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Original Research Article

Development Of an Adaptive Leadership Model for Enhancing the Learning Adaptability of Students Majoring in Advertising Design at Vocational Colleges of Guangdong Province, China

Liandi He^{1*}, Xiaoshu Xu², & Yin Yun Wei³

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Name of Author &
Corresponding Author: *

1. Liandi He*

Graduate School, Stamford
International University, Thailand.
Email: 1550549242@qq.com

2. Xiaoshu Xu

Graduate School, Stamford
International University, Thailand.
Email: xiaoshu xu@stamford.edu

3. Yin Yun Wei

Graduate School, Stamford
International University, Thailand.
Email: wei.yvonne@gmail.com

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ABSTRACT

This study aimed to (1) identify the core dimensions of adaptive leadership and learning adaptability among advertising design students in vocational colleges in Guangdong Province, China; (2) assess their current levels; (3) examine the predictive effect of adaptive leadership on learning adaptability; (4) develop an adaptive leadership model to enhance learning adaptability; and (5) evaluate the model's effectiveness. A mixed-methods research design was employed. Questionnaires were distributed to 290 students, of which 270 valid responses were retained for quantitative analysis. Descriptive statistics and multiple regression analysis were used to examine students' levels and the predictive relationships between variables. Expert consultation informed model development, and a 16-week quasi-experimental intervention involving 82 students was evaluated using paired-samples t-tests.

The findings revealed that students demonstrated moderate levels of adaptive leadership and upper-moderate levels of learning adaptability, with Change-Coping and Autonomous Learning Adaptability representing the weakest dimensions. Adaptive leadership significantly and positively predicted learning adaptability, explaining 51% of its variance. Change-Coping was the strongest predictor, followed by Problem-Solving, Self-Awareness, and Interpersonal Relationships. Based on these findings, a localized three-stage cyclical adaptive leadership cultivation model was developed. The quasi-experimental evaluation involving 82 students demonstrated significant improvements across all dimensions of learning adaptability following the intervention. This study contributes localized empirical evidence to vocational advertising design education in Guangdong Province and provides a systematic, practical framework for enhancing



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students' learning adaptability and employability in the AIGC-driven creative industry.

Introduction

The rapid development of digital technologies and cultural and creative industries has transformed the advertising design sector. Technologies such as Artificial Intelligence Generated Content (AIGC), virtual rendering, and intelligent design platforms are reshaping design processes and professional competency requirements (Smith & Brown, 2020). In Guangdong Province, China, these changes create new challenges for vocational colleges in preparing students for an increasingly dynamic and technology-driven industry. Traditional vocational advertising education emphasizes technical skills and practical design abilities. However, these competencies alone are insufficient to meet contemporary industry demands. Students must also develop independent learning, interdisciplinary collaboration, creative problem-solving, and the ability to respond effectively to technological change (Black & Gray, 2023). Learning adaptability (LA), defined as the ability to adjust cognitive processes, behaviors, and emotional responses to changing learning environments and challenges, has therefore become essential for vocational students (Li, 2018). Adaptive Leadership (AL), developed by Heifetz and colleagues to address complex problems in uncertain environments, offers a theoretical foundation for understanding how individuals respond to change and develop problem-solving capabilities (Heifetz et al., 2009). In educational settings, adaptive leadership can support self-regulation, resilience, collaboration, and active engagement in learning (Deitmer, 2010). Accordingly, integrating adaptive leadership into vocational education may strengthen students' capacity to navigate technological change and develop lifelong learning competencies.

Despite growing academic interest, several research gaps remain. First, the theoretical gap concerns the limited adaptation of existing adaptive leadership frameworks to China's collectivist educational culture and vocational learning environments (Chen, 2021). Second, the empirical gap involves insufficient research on the relationship between adaptive leadership and learning adaptability among vocational advertising design students facing digital transformation (Liu, 2019). Third, the methodological gap reflects the limited use of intervention-based and quasi-experimental designs to establish whether developing adaptive leadership can improve learning adaptability. Fourth, the contextual gap concerns the specific challenges faced by Guangdong vocational students, including independent learning, emerging technology adoption, and collaborative design projects (Zhao, 2023). Curricula that prioritize technical training may consequently leave students underprepared for evolving industry expectations (Akkermans, 2013).

To address these gaps, this study develops a localized Adaptive Leadership Model for vocational advertising design students in Guangdong Province. Using a quasi-experimental pretest–posttest design, it evaluates the model's effectiveness in improving learning adaptability. By integrating adaptive leadership theory with China's vocational education context and the needs of the digital creative industry, the study contributes to theoretical development and offers practical guidance for designing competency-based educational interventions.



Literature Review and Theoretical Framework

Adaptive Leadership

Adaptive leadership, introduced by Heifetz and colleagues, enables individuals and organizations to address complex challenges through continuous learning, behavioral change, communication, and experimentation (Heifetz & Linsky, 2017; Heifetz et al., 2009). Key functions include recognizing change, managing uncertainty, problem-solving, and embracing diverse perspectives (Williams et al., 2017). In vocational education, adaptive leadership supports students' self-awareness, adaptability, and learning adjustment (Deitmer, 2010; Sun, 2018). This study identifies four dimensions for advertising design students: self-awareness, change-coping ability, problem-solving ability, and interpersonal relationships. These competencies help students manage technological changes, creative challenges, and collaborative tasks. However, localized measurement models for vocational advertising design students remain limited, particularly in Guangdong's rapidly evolving digital creative industry.

Students' Learning Adaptability

Learning adaptability refers to students' ability to adjust their cognition, emotions, and behaviors to changing learning environments and requirements (Pintrich, 2003). Li (2018) identified five dimensions: learning attitude, autonomous learning, learning interaction, learning environment, and physical and mental health adaptation. Project-based learning, digital platforms, and enterprise practice can enhance adaptability (Moore & Johnson, 2021; Zhou, 2020; Brown & Jones, 2024). However, existing interventions often emphasize short-term academic outcomes rather than sustained adaptability. This limitation is particularly significant for advertising design students facing AIGC technologies, digital transformation, and evolving industry demands (Smith & Brown, 2020; Zhao, 2023).

Relationship Between Adaptive Leadership and Learning Adaptability

Adaptive leadership may enhance learning adaptability through four mechanisms: self-awareness strengthens learning motivation and goal orientation; change-coping ability encourages independent learning; problem-solving ability supports responses to creative challenges and psychological pressure; and interpersonal relationships improve communication and teamwork (Sun, 2018; Black & Gray, 2023; Wilson & Davis, 2024; Wu, 2021). Previous studies indicate that adaptive competencies predict vocational students' learning adaptability (Zhang & Wang, 2021), while employability research emphasizes continuous adaptation to changing professional environments (Akkermans, 2013). Nevertheless, empirical research focusing on vocational advertising design students remains limited, particularly studies translating these relationships into structured teaching models.

Significance of Developing an Adaptive Leadership Model

Current vocational teaching practices often lack systematic approaches for cultivating adaptive leadership. A staged adaptive leadership model can address this limitation by integrating students' developmental characteristics, industry requirements, and curriculum

progression (Zhao, 2023). Theoretically, such a model can extend adaptive leadership research by providing localized evidence from vocational advertising design education in Guangdong. Practically, it can guide curriculum design through progressive activities, including AIGC workshops, simulated industry projects, interdisciplinary collaboration, and enterprise internships. By linking adaptive leadership development with learning adaptability improvement, the model can provide a practical framework for cultivating future-oriented advertising design professionals.

Conceptual Framework

The conceptual framework, with demographic variables (gender, age, and grade) serving as potential controls. Adaptive leadership is the independent variable, comprising four dimensions, while learning adaptability is the dependent variable, comprising five dimensions. The framework examines whether adaptive leadership predicts learning adaptability after accounting for demographic differences.

