deliberate alignment of teaching methods with the cognitive and motivational profiles of the learners they serve.

Ethics Declaration

Ethical clearance was not required for this study. Data were collected from voluntary participants with informed consent. No personally identifiable information was retained, and all responses were treated as strictly confidential. The study was conducted in accordance with the applicable ethical guidelines for social science research.

AI Declaration

AI-assisted writing tools were used for the preparation and language editing of this paper. All intellectual content, theoretical framing, research design, data analysis, and interpretations were the work of the authors. AI tools were not used for data generation, statistical analyses, or the creation of original arguments.

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