

RESEARCH ARTICLE

Innovation in talent training models for Chinese-Malaysian media education under social cognitive theory: Research on mechanisms for deepening cross-cultural communication

Lisha Li

Faculty of Art, Kunming City College, Kunming, Yunnan, 650106, China

* **Corresponding author:** Lisha Li, 18468035908@163.com

ABSTRACT

Based on social cognitive theory, this study investigates the deepening mechanism of cross-cultural communication through innovative talent cultivation models in media education between China and Malaysia. A total of 1,350 questionnaires were distributed, with 1,156 valid responses collected, including 582 samples from China and 574 from Malaysia. The findings reveal: From the perspective of socio-cultural environmental influence, cultural difference cognition (77.9%) and cultural values (78.0%) show the most significant impact, with Malaysian students demonstrating stronger cultural adaptation capabilities due to their multicultural environment advantages. Regarding educational environmental influence, curriculum design (82.4%) and teaching method innovation (79.5%) are key factors, with differences existing between the two countries in educational philosophy and practical models. In terms of media environmental influence, media usage competency (81.2%) and media exposure level (78.6%) have substantial impacts. The cross-cultural adaptation process exhibits distinct developmental stages: psychological adjustment experiences an initial conflict period (1-2 months), active adaptation period (3-6 months), and stable development period (over 6 months); cultural identity construction undergoes initial cognition (1-3 months), deepened understanding (4-8 months), and integration (over 9 months); capability development progresses through basic construction (1-3 months), capability enhancement (4-6 months), and comprehensive development (7-9 months). The assessment of cultivation effectiveness indicates that 84.5% of students achieved expected levels in knowledge mastery, 85.6% demonstrated significant improvement in cross-cultural competence, and 83.2% showed good environmental adaptability. It is recommended to strengthen China-Malaysia media education cooperation, innovate cultivation models, optimize curriculum design, enhance practical components, and establish effective cross-cultural support systems to promote students' comprehensive development in cross-cultural communication capabilities.

Keywords: social cognitive theory; China-Malaysia media education; talent cultivation; cross-cultural communication; deepening mechanism

1. Introduction

In the context of rapid globalization and digitalization, cross-cultural communication has increasingly become an important bridge for international cooperation. Particularly under the impetus of the "Belt and

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Road Initiative," cooperation between China and Malaysia in the education field has continuously deepened, with media talent cultivation becoming an essential component of educational exchange between the two countries. The "Belt and Road Initiative" was first proposed by Chinese President Xi Jinping in 2013, referring to the "Silk Road Economic Belt" and the "21st Century Maritime Silk Road." It aims to build a community of shared interests, future, and responsibility characterized by political mutual trust, economic integration, and cultural inclusiveness by relying on existing bilateral and multilateral mechanisms between China and relevant countries, and leveraging established and effective regional cooperation platforms. In recent years, China and Malaysia have established multi-level cooperation in media education, yet numerous challenges remain in terms of innovation and adaptability in talent cultivation models. Research by Cai et al. (2023) indicates that the construction of cross-regional educational innovation cooperation networks requires breaking through the limitations of traditional models and establishing more flexible and open cooperation mechanisms^[1].

Currently, China-Malaysia media education cooperation demonstrates diversified development trends, with cooperation forms including student exchange, faculty visits, joint curriculum development, and research collaboration. Jiang et al. (2023) point out that talent cultivation models based on ecological networks can effectively promote the integration and optimal allocation of educational resources^[2]. However, practical challenges remain, including educational philosophy conflicts arising from cultural differences, insufficient adaptability of teaching methods, and learners' cross-cultural adaptation difficulties. These challenges highlight the urgency of innovating talent cultivation models, particularly exploring more effective cross-cultural communication mechanisms under the guidance of social cognitive theory.

Social cognitive theory emphasizes the dynamic interaction between environment, individual cognition, and behavior, providing important theoretical support for understanding and optimizing talent cultivation in cross-cultural communication. Li et al. (2021) demonstrate that talent cultivation under disciplinary integration needs to fully consider environmental factors and construct more adaptive educational models^[3]. This theory has unique application value in cross-cultural communication education, not only helping to understand learners' cognitive construction processes but also providing theoretical basis for optimizing educational environments and promoting cultural interaction.

Chen et al. (2021) emphasize that cultivating innovation ability and compound talents requires establishing systematic theoretical frameworks and practical pathways^[4]. Educational practices based on social cognitive theory have shown significant effects, particularly in enhancing learners' cross-cultural adaptation abilities and professional skill levels. Research by Yingxuan and Shuo (2024) further confirms that in the era of artificial intelligence, talent cultivation models need to focus more on environmental adaptability and innovation^[5].