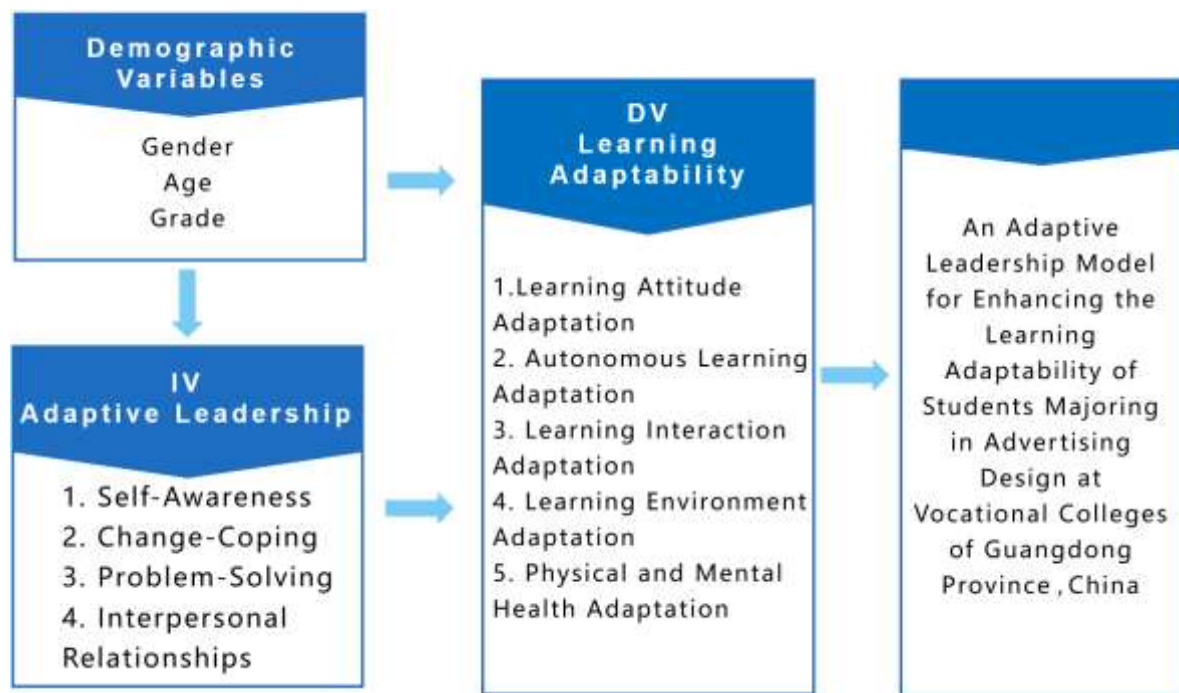


Figure 1 Conceptual Framework

Objectives

1. To identify the core dimensions of adaptive leadership and learning adaptability among advertising design students in Guangdong vocational colleges, China.
2. To assess students' current levels of adaptive leadership and learning adaptability.
3. To examine the predictive effect of adaptive leadership on learning adaptability.
4. To develop an Adaptive Leadership Model to enhance students' learning adaptability.
5. To evaluate the effectiveness of the developed model in improving learning adaptability.



Hypotheses

H1: Self-Awareness exerts a significant positive predictive effect on students' learning adaptability.

H2: Change-Coping exerts a significant positive predictive effect on students' learning adaptability.

H3: Problem-Solving exerts a significant positive predictive effect on students' learning adaptability.

H4: Interpersonal Relationships exert a significant positive predictive effect on students' learning adaptability.

H5: The activity scheme based on the adaptive leadership model can significantly improve students' learning adaptability.

Methodology

Research Design

This study employed a mixed-methods design combining a quantitative survey, a quasi-experimental intervention, and qualitative expert consultation. The cross-sectional survey examined the relationship between adaptive leadership and learning adaptability among advertising design students in public vocational colleges in Guangdong Province, China. A one-group pretest–posttest design evaluated the effectiveness of the proposed adaptive leadership cultivation model. Qualitative data from expert consultations supported model development and refinement. Quantitative data were analyzed statistically, while qualitative feedback was analyzed thematically to inform model improvement and contextual interpretation.

Population and Sample

The target population consisted of 1,198 students majoring in Advertising Design enrolled in three representative public technical colleges in Guangdong Province, China:

1. Guangdong Light Industry Technician College (526 students)
2. Guangdong Shenzhen Technician College (408 students)
3. Guangdong City Technician College (264 students)

The selected institutions were early participants in China's national vocational education reforms and demonstrated strong performance in advertising design education. Stratified cluster sampling ensured institutional representation, while convenience sampling facilitated questionnaire distribution. Based on a population of 1,198 students, the minimum sample size was determined using Krejcie and Morgan's (1970) table. Purposive sampling recruited 290 eligible Advertising Design students, of whom 270 provided valid responses, yielding a 93.1% effective response rate and meeting the minimum sample requirement for statistical analysis.



Table 1 Total Number and Sample of Selected Students in Advertising Major

College Name	Number	Sample
Guangdong Light Industry Technician College	526	127
Guangdong Shenzhen Technician College	408	99
Guangdong City Technician College	264	64
Total	1198	290

Research Instruments

Data were collected using a study-specific questionnaire comprising demographic information, a 16-item Adaptive Leadership Scale (four dimensions: self-awareness, change coping, problem-solving, and interpersonal relationships), and a 20-item Learning Adaptability Scale adapted from Li Haiyan (2018) (five dimensions). All items used a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Instrument Validity and Reliability

Five experts assessed content validity using the Item–Objective Congruence (IOC) method. Items with IOC values below 0.80 were removed or revised. Pilot testing with 60 students yielded Cronbach’s alpha coefficients of 0.88 for adaptive leadership and 0.90 for learning adaptability, with all subscales exceeding 0.80.

Data Collection Procedures

Following institutional approval and informed consent, questionnaires were distributed via Wenjuanxing. Responses were screened for completeness and quality, yielding 270 valid questionnaires for analysis.

Quasi-Experimental Intervention

A one-group pretest–posttest design was conducted with 82 students from two classes at Guangdong Light Industry Technician College over 16 weeks. The intervention incorporated AIGC-supported learning, simulated industry projects, collaborative problem-solving, and enterprise-oriented internships. Learning adaptability was measured before and after the intervention.

Data Analysis

SPSS and AMOS (or SmartPLS, depending on the software used) were used for descriptive statistics, reliability and validity testing, correlation, multiple regression, structural equation modeling, and paired-samples t-tests. Statistical significance was set at $p < 0.05$.

Results

Table 2 Demographic Characteristics of Advertising Design Students from Three Vocational Colleges in Guangdong Province

Demographic Characteristics	Classification	Number of Students	Percentage
Gender	Male	149	55.0
	Female	121	45.0
Grade	Freshman	110	40.7
	Sophomore	90	33.3
	Junior	70	26.0
College	Guangdong Light Industry Technician College	117	43.3
	Shenzhen Technician College, Guangdong Province	89	33.0
	Guangdong City Technician College	64	23.7
Total		270	100

As shown in Table 2 the sample comprised 270 advertising design students from three vocational colleges in Guangdong Province. Of these, 149 (55.0%) were male and 121 (45.0%) were female, indicating a relatively balanced gender distribution. By grade level, freshmen accounted for the largest proportion with 110 students (40.7%), followed by sophomores with 90 (33.3%) and juniors with 70 (26.0%). This indicates that students from different stages of study were well represented. Regarding institutional background, 117 students (43.3%) were from Guangdong Light Industry Technician College, 89 (33.0%) from Shenzhen Technician College, Guangdong Province, and 64 (23.7%) from Guangdong City Technician College. The participation of students from three vocational colleges enhanced the diversity and representativeness of the sample.

To identify the core constituent dimensions of adaptive leadership and learning adaptability among advertising design students at vocational colleges.

Prior to the formal survey, Cronbach's α coefficient was adopted to test questionnaire reliability. As a standard indicator for measuring the internal consistency of scales, Cronbach's α test is a mandatory prerequisite before any questionnaire can be applied to formal research. Table 3 presented the reliability test results for all variables and their respective dimensions. All variables and dimensions achieved satisfactory reliability levels ($\alpha > 0.8$), which demonstrated that the questionnaire possessed sound internal reliability.



Table 3 Reliability Testing Report based on Pilot Test for Variable and Dimension

Variable	Dimensions	α	Total
AL	Self-Awareness	0.85	0.88
	Change-Coping	0.91	
	Problem-Solving	0.89	
	Interpersonal Relationships	0.88	
LA	Learning Attitude Adaptation	0.88	0.90
	Autonomous Learning Adaptation	0.92	
	Learning Interaction Adaptation	0.90	
	Learning Environment Adaptation	0.92	
	Physical and Mental Health Adaptation	0.87	

To evaluate the current status of adaptive leadership and learning adaptability among advertising design students at vocational colleges in Guangdong Province.

Table 4 Current Levels of Adaptive Leadership and Learning Adaptability Among Students from Vocational Colleges in Guangdong Province

Dimension	Mean	SD	Level
Learning Attitude Adaptation	3.51	0.71	High
Autonomous Learning Adaptation	3.35	0.74	Moderate
Learning Interaction Adaptation	3.48	0.69	Moderate
Learning Environment Adaptation	3.39	0.76	Moderate
Physical and Mental Health Adaptation	3.37	0.80	Moderate
Overall Learning Adaptability	3.42	0.68	Moderate
Self-Awareness	3.40	0.73	Moderate
Change-Coping	3.28	0.78	Moderate
Problem-Solving	3.35	0.75	Moderate
Interpersonal Relationships	3.46	0.67	Moderate
Overall Adaptive Leadership	3.37	0.72	Moderate

To achieve this objective, descriptive statistics were utilized to analyze the overall levels of students' adaptive leadership and learning adaptability, including means (M) and standard deviations (SD). Descriptive statistical analysis was conducted based on the 270 valid questionnaires. The results indicated that the overall score of students' learning adaptability was 3.42 ± 0.68 , representing an upper-middle level, while the total score of adaptive leadership stood at 3.37 ± 0.72 , which reflected a moderate level. The specific scores of all dimensions were displayed in Table 5.



To examine the extent to which adaptive leadership predicts the learning adaptability of students at vocational colleges in Guangdong Province, China.

Table 5 Correlation between Adaptive Leadership and Learning Adaptability

Variable	LAA	A LA	LI A	LEA	P MH	Overall (LA)
SA	0.63**	0.59**	0.61**	0.57**	0.55**	0.62**
CC	0.60**	0.72**	0.64**	0.61**	0.63**	0.69**
PS	0.61**	0.68**	0.65**	0.60**	0.65**	0.67**
IR	0.64**	0.66**	0.70**	0.62**	0.58**	0.66**
Overall (AL)	0.65**	0.68**	0.67**	0.63**	0.62**	0.68**

Note: ** $p < 0.01$, * $p < 0.05$ (two-tailed test); $N = 270$

As shown in Table 4, the overall adaptive leadership had a significant positive correlation with overall learning adaptability ($r = 0.68$, $p < 0.01$). All sub-dimensions also presented significant positive correlations ($p < 0.05$). Specifically, Change-Coping (CC) had the highest correlation with Autonomous Learning Adaptation (ALA) ($r = 0.72$, $p < 0.01$). The correlation coefficient between Problem-Solving (PS) and Physical and Mental Health Adaptation (MHA) was 0.65 ($p < 0.01$). Self-Awareness (SA) was positively correlated with Learning Attitude Adaptation (LAA) at 0.63 ($p < 0.01$). Interpersonal Relationships (IR) was significantly positively correlated with Learning Interaction Adaptation (LIA) ($r = 0.70$, $p < 0.01$) and Learning Environment Adaptation ($r = 0.62$, $p < 0.01$). The results verified that all dimensions of adaptive leadership exerted positive effects on students' learning adaptability.

Table 6 Multiple Regression of Adaptive Leadership on Learning Adaptability

Independent Variable	Standardized Coefficient (β)	t	p
Self-Awareness	0.18	3.52	0.001
Change-Coping	0.32	6.87	0.000
Problem-Solving	0.25	5.43	0.000
Interpersonal Relationships	0.15	3.19	0.002

Note: Dependent variable: total score of learning adaptability; $N = 270$; $F = 89.32$, $p < 0.001$; Adjusted $R^2 = 0.51$

Multiple linear regression showed that adaptive leadership significantly predicted learning adaptability ($F = 89.32$, $p < 0.001$), explaining 51% of the variance (adjusted $R^2 = 0.51$). Change-Coping had the strongest effect ($\beta = 0.32$, $p < 0.001$), followed by Problem-Solving ($\beta = 0.25$, $p < 0.001$), Self-Awareness ($\beta = 0.18$, $p = 0.001$), and Interpersonal Relationships ($\beta = 0.15$, $p = 0.002$). All four dimensions positively predicted learning adaptability, supporting H1–H4.

To construct an Adaptive Leadership Model for boosting the learning adaptability of vocational college students in Guangdong Province, China

Based on empirical findings and revisions from seven vocational education experts, the researchers developed a localized three-stage circular cultivation model (Figure 1), illustrating the pathway from adaptive leadership cultivation to improved learning adaptability.

The double-ring structure emphasizes Change-Coping (CC) and Problem-Solving (PS), which showed stronger predictive effects, while incorporating Self-Awareness (SA) and Interpersonal Relationships (IR) to support multidimensional development. Directional arrows illustrate key relationships, including CC → Autonomous Learning Adaptation (ALA) and IR → Learning Interaction Adaptation (LIA).

The model comprises three progressive stages: (1) developing SA to strengthen learning and career awareness; (2) enhancing CC and PS to address adaptive challenges in the AIGC digital context; and (3) improving IR to strengthen collaboration and practical adaptation. This cyclical framework provides systematic and practical guidance for enhancing advertising design students' learning adaptability in vocational colleges across Guangdong Province.

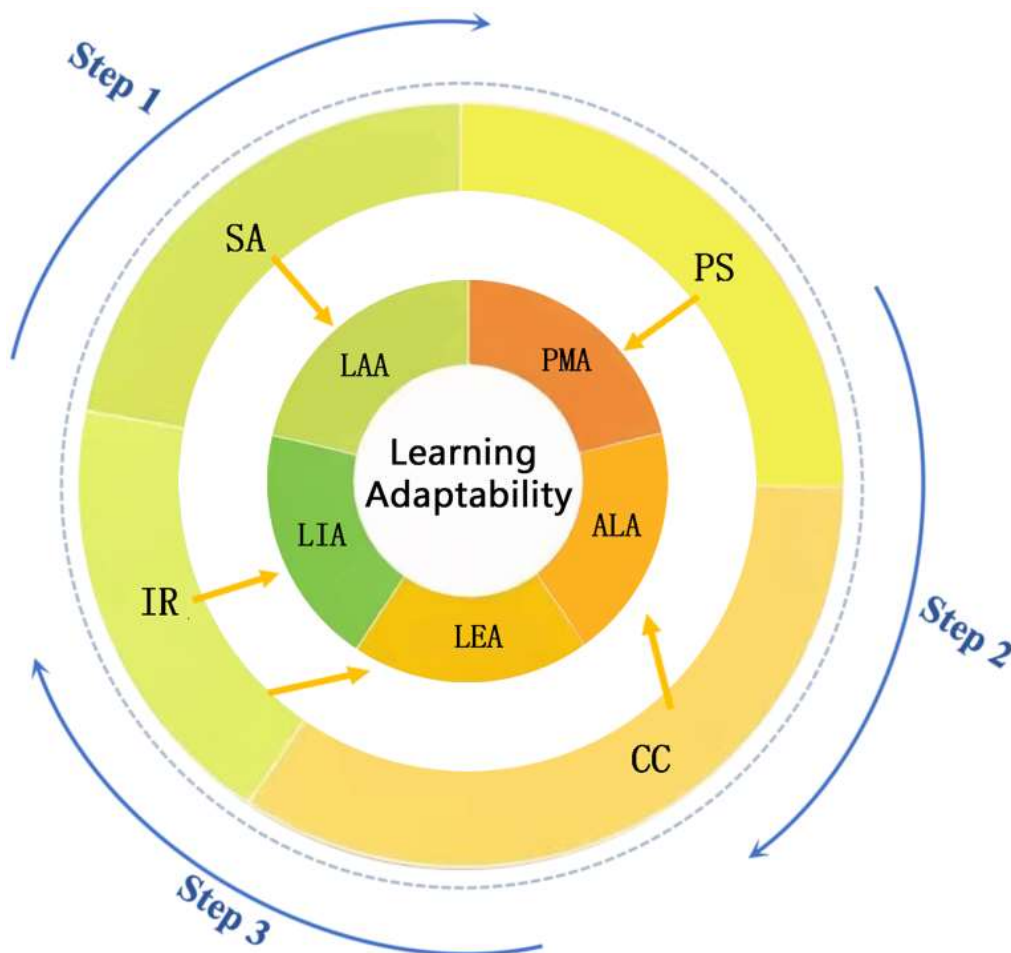


Figure 2 The Final Model for Enhancing Learning Adaptability Among Students Majoring in Advertising Design at Vocational Colleges in Guangdong Province, China



Note:

LAA=Learning Attitude Adaptation

ALA=Autonomous Learning Adaptation

LIA=Learning Interaction Adaptation

LEA=Learning Environment Adaptation

PMA=Physical and Mental Health Adaptation

SA=Self-Awareness

CC=Change-Coping

PS=Problem-Solving

IR=Interpersonal Relationships

To evaluate the effectiveness of the developed model from the perspective of improving students' learning adaptability

To verify Hypothesis 5 and scientifically evaluate the practical intervention effectiveness of the constructed adaptive leadership model, a paired-samples t-test was conducted to compare students' learning adaptability before and after the 16-week model-based intervention. The overall and dimensional pre-test and post-test statistical results were shown in Table 6.

Table 7 Paired-Samples t-test of Learning Adaptability

Dimension	Pre-test (M)	Post-test (M)	t	p
LAA	3.51	3.73	-5.932	0.000***
ALA	3.35	3.67	-8.157	0.000***
LIA	3.48	3.70	-6.209	0.000***
LEA	3.39	3.65	-7.025	0.000***
PMA	3.37	3.61	-6.513	0.000***
Overall	3.37	3.62	-7.823	0.000***

Note: *** $p < 0.001$; $n = 82$.

The intervention significantly improved overall learning adaptability from 3.37 to 3.62 ($t = -7.823$, $df = 81$, $p < 0.001$). All five dimensions improved significantly ($p < 0.001$): learning attitude (3.51–3.73), autonomous learning (3.35–3.67), learning interaction (3.48–3.70), learning environment (3.39–3.65), and physical and mental health (3.37–3.61). Autonomous learning showed the greatest improvement, supporting H5. These findings confirm the effectiveness of the 16-week adaptive leadership cultivation model in enhancing learning adaptability among advertising design students in Guangdong vocational colleges, providing empirical support for its application and wider adoption in vocational education.



Discussion

Overall Characteristics of Adaptive Leadership

The findings indicated that advertising design students in Guangdong vocational colleges demonstrated a moderate level of adaptive leadership, with Interpersonal Relationships scoring highest and Change-Coping lowest. This pattern is consistent with previous studies showing that vocational students generally possess stronger interpersonal skills than the ability to adapt to rapidly changing environments (Chen, 2021; Zhang & Wang, 2021; Wu, 2021). Considering the rapid digital transformation of Guangdong's advertising industry, traditional software-oriented instruction may not adequately prepare students for emerging technologies and changing workplace demands (Smith & Brown, 2020; Zhao, 2023). These findings support adaptive leadership theory, which emphasizes the ability to respond effectively to change and uncertainty (Heifetz et al., 2009; Heifetz & Linsky, 2017).

Learning Adaptability of Students

Students demonstrated an overall upper-middle level of learning adaptability. Learning Attitude Adaptation scored highest, whereas Autonomous Learning Adaptation was the weakest dimension. This finding suggests that teacher-centered instruction provides limited opportunities for self-directed learning, consistent with previous research on autonomous learning in vocational education (Moore & Johnson, 2021; Pintrich, 2003). In addition, moderate performance in Physical and Mental Health Adaptation may reflect the pressures associated with project-based learning and industry expectations (Liu, 2019; Zhou, 2020; Sun, 2018). These results indicate the need for systematic strategies that strengthen both independent learning and psychological adaptation.

Influence of Adaptive Leadership on Learning Adaptability

Adaptive leadership significantly predicted students' learning adaptability, with Change-Coping showing the strongest effect, followed by Problem-Solving, Self-Awareness, and Interpersonal Relationships. The dominant role of change-coping reflects the rapidly evolving digital advertising industry, where continuous technological adaptation is essential (Smith & Brown, 2020; Zhao, 2023). Problem-solving also contributed substantially by supporting students' ability to manage complex design tasks and learning challenges (Brown & Jones, 2024; Wilson et al., 2024). Meanwhile, self-awareness and interpersonal relationships promoted motivation, collaboration, and career development (Green & White, 2021; Taylor & Anderson, 2024). The confirmation of all five hypotheses further supports the theoretical framework and demonstrates that adaptive leadership is an important contributor to students' learning adaptability.

Effectiveness of the Adaptive Leadership Model

Based on these findings, this study developed a three-stage Adaptive Leadership (AL) Model comprising cognitive foundation, competency development, and practical application. The model prioritizes Change-Coping and Problem-Solving, supported through AIGC

workshops, simulated industry projects, and enterprise internships (Black & Gray, 2023; Brown & Jones, 2024; Liu, 2019). The significant improvements observed after the 16-week intervention confirmed the model's effectiveness in enhancing students' adaptive leadership and learning adaptability. These findings are consistent with previous studies demonstrating that adaptive leadership, authentic learning experiences, and workplace-oriented training improve students' adaptability and employability (Akkermans, 2013; Sunderman et al., 2020; Williams et al., 2017). Therefore, the proposed AL Model provides an evidence-based framework for curriculum reform and talent development in vocational advertising design education.

Conclusion

This study achieved its primary objective of examining the relationship between adaptive leadership and learning adaptability among advertising design students in vocational colleges in Guangdong Province while developing and validating an adaptive leadership-based developmental model. The findings demonstrate that adaptive leadership is a significant predictor of learning adaptability, with Change-Coping and Problem-Solving emerging as the strongest influencing dimensions. A profession-specific framework for both adaptive leadership and learning adaptability was established, addressing the unique learning characteristics and competency requirements of advertising design students in the context of rapid technological advancement and AI-generated content (AIGC). The study further revealed that students generally exhibited moderate to moderately high levels of adaptive leadership and learning adaptability, although notable differences existed across dimensions and grade levels. While learning attitude and interaction were relatively well developed, autonomous learning and change-coping abilities require further enhancement. The significant influence of grade level suggests that continuous learning experiences and practical training contribute to the progressive development of these competencies. Importantly, the intervention findings confirmed the effectiveness of the proposed adaptive leadership-based developmental model in significantly improving students' learning adaptability. The model demonstrated strong practical applicability and provides an evidence-based framework that can be integrated into vocational teaching practices to cultivate students' adaptive competencies in dynamic learning environments.

All four research hypotheses were supported, confirming the theoretical mechanism through which adaptive leadership enhances learning adaptability. These findings contribute to the existing literature by extending adaptive leadership theory into vocational education and establishing a context-specific framework for advertising design education. From a practical perspective, the study offers valuable guidance for curriculum design, instructional innovation, and leadership-oriented learning interventions that prepare students to meet the evolving demands of the creative industry in the era of digital transformation and artificial intelligence.



Recommendations

Implications and Contributions

This study contributes to theory and practice by explaining how adaptive leadership improves learning adaptability among vocational advertising design students and by providing a practical model for teaching and talent development.

First, the study fills a research gap by examining adaptive leadership and learning adaptability in advertising design students and proposing a profession-specific framework.

Second, it identifies Change-Coping and Problem-Solving as the strongest predictors of learning adaptability, providing quantitative evidence for leadership research.

Third, it confirms that grade strengthens the relationship between adaptive leadership and learning adaptability, highlighting the importance of practical experience.

Practical Implications

The developed model improves learning adaptability through adaptive leadership training, AIGC practice, and industry projects. It supports curriculum improvement, aligns talent development with industry needs, and can be adapted for other art and design programs.

1. **Sample Scope** The study was limited to three public vocational colleges in Guangdong, with a small intervention sample from one college, reducing generalizability.

2. **Research Duration** The 16-week intervention and three-month follow-up were insufficient to evaluate long-term effects.

3. **Research Content** The study did not examine other influencing factors, such as family support, teacher guidance, personality, or industry environment, nor differences among students with varying academic performance.

4. **Research Methods** Self-reported data and a small interview sample from one college may have limited accuracy and depth. More qualitative methods could strengthen future research.

Recommendations for Future Research

1. Expand samples across regions, institutions, and related design majors.

2. Conduct long-term longitudinal studies to assess sustained outcomes.

3. Investigate additional influencing factors and refine the developed model with AIGC and personalized training.

4. Use mixed-method approaches, including case studies and grounded theory, to strengthen evidence.

5. Promote wider implementation through curriculum integration and school–industry collaboration.

6. Explore the impact of emerging technologies, especially AIGC and blended learning, on adaptive leadership and learning adaptability.



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