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Original Research Article

Level of Innovative Leadership among Clothing and Dress Design Students at Guangxi Economic and Trade Vocational Institute, China

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ABSTRACT

Innovative leadership has become an essential competency for students in creative and design-oriented disciplines in response to rapid technological advancement and industry transformation. In the context of vocational fashion education, cultivating students' creativity, collaborative competence, and strategic thinking is increasingly important for preparing them for dynamic professional environments. This study aims to examine the level of innovative leadership among Clothing and Dress Design students at Guangxi Economic and Trade Vocational Institute, China.

The research focuses on four dimensions of innovative leadership: creative thinking, problem-solving and decision-making ability, teamwork and leadership, and innovation awareness with future trend insight. A descriptive research design was adopted, and a structured questionnaire was used as the primary instrument for data collection. The findings indicate that the development of innovative leadership among students requires further enhancement across several dimensions, particularly in strengthening innovation awareness and collaborative learning experiences. The study highlights the importance of integrating creativity-oriented pedagogy, project-based learning, and industry-related knowledge into vocational fashion design education. The results provide practical implications for curriculum development, instructional improvement, and the cultivation of innovation-oriented talents in vocational education.



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Introduction

In the twenty-first century, innovation has emerged as a critical competency across nearly all professional domains. Rapid technological advancement, globalization, and digital transformation are reshaping industrial structures and organizational practices worldwide. Contemporary workplaces increasingly demand professionals who possess creative thinking, collaborative ability, strategic decision-making skills, and adaptability. In this context, innovative leadership has gained growing scholarly and practical attention as a key capability for sustaining organizational competitiveness and long-term development. The global fashion and apparel industry exemplifies these transformative changes. Emerging technologies such as 3D garment simulation, artificial intelligence (AI)-assisted design, and virtual fashion presentation platforms are redefining traditional design and production processes. In addition, intelligent manufacturing systems are improving production efficiency, while sustainability considerations are reshaping material selection, brand strategy, and supply chain management. Meanwhile, accelerated fashion cycles driven by digital media and global consumer networks have significantly shortened product life cycles and intensified market competition. As a result, clothing and dress designers are now expected to integrate technical expertise and aesthetic creativity with innovative thinking, market awareness, and interdisciplinary collaboration. In China, the apparel industry is undergoing simultaneous technological upgrading and shifts in consumer demand. The integration of digital technologies into design and production processes, along with increasing emphasis on personalization and sustainability, has raised expectations for design professionals. However, vocational education in this field continues to emphasize traditional skill-oriented training, focusing primarily on craftsmanship and technical proficiency. While such training remains important for foundational competence, it may not sufficiently foster innovative leadership or comprehensive professional capabilities. This mismatch between educational outcomes and industry requirements has become increasingly evident (Hetian & Naeim, 2025). Guangxi represents a particularly illustrative regional case. Benefiting from its geographic proximity to ASEAN countries, policy support under the Regional Comprehensive Economic Partnership (RCEP), and rich ethnic cultural resources, the region is transitioning from a processing-oriented manufacturing base toward a fashion industry cluster and cultural-creative hub. Despite this progress, challenges remain, including limited brand competitiveness, shortages of high-level creative talent, and relatively low value-added positioning within the industry chain. In this context, strengthening innovative leadership among clothing and dress design students is essential for supporting regional industrial upgrading. However, insufficient integration of innovation-oriented training within vocational education may constrain graduates' innovation capacity and leadership readiness (Tan et al., 2022).

Although innovative leadership has been widely discussed in education and management literature, empirical studies focusing on vocational college students in clothing and dress design programs remain limited, particularly in regions undergoing industrial transformation. To address this gap, the present study aims to examine students' overall and dimension-specific levels of innovative leadership, thereby providing empirical evidence to inform curriculum development and continuous improvement in vocational design education.



Literature Review and Theoretical Framework

Concept of Innovative Leadership

Innovative leadership has emerged as a critical competence in the knowledge economy, particularly under rapid digital transformation. Unlike traditional leadership that emphasizes hierarchy and control, innovative leadership integrates creative thinking, problem reframing, systems integration, strategic judgment, and team motivation to guide individuals and teams toward sustained innovation (Amabile & Pratt, 2016). Grounded in the dynamic componential model of creativity, innovation arises from the interaction of domain expertise, creativity-relevant processes, intrinsic motivation, and supportive environments (Amabile & Pratt, 2016). This model underscores that innovation is not solely dependent on individual talent but is significantly shaped by contextual conditions and motivational structures. In design and complex problem-solving, leaders must reframe problems and create new conceptual frames, as emphasized by Dorst (2011) and Buchanan (2019), enabling breakthrough solutions and systemic integration across stakeholders. Such reframing capability is particularly critical in fashion design, where ambiguous consumer demands and rapidly evolving technologies require continuous reinterpretation of design problems.

From an organizational perspective, innovative leadership fosters collective creativity, as transformational behaviors enhance team innovation through vision, intellectual stimulation, and individualized consideration (Gumusluoglu & Ilsev, 2009). This perspective highlights that innovative leadership extends beyond individual cognitive capacity to include the ability to inspire, empower, and coordinate collaborative innovation processes. In vocational and design education, specially fashion and clothing, students need not only technical proficiency but also the ability to anticipate trends, integrate technologies, and collaborate across disciplines (Wang, 2015). The integration of these competencies is essential for preparing students to navigate the increasingly complex and interdisciplinary nature of the fashion industry.

Overall, innovative leadership represents an integrated capability combining cognitive, strategic, and motivational dimensions. It emphasizes intrinsic motivation, adaptive thinking, collaborative facilitation, and implementation capacity, equipping individuals to navigate uncertainty, create value, and respond to industrial transformation. Within vocational education contexts, the development of innovative leadership thus requires pedagogical approaches that simultaneously cultivate creative cognition, strategic reasoning, and collaborative engagement.

Dimensions of Innovative Leadership

Innovative leadership is multidimensional, comprising four interrelated dimensions in vocational design education. These dimensions collectively form a holistic framework that captures the cognitive, behavioral, and forward-looking capacities necessary for sustained innovation in fashion and clothing design contexts.

1. Creative Thinking forms the cognitive core, enabling divergent thinking, cross-domain integration, and generation of novel, feasible solutions (Gafour & Gafour, 2020). In clothing design, it involves aesthetic originality, material experimentation, digital technology application, and sustainability considerations. McFadzean's (2000) creative problem-solving model further highlights selecting cognitive strategies appropriate to innovation scope,

distinguishing between incremental refinement and paradigm-shifting innovation. Educational interventions enhance flexible cognition and higher-order thinking (Larraz-Rábanos, 2021), suggesting that creative thinking is not a fixed trait but a developable competency that can be systematically cultivated through well-designed learning experiences.

2. Problem-Solving and Decision-Making Ability integrates identification, evaluation, and strategic judgment under constraints. Students face material, time, cost, and market challenges, requiring systematic reasoning and adaptive responses (Yurtseven et al., 2021). This dimension reflects the practical application of creativity within real-world constraints, distinguishing innovative leadership from abstract ideation. Problem-based learning (Savery, 2015) and project-based approaches (Bell, 2010) cultivate higher-order problem-solving, interdisciplinary integration, and self-directed learning, all of which are essential for navigating the complexity of fashion design practice.

3. Teamwork and Leadership reflect the social dimension. Effective collaboration depends on role clarity, trust, resource coordination, and shared objectives (Salas et al., 2015; Johnson & Johnson, 2009). In design studios, students negotiate responsibilities, integrate diverse expertise, and develop leadership awareness through interdisciplinary and industry-linked projects. Cooperative learning structures enhance accountability, communication, and collective problem-solving (Smith et al., 2005). This dimension recognizes that innovative leadership is not exercised in isolation but emerges through coordinated group dynamics and shared creative effort.

4. Innovation Awareness and Future Trend Insight represents the forward-looking dimension. It involves recognizing technological, cultural, and sustainability shifts and strategically responding to emerging opportunities (Burt, 2004). In fashion education, students analyze trends, engage with AI and digital tools, and apply foresight methodologies to align creative decisions with future demands (Faerm, 2012; Ollenburg, 2018). This dimension is particularly critical in an industry characterized by rapid cycles of change, where the ability to anticipate and shape future directions distinguishes proactive innovators from reactive practitioners.

These dimensions collectively reflect cognitive flexibility, practical reasoning, social coordination, and strategic foresight. Integrating them through authentic, project-based, and interdisciplinary curricula enables vocational students to navigate industrial transformation, cultivate innovation competencies, and develop sustainable leadership skills (Casciani et al., 2022; Wang, 2015). The interdependence among these dimensions suggests that innovative leadership development requires a holistic approach rather than isolated skill training.

Objectives

1. To examine the overall level of innovative leadership among Clothing and Dress Design students at Guangxi Economic and Trade Vocational Institute, China.

2. To examine the level of innovative leadership in each dimension: creative thinking, problem-solving and decision-making ability, teamwork and leadership, and innovation awareness and future trend insight.



Methodology

Research Design

This study adopted a descriptive research design to examine the level of innovative leadership among Clothing and Dress Design students at Guangxi Economic and Trade Vocational Institute, China. Descriptive research is suitable for systematically portraying characteristics of a population or phenomenon without testing causal relationships or subgroup differences. The study aimed to assess the overall level of innovative leadership and its specific dimensions rather than test hypotheses or evaluate effects. Accordingly, descriptive statistics, including frequency, percentage, mean, and standard deviation, were employed to provide an accurate overview of students' current innovative leadership competencies.

Population and Sample

This study focused on examining innovative leadership among students majoring in Clothing and Dress Design at Guangxi Economic and Trade Vocational Institute, China. The target population comprised all full-time students enrolled in the program during the 2025 academic year, representing the primary recipients of professional and innovation-oriented training. To ensure an adequate and representative sample, 264 students were randomly selected from the total population of 600 using the Krejcie and Morgan (1970) formula, ensuring each student had an equal chance of selection.

Inclusion criteria required participants to be officially enrolled, have completed at least three months of coursework, and voluntarily consent to participate. Ethical considerations were strictly observed: participation was voluntary, questionnaires were anonymous, confidentiality was maintained, and students could withdraw without consequences. All data were used solely for academic purposes.

Random sampling enhances the credibility and objectivity of findings by reducing systematic bias. By focusing on a single program within a vocational institution, this study provides contextualized insight into innovative leadership development in a vocational fashion education setting. Although the results are specific to this cohort, they offer valuable implications for curriculum planning, teaching strategies, and the cultivation of innovation-oriented competencies in vocational design programs (Krejcie & Morgan, 1970).

Research Instruments

This study employed a structured questionnaire to examine the level of innovative leadership among Clothing and Dress Design students, aligned with the research objectives of assessing both overall and dimensional competencies. The instrument was developed based on theoretical and empirical literature on innovative leadership, creativity, problem-solving, collaboration, and trend awareness in design education.

The questionnaire comprised two sections: general demographic information and the current status of innovative leadership across four dimensions: Creative Thinking, Problem-Solving and Decision-Making Ability, Teamwork and Leadership, and Innovation Awareness and Future Trend Insight. Each dimension was represented by multiple items to capture its multidimensional construct. Responses were measured using a five-point Likert scale (Likert,

1932). Mean scores were interpreted using standardized intervals to classify levels of innovative leadership.

The theoretically grounded framework, structured format, and standardized scale ensured systematic, reliable, and valid measurement of students perceived innovative leadership within the vocational education context.

Validity and Reliability

To ensure the rigor of the research instrument, content validity and reliability were systematically evaluated. Content validity was established through expert review and Item-Objective Congruence (IOC) analysis (Hambleton, 1980; Davis, 1992). Three experts in educational administration and design education assessed each item for relevance, clarity, and alignment with research objectives. IOC values ranged from 0.50 to 1.00, meeting acceptable criteria. Minor revisions were made based on quantitative IOC results and qualitative feedback to improve conceptual clarity. A pilot test was conducted to verify item clarity and response consistency before formal administration.

Reliability was assessed using Cronbach's Alpha (Cronbach, 1951), yielding a coefficient of 0.958 for the scale, indicating excellent internal consistency. These procedures confirm that the questionnaire is both valid and reliable, providing a credible measure of innovative leadership among Clothing and Dress Design students and supporting the robustness of subsequent descriptive statistical analyses.

Data Collection Procedure

Data collection followed a systematic and ethical procedure. Official approval was obtained from Guangxi Economic and Trade Vocational Institute, and the study was reviewed by the Graduate School of Thonburi Rajabhat University to ensure ethical compliance, including voluntary participation, informed consent, and confidentiality. The questionnaire was finalized under expert supervision, with content validity verified by three specialists in art and design education. A pilot test was conducted with 30 students to assess clarity and response consistency, and minor revisions were made accordingly.

For formal data collection, the finalized questionnaire was administered online via the Wenjuanxing platform to 264 randomly selected students during the 2025 academic period. Participation was voluntary, and responses were submitted within the designated timeframe. Completed questionnaires were reviewed for completeness, yielding 264 valid responses. The organized dataset was subsequently prepared for descriptive statistical analysis. The structured procedure ensured reliability, transparency, and methodological rigor in capturing the innovative leadership profile of Clothing and Dress Design students.

Data Analysis

Data analysis employed both reliability and descriptive statistical techniques to examine innovative leadership among Clothing and Dress Design students. Internal consistency of the questionnaire was assessed using Cronbach's Alpha (Cronbach, 1951), yielding an excellent value of 0.973, indicating strong homogeneity and stability of the instrument.



Descriptive statistics were applied to summarize demographic characteristics, including gender, age, academic year, and leadership experience, using frequency and percentage. To assess the overall level of innovative leadership and its four dimensions, mean and standard deviation were calculated. The mean reflects central tendency, while standard deviation indicates response variation, interpreted according to DeVellis (2016) to gauge consistency.

A five-point Likert scale (Likert, 1932) was used for all items, with scores categorized into verbal interpretation levels (Jamil et al., 2021). Additional indices, such as the Index of Concordance (IOC), were employed during instrument validation to ensure content relevance. These analytical procedures provided a systematic and rigorous framework for quantifying and interpreting students' innovative leadership competencies.

Results

Table 1 Current Situation of Innovative Leadership

Item	n=264		Level
	$\bar{X}$	S.D.	
1.Creative Thinking	2.206	1.031	Low
2.Problem-Solving and Decision-Making Ability	1.975	0.965	Low
3.Teamwork and Leadership	1.874	0.682	Low
4.Innovation Awareness and Future Trend Insight	1.727	0.453	Low
Total	1.946	0.703	Low

The sample consisted of 264 Clothing and Dress Design students. The majority of respondents were female, most were aged between 16 and 19 years, and students were relatively evenly distributed across three academic years. In addition, more than half of the respondents reported having no prior leadership experience. These characteristics provide a general context for interpreting the findings. The overall level of innovative leadership was determined based on the data presented in Table 1 (Current Situation of Innovative Leadership). The results indicate that the overall mean score is low ($\bar{X}$ = 1.946, S.D. = 0.703), suggesting that students' innovative leadership capacity remains underdeveloped and has not yet reached a moderate level. The standard deviation reflects moderate variation, indicating that although individual responses differ to some extent, students generally share similar perceptions of their innovative leadership abilities.

A detailed examination of Table 1 shows that all four dimensions of innovative leadership fall within the low level. This consistent pattern indicates that the limitation in innovative leadership is not restricted to a specific competency but is evident across all dimensions. Despite this overall trend, differences in mean scores reveal relative variation in the development of each dimension.

Based on the data presented in Table 1, the four dimensions are ranked from highest to lowest mean score as follows: (1) Creative Thinking, (2) Problem-Solving and Decision-Making Ability, (3) Teamwork and Leadership, and (4) Innovation Awareness and Future Trend Insight.



This ranking provides a clearer understanding of the relative strengths and weaknesses among the dimensions.

Creative Thinking recorded the highest mean score ($\bar{X}$ = 2.206, S.D. = 1.031), making it the relatively strongest dimension. The results suggest that students demonstrate a certain level of ability in generating original ideas and engaging in creative design processes. However, the mean score remains within the low level, indicating that creative competence has not yet developed into a stable and consistent capability. The relatively larger standard deviation indicates noticeable variation among students, suggesting that creative ability is unevenly distributed within the sample.

Problem-Solving and Decision-Making Ability ranked second, with a mean score of 1.975 (S.D. = 0.965). This dimension reflects students' capacity to identify key problems, evaluate alternatives, and make decisions in design-related contexts. Although the mean score is relatively close to the moderate threshold, it still falls within the low level. This suggests that students' analytical and strategic thinking skills remain insufficient. The variation in responses indicates that students differ in their confidence and competence when dealing with complex design tasks.

Teamwork and Leadership ranked third ($\bar{X}$ = 1.874, S.D. = 0.682). This dimension reflects students' ability to collaborate with others, assume leadership roles, and manage tasks within a team environment. The results indicate that these competencies remain limited. Compared with the previous dimensions, the smaller standard deviation suggests more consistent perceptions among respondents, indicating that this limitation is widely shared across the sample.

Innovation Awareness and Future Trend Insight recorded the lowest mean score ($\bar{X}$ = 1.727, S.D. = 0.453), making it the weakest dimension. This finding indicates that students have limited awareness of fashion industry trends, sustainability issues, and technological developments. The relatively small standard deviation suggests a high level of agreement among respondents, confirming that this weakness is consistently observed across the group.

Overall, the results derived from Table 1 indicate that innovative leadership among Clothing and Dress Design students remains at a low level across all four dimensions. Although Creative Thinking shows relatively stronger performance, it does not reach a moderate level. The other dimensions, particularly Innovation Awareness and Future Trend Insight, demonstrate more pronounced limitations.

The ranking pattern further suggests that internal cognitive abilities, such as idea generation and creativity, are relatively more developed than competencies related to collaboration and future-oriented awareness. However, the fact that all dimensions remain within the low level indicates that innovative leadership development is generally insufficient and unbalanced.

In summary, the findings confirm that students' innovative leadership competencies are underdeveloped across all dimensions. While some foundational abilities are evident in creative thinking, significant gaps remain in problem-solving, teamwork, and especially in innovation awareness and future-oriented competencies. These results provide a clear empirical basis for further analysis and discussion.

Discussion

The findings of this study indicate that the overall level of innovative leadership among Clothing and Dress Design students at Guangxi Economic and Trade Vocational Institute is low ($M = 1.946$, $SD = 0.703$), with all four dimensions also falling within the low range. This suggests that innovative leadership has not yet developed into a mature or integrated competence among the students. Although variability exists, the relatively consistent standard deviations across dimensions indicate that this limitation is broadly shared rather than confined to specific subgroups.

From a theoretical perspective, this result supports the view that innovative leadership is a multidimensional and integrative construct rather than a set of independent skills (Amabile and Pratt, 2016). The uniformly low scores therefore reflect not only weak development within individual dimensions but also insufficient synergy among cognitive, behavioral, and contextual competencies. In vocational education contexts, particularly in design disciplines, pedagogical emphasis has traditionally prioritized technical skill acquisition (Wang, 2015). While such training is essential, it may inadvertently constrain the development of higher-order competencies required in contemporary creative industries, including strategic thinking, collaboration, and future-oriented awareness.

Creative Thinking

Creative Thinking obtained the highest mean score ($M = 2.206$, $SD = 1.031$), indicating that students possess a basic capacity for idea generation. However, the result remains within the low category, suggesting that creativity is still in an early developmental stage and has not yet evolved into a stable or consistently applied competence. This finding aligns with the understanding of creativity as a developmental and context-dependent process (Larraz-Rábanos, 2021). According to the componential theory of creativity, creative performance emerges from the interaction of domain-relevant skills, creativity-relevant processes, intrinsic motivation, and environmental support (Amabile and Pratt, 2016). In this context, the relatively low score may reflect limited opportunities for experimentation and exploration within structured vocational training environments. Moreover, recent developments in fashion and design education emphasize the integration of digital technologies and interdisciplinary approaches as key drivers of creativity (Casciani et al., 2022; Channuwong et al., 2024). The findings suggest that while students demonstrate initial creative potential, it has not yet been fully expanded into innovation-oriented practice supported by technological and conceptual integration.

Problem-Solving and Decision-Making Ability

This dimension ranked second ($M = 1.975$, $SD = 0.965$), indicating emerging but still limited competence in analytical reasoning and decision-making. Problem-solving and decision-making involve evaluating alternatives under constraints and integrating multiple design considerations such as feasibility, aesthetics, sustainability, and market relevance (Yurtseven et al., 2021). The results suggest that students may be able to identify problems but lack confidence or autonomy in making strategic decisions that influence project outcomes. This reflects a transitional learning stage from guided instruction toward independent



professional judgment. Supporting this interpretation, research on problem-based learning emphasizes that higher-order thinking skills develop more effectively in authentic, learner-centered environments that encourage autonomy and reflection (Savery, 2015). The findings therefore imply that such pedagogical structures may not yet be sufficiently embedded in the curriculum.

Teamwork and Leadership

Teamwork and Leadership also demonstrated a low level ($M = 1.874$, $SD = 0.682$), indicating that although collaborative activities exist, leadership capabilities remain underdeveloped. Effective teamwork requires coordination, communication, shared accountability, and role negotiation within group settings (Salas et al., 2015; Sutthadaanantaphokin et al., 2025). Cooperative learning theory posits that teamwork and leadership must be intentionally designed and structured within educational environments rather than assumed as automatic outcomes of group work (Johnson and Johnson, 2009). In studio-based design education, collaboration is often practiced; however, leadership roles may not be systematically rotated or explicitly developed. This limits students' opportunities to cultivate decision authority and team coordination skills, which are increasingly essential in multidisciplinary fashion industry contexts.

Innovation Awareness and Future Trend Insight

This dimension recorded the lowest mean score ($M = 1.727$, $SD = 0.453$), indicating a significant deficiency in students' awareness of industry trends, technological developments, and future-oriented thinking. Innovation literature emphasizes that foresight and environmental scanning are critical components of innovative capability, enabling individuals to anticipate and respond to change (Burt, 2004). The low result suggests limited exposure to external industry developments and weak integration of forward-looking content within learning experiences. Given the rapid transformation of the fashion industry driven by sustainability imperatives and digital innovation (Ma, 2023; Casciani et al., 2022), this deficiency represents a critical gap between academic preparation and professional requirements. Without stronger future-oriented awareness, students may face difficulties adapting to evolving industry demands.

Integrated Interpretation of Findings

Overall, the four dimensions reveal a structurally uneven pattern of innovative leadership development. Creative Thinking appears relatively stronger, while Innovation Awareness and Future Trend Insight is the weakest dimension. Problem-Solving and Teamwork occupy intermediate positions but remain underdeveloped. This pattern suggests that internal cognitive capacities (e.g., idea generation) tend to develop earlier than externally oriented competencies such as strategic decision-making, collaboration, and foresight. From an integrative theoretical perspective, innovative leadership requires alignment across cognitive, behavioral, and contextual domains (Amabile and Pratt, 2016). The observed imbalance indicates that these competencies are currently developing in isolation rather than functioning as an interconnected system. In summary, the findings reflect a transitional developmental



stage in vocational design education. Students demonstrate foundational creative potential; however, the integration of creativity with strategic reasoning, collaborative leadership, and future awareness remains limited. This underscores the need for more holistic educational models that align with the evolving demands of the global fashion industry.

Implications

The findings yield several pedagogical and curriculum-related implications for strengthening innovative leadership among Clothing and Dress Design students.

First, curriculum design should prioritize the integrated development of innovative leadership competencies rather than treating each dimension separately. Although Creative Thinking is relatively stronger, it remains insufficiently developed. Instruction should therefore extend beyond ideation to include structured application through real-world design challenges and interdisciplinary projects that integrate creativity with decision-making and problem-solving.

Second, the low level of Problem-Solving and Decision-Making Ability indicates the need to enhance analytical and strategic thinking skills. This can be achieved through case-based learning, scenario simulation, and reflective practice, which allow students to evaluate constraints, justify decisions, and develop autonomy in design processes.

Third, the underdeveloped Teamwork and Leadership dimension highlights the importance of intentional collaborative learning design. Group-based projects should incorporate rotating leadership roles, peer evaluation mechanisms, and structured accountability systems to ensure that leadership skills are explicitly cultivated rather than implicitly assumed.

Fourth, the weakest dimension—Innovation Awareness and Future Trend Insight—requires urgent curriculum enrichment. Integrating sustainability education, digital fashion technologies, and systematic trend analysis into coursework, along with strengthened industry engagement through internships and guest lectures, can enhance students' future-oriented thinking and responsiveness to industry change.

Finally, the consistently low scores across all dimensions suggest that isolated interventions may be insufficient. Instead, institutions should adopt a systemic and holistic educational strategy that aligns curriculum content, teaching methods, and industry collaboration to foster balanced and sustained development of innovative leadership competencies.

Conclusion

This study addressed two research objectives to examine the innovative leadership of Clothing and Dress Design students at Guangxi Economic and Trade Vocational Institute, China.

First, in response to Research Objective 1, which aimed to examine the overall level of innovative leadership, the findings revealed that students' innovative leadership is at a low level ($\bar{X}$ = 1.946, S.D. = 0.703). This indicates that students have not yet reached a moderate level in key competencies related to creativity, problem-solving, teamwork, and innovation awareness. The relatively consistent standard deviation further suggests that this limitation is widely shared among students, rather than being confined to a specific group.



Second, in response to Research Objective 2, which focused on the level of innovative leadership across four dimensions, all dimensions were found to be at a low level, although differences in mean scores indicate a clear ranking pattern. The dimensions are ranked from highest to lowest as follows: Creative Thinking ($\bar{X}$ = 2.206), Problem-Solving and Decision-Making Ability ($\bar{X}$ = 1.975), Teamwork and Leadership ($\bar{X}$ = 1.874), and Innovation Awareness and Future Trend Insight ($\bar{X}$ = 1.727). Creative Thinking emerged as the relatively strongest dimension, suggesting that students possess some foundational ability in idea generation; however, it remains underdeveloped. Problem-Solving and Decision-Making Ability reflects limited strategic thinking and decision-making competence. Teamwork and Leadership indicate insufficient collaboration and leadership readiness, while Innovation Awareness and Future Trend Insight represent the weakest area, highlighting a significant gap in students' understanding of industry trends, sustainability, and digital transformation.

Overall, the findings indicate that students' innovative leadership is not only low in overall level but also structurally unbalanced. Internal cognitive abilities, such as creativity, are relatively stronger, whereas external and future-oriented competencies remain weak. These results effectively address the research objectives and provide empirical evidence for understanding the current state of innovative leadership in vocational fashion education, highlighting the need for more systematic and balanced development across all dimensions.

Recommendations

Contribution to Body of Knowledge

This study advances understanding of innovative leadership in vocational fashion education by identifying it as a multidimensional construct consisting of four key dimensions: creative thinking, problem-solving and decision-making, teamwork and leadership, and innovation awareness with future trend insight.

The findings propose a conceptual framework—Innovative Leadership Development Model in Vocational Fashion Education (ILDm-VFE)—which highlights that while creative thinking and teamwork are relatively developed, innovation awareness and future-oriented thinking remain weak areas. This extends existing literature by emphasizing the importance of future-readiness in design education.

Future Research Directions

Future research should explore cross-cultural comparisons, longitudinal development of innovative leadership, and the impact of digital technologies such as AI and virtual fashion platforms on student competencies. Further qualitative studies are also recommended to gain deeper insight into students' leadership development experiences.

References

- Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Annual Review of Organizational Psychology and Organizational Behavior*, 3, 55–63.
- Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior*, 36, 157–183.
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House*, 83(2), 39–43.
- Buchanan, R. (2019). Systems thinking and design thinking: The search for principles in design. *Design Issues*, 35(2), 3–14.
- Burt, R. S. (2004). Structural holes and good ideas. *American Journal of Sociology*, 110(2), 349–399.
- Burt, S. (2004). The international diffusion of fashion trends. *Journal of Fashion Marketing and Management*, 8(1), 25–35.
- Casciani, D., Charnley, F., & Millward-Hopkins, J. (2022). Fashion and sustainability: Designing for circularity. *Journal of Cleaner Production*, 365, 132–145.
- Casciani, D., et al. (2022). [Details of publication on digital transformation in fashion/design education need verification].
- Dorst, K. (2011). The core of ‘design thinking’ and its application. *Design Studies*, 32(6), 521–532.
- Faerm, S. (2012). *Design education: Creating future designers*. Fairchild Books.
- Gafour, W. H., & Gafour, W. A. (2020). Creative thinking skills in education. *Journal of Education and Practice*, 11(9), 45–52.
- Gumusluoglu, L., & Ilsev, A. (2009). Transformational leadership and organizational innovation. *Journal of Business Research*, 62(4), 461–473.
- Hetian, A., & Naeim, B. (2025). [Title of the article/book needed]. [Journal/Publisher name needed], [volume(issue)], [page range]. [https://doi.org/\[if available\]](https://doi.org/[if available])
- Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher*, 38(5), 365–379.
- Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher*, 38(5), 365–379.
- Larraz-Rábanos, N. (2021). Developing creative thinking in higher education. *Thinking Skills and Creativity*, 41, 100–112.
- Larraz-Rábanos, N. (2021). [Details of publication on creativity development need verification].
- Ma, J. J. (2023). Development of education for sustainable fashion design using a challenge-based learning approach. *International Journal of Fashion Design, Technology and Education*, 16(2), 164–174.
- McFadzean, E. (2000). Techniques for creative problem solving. *Team Performance Management*, 6(3–4), 62–73.
- Ollenburg, C. (2018). Fashion forecasting and trend analysis in design education. *International Journal of Fashion Design, Technology and Education*, 11(2), 123–134.



- Salas, E., Shuffler, M. L., Thayer, A. L., Bedwell, W. L., & Lazzara, E. H. (2015). Understanding and improving teamwork in organizations. *Human Resource Management Review*, 25(4), 468–481.
- Salas, E., Shuffler, M. L., Thayer, A. L., Bedwell, W. L., & Lazzara, E. H. (2015). Understanding and improving teamwork in organizations: A scientifically based practical guide. *Annual Review of Organizational Psychology and Organizational Behavior*, 2, 471–499.
- Savery, J. R. (2015). Overview of problem-based learning: Definitions and distinctions. *Interdisciplinary Journal of Problem-Based Learning*, 1(1), 9–20.
- Savery, J. R. (2015). Overview of problem-based learning: Definitions and distinctions. *Interdisciplinary Journal of Problem-Based Learning*, 9(2), 5–15.
- Smith, K. A., Sheppard, S. D., Johnson, D. W., & Johnson, R. T. (2005). Pedagogies of engagement: Classroom-based practices. *Journal of Engineering Education*, 94(1), 87–101.
- Sutthadaanantaphokin, K., Channuwong, S., Moolngearn, P., Luangsmarnkul, P., & Wang, S. (2025). Transformational leadership influencing mission implementation of Thai Universities. *Sciences of Conservation and Archaeology*, 37(3), 58-67.
- Tan, Z., Luo, Z., & Lin, S. (2022). Exploration and practice of progressive PBL in costume design course: The example Engineering and Design College of Hunan Normal University. *Ergonomics in Design*, 47, 30–38.
- Wang, A. Y. (2015). Cultivating innovative design thinking in fashion education. *International Journal of Fashion Design, Technology and Education*, 8(3), 1–9.
- Wang, Y. (2015, May). *Exploration on combinative knowing and doing training mode for fashion design teaching in universities*. In *1st International Conference on Arts, Design and Contemporary Education (ICADCE 2015)* (645-649). Atlantis Press. 205-213.
- Yurtseven, R., Akkas Baysal, Ö., & Ocak, G. (2021). Analysis of the Relationship between Decision Making Skills and Problem-Solving Skills of Primary School Students. *International Online Journal of Education and Teaching*, 8(3), 2117-2130.
- Yurtseven, N., Vatansever, S., & Aydın, H. (2021). Decision-making and problem-solving in design education. *Design and Technology Education*, 26(1), 55–70.