This study aims to deeply explore the innovation mechanisms of China-Malaysia media education talent cultivation models through the lens of social cognitive theory. Specific objectives include: analyzing the influence mechanisms of environmental factors on learners' cognitive development, exploring cross-cultural adaptation strategies, and constructing innovative talent cultivation frameworks. Han's (2024) research indicates that talent cultivation needs analysis is an important foundation for optimizing educational models, providing crucial reference for this study^[6].

To better understand the background and significance of this research, it is necessary to clarify the main talent cultivation models currently adopted in China-Malaysia media education. At present, Chinese media education mainly adopts two models: first, the traditional cultivation model dominated by theoretical teaching and supplemented by practical teaching, emphasizing systematic instruction of basic theories and

professional knowledge, but with relatively weak practical components; second, the "Industry-University-Research" integrated innovation model developed in recent years, enhancing students' practical abilities through school-media cooperation, laboratory construction, and project practice. Malaysian media education is mainly characterized by: first, a practice-oriented multicultural integration cultivation model that fully utilizes its multilingual and multicultural environmental advantages to develop students' cross-cultural communication abilities; second, a "project-driven" teaching model that integrates media projects throughout the entire teaching process, emphasizing industry practical abilities. In terms of China-Malaysia cooperation, three main models have been formed: first, the "2+2" or "3+1" joint training model, where students study in phases at universities in both countries; second, the semester exchange learning model, promoting short-term cultural immersion; third, the specialized workshop model, focusing on short-term intensive cooperative training on specific media topics. However, these models face problems in practice such as disconnection between theory and practice, insufficient cross-cultural adaptation support, and inadequate innovation in teaching methods. Based on social cognitive theory, this research will analyze the influence mechanisms of environmental factors on the effectiveness of these cultivation models, explore optimization pathways, and construct a new cross-cultural media talent cultivation model with greater adaptability and innovation.

The research innovation is mainly reflected in three aspects: (1) systematically applying social cognitive theory to China-Malaysia media education cooperation research for the first time, expanding the theory's application scope; (2) proposing talent cultivation model innovation ideas based on environment-cognition-behavior interaction; (3) constructing operable cross-cultural communication deepening mechanisms. Yang (2024) emphasizes that talent cultivation goals and pathways in new-era open education need to keep pace with the times, echoing this study's innovative ideas^[7].

The theoretical significance of this study lies in enriching the application research of social cognitive theory in cross-cultural education, providing new theoretical perspectives for optimizing talent cultivation in cross-cultural communication. The practical significance lies in providing operable innovation models and deepening mechanisms for China-Malaysia media education cooperation, helping enhance cooperation effectiveness and talent cultivation quality.

This study emphasizes the core role of environmental factors in cross-cultural communication, enhancing talent cultivation effects through optimizing learning environments, strengthening cultural interaction, and promoting cognitive adaptation. This research perspective based on social cognitive theory not only helps deepen understanding of cross-cultural communication mechanisms but also provides new ideas and methods for promoting China-Malaysia media education cooperation. Through systematic theoretical analysis and empirical research, it provides important theoretical guidance and practical reference for promoting the in-depth development of China-Malaysia media education cooperation and improving cross-cultural talent cultivation quality.

2. Literature review

Through the systematic review and analysis of relevant domestic and international research literature in recent years, scholars have conducted extensive and in-depth discussions on talent training model innovation and its application in cross-cultural communication. This paper presents a literature review across multiple dimensions, including research on talent training model innovation, innovation paths under information technology, training system construction, professional field research, practical ability cultivation, and cultural and environmental factors.

In terms of talent training model innovation research, Li Ying et al. (2021) proposed an innovative design for the segmented connection between vocational and undergraduate education, emphasizing the importance of systematic training and detailing key links and quality assurance mechanisms in the training process^[8]. Tang Jie (2020) explored the university talent training model under the guidance of "double innovation," pointing out that cultivating innovation and entrepreneurship abilities is an important direction in modern education, and proposed specific implementation strategies and evaluation systems^[9]. Liu Xinli (2020) studied the innovation of vocational education talent training models from the perspective of "craftsman spirit," emphasizing the unified cultivation of professional skills and vocational qualities, providing new ideas for vocational education reform^[10]. Tong Dan and Han Liming (2020) proposed an "internship-employment integration" training model based on school-enterprise cooperation, validating the effectiveness of this model through empirical research^[11].

In research on talent training innovation under information technology, Chen (2024) explored innovative paths for vocational education talent training models, emphasizing the revolutionary role of information technology in educational models and proposing personalized training programs based on big data^[12]. Tang (2024) proposed an innovative model for language education talent training based on deep learning models, exploring the application prospects of artificial intelligence technology in language education^[13]. Wang (2024) studied the innovation of university education talent training models and industry-education integration mechanisms in the internet era, proposing an educational ecosystem construction plan under the "Internet+" background^[14]. These studies not only demonstrate the driving force of information technology in talent training model innovation but also provide important references for future educational development.

In terms of training system construction, Chen Hui and Zheng Shuhe (2019) proposed a "one body, two wings" professional talent training system, systematically explaining the organic unity of theoretical teaching, practical teaching, and innovation ability cultivation^[15]. Xu Yuping and Deng Lei (2019) explored the evolution of higher education talent training models from "human capital" to "social innovation," deeply analyzing new requirements for talent training in social development^[16]. Tao Hongli (2019) conducted empirical research on innovation and entrepreneurship practice education under "asynchronous teaching organization forms," proposing a new talent training model based on practice^[17].

In professional field talent training research, Wang Jijian and Zhou Daliang (2017) studied entrepreneurship-oriented social sports professional talent training models, exploring integration paths between professional education and entrepreneurship education^[18]. Li and Li (2024) explored talent training and industry-education integration path construction from an informatization perspective, proposing educational innovation strategies under digital transformation^[19]. Li and Wu (2024) studied innovation in vocational education talent training models in the information age, emphasizing the unity of technology application and vocational ability cultivation^[20]. Meng (2024) focused on higher education talent training models in the digital era, exploring new paradigms of training in intelligent educational environments^[21].

In practical ability cultivation, Lu Shixiu (2016) conducted empirical research based on student needs, exploring talent training model innovation for enhancing practical abilities and proposing a "demand-oriented, competency-based" training concept^[22]. Zhu Tuan et al. (2016) analyzed innovation and entrepreneurship talent training models in local undergraduate universities, emphasizing the combination of regional characteristics and innovation-entrepreneurship education^[23]. These studies not only emphasize the importance of practical ability in talent training but also provide specific implementation paths and methods.

Recent research has increasingly focused on the integration of cultural and environmental factors. Chen Jing and Zhang Yongjie (2023) explored ecological talent training model innovation based on environmental general education, proposing new ideas for environmental awareness cultivation^[24]. Shu Xiaoying and Chen Pan (2024) studied professional talent training model innovation and practice under the "digitalization + culture" education background, exploring integration paths between cultural inheritance and technological innovation^[25]. Ouyang Linxin (2022) studied art talent training models based on cultural experimental zone needs, emphasizing the important role of cultural characteristics in talent training^[26]. Wei Wei (2021) explored the application of traditional culture in innovative talent training models, proposing unified training programs for cultural inheritance and innovative development^[27]. Wang Guohua (2021) analyzed innovation paths for the "moral education-centered" talent training model, emphasizing the organic unity of value guidance and ability cultivation^[28].

Through systematic literature review, current research shows the following characteristics and trends: (1) Research on talent training model innovation has developed from single teaching model exploration to multi-dimensional, multi-level systematic research, emphasizing the integrity and systematicity of the training process; (2) Information technology development has promoted the digital transformation of training models, with intelligent educational environments providing new possibilities for talent training; (3) Cultural and environmental factors are receiving increasing attention in talent training, with cross-cultural ability cultivation becoming an important research direction; (4) The importance of practical ability cultivation and innovation-entrepreneurship education continues to rise, with industry-education integration becoming an important path for training model innovation.

However, existing research also has some limitations and issues requiring further exploration: (1) Research on cross-cultural talent training based on social cognitive theory is relatively lacking, requiring strengthened systematic and targeted theoretical guidance; (2) Specific practical research on China-Malaysia media education cooperation needs deepening, especially regarding educational model innovation under cultural differences; (3) Research on the influence mechanism of environmental factors on cross-cultural communication ability cultivation is insufficient, requiring further exploration of the interactive relationship between environmental optimization and ability enhancement; (4) Research on the integration and application of digital technology and traditional culture needs strengthening to meet new-era talent training demands. These issues need further discussion and resolution in future research to provide theoretical support and practical guidance for promoting innovative development in cross-cultural communication talent training models.

3. Research methods

3.1. Research framework

Based on social cognitive theory, this study constructs a systematic theoretical framework, focusing on the interactive relationship among environment, individual cognition, and behavior in cross-cultural communication talent training. The theoretical framework unfolds across three levels: (1) Environmental level, including cultural environment (cultural difference cognition, cultural interaction frequency, cultural adaptation level), educational environment (curriculum adaptation, teaching method innovation, diversity of practical opportunities), and media environment (media exposure level, media usage capability, media creation practice); (2) Cognitive level, focusing on learners' cross-cultural cognitive level, professional knowledge mastery, and innovative thinking ability; (3) Behavioral level, examining cross-cultural communication behavior, learning behavior adaptation, and practical operation capability^[29]. This framework emphasizes the influence of environmental factors on individual cognitive development and behavioral

performance while also considering the reciprocal effects of individual cognition and behavior on the environment, forming a dynamic interactive theoretical system.

Based on the above theoretical framework, this study proposes three groups of main research hypotheses: The H1 hypothesis group focuses on cultural environment influences, including H1a "cultural difference cognition has a significant positive impact on cross-cultural communication ability," H1b "cultural interaction frequency has a significant positive impact on cross-cultural communication ability," and H1c "cultural adaptation level has a significant positive impact on cross-cultural communication ability." The H2 hypothesis group addresses the role of educational environment, including H2a "curriculum adaptation has a significant positive impact on cross-cultural communication ability," H2b "teaching method innovation has a significant positive impact on cross-cultural communication ability," and H2c "diversity of practical opportunities has a significant positive impact on cross-cultural communication ability." The H3 hypothesis group explores media environment influences, including H3a "media exposure level has a significant positive impact on cross-cultural communication ability," H3b "media usage capability has a significant positive impact on cross-cultural communication ability," and H3c "media creation practice has a significant positive impact on cross-cultural communication ability"^[30]. Additionally, it is hypothesized that cognitive development (cross-cultural cognitive level, professional knowledge mastery, innovative thinking ability) and behavioral adaptation (cross-cultural communication behavior, learning behavior adaptation, practical operation capability) mediate the influence of environmental factors on cross-cultural communication ability.

In terms of variable design, this study develops a complete variable system including independent variables, mediating variables, and dependent variables. Independent variables include cultural environment factors (5 items for cultural difference cognition, 4 items for cultural interaction frequency, 4 items for cultural adaptation level), educational environment factors (4 items for curriculum adaptation, 4 items for teaching method innovation, 4 items for diversity of practical opportunities), and media environment factors (4 items for media exposure level, 4 items for media usage capability, 4 items for media creation practice)^[31]. Mediating variables are divided into cognitive development (4 items each for cross-cultural cognitive level, professional knowledge mastery, and innovative thinking ability) and behavioral adaptation (4 items each for cross-cultural communication behavior, learning behavior adaptation, and practical operation capability). The dependent variable is cross-cultural communication ability, including 4 items each for cross-cultural understanding ability, expression ability, interaction ability, and innovation ability.

The measurement of all variables employs a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), with data collected through questionnaire surveys. To ensure measurement reliability and validity, all items are referenced from relevant mature scales and appropriately adjusted according to the research context^[32]. Additionally, a pre-test will be conducted before the formal survey, using reliability analysis (Cronbach's α coefficient) and validity analysis (exploratory factor analysis and confirmatory factor analysis) to ensure the scientific nature of the measurement tools. Furthermore, respondents' demographic characteristics (such as gender, age, educational background, etc.) will be controlled as control variables to improve the accuracy of research results. This research framework embodies both the core ideas of social cognitive theory and fully considers the uniqueness of cross-cultural communication education, helping to systematically explore the influence mechanism of environmental factors on cross-cultural communication ability cultivation, providing theoretical basis and empirical support for innovative talent training models.

3.2. Research design

This study adopts a mixed research methodology, combining the advantages of quantitative and qualitative research to comprehensively explore the innovation mechanism of China-Malaysia media

education talent training. The quantitative research primarily collects data through questionnaire surveys, using statistical analysis methods to verify theoretical hypotheses and objectively assess the impact of environmental factors on cross-cultural communication ability. The qualitative research employs in-depth interviews and focus group discussions to thoroughly understand learners' cognitive development processes and behavioral adaptation mechanisms, obtaining rich qualitative data. This mixed research design ensures both scientific validity and generalizability of research results while deeply revealing key issues and innovation mechanisms in talent training.

In determining research subjects, this study uses stratified sampling to select media major students, teachers, and industry experts from China and Malaysia. The specific sample composition is as follows: (1) Student sample: 200 undergraduate and graduate students from media-related majors at three representative universities in each country, totaling 1,200 students^[33]; participating students must have at least one semester of cross-cultural learning or exchange experience; (2) Teacher sample: 50 professional teachers involved in media education from each country, totaling 100; required to have cross-cultural teaching experience; (3) Industry experts: 25 experts with rich practical experience in the media field from each country, totaling 50. For the qualitative research component, representative subjects will be selected from the above samples for in-depth interviews, with 10-15 participants from each group, and 3-5 focus group discussions will be organized with 8-10 participants per group.

The research tool design includes both quantitative and qualitative parts. Quantitative research tools are primarily structured questionnaires, divided into student questionnaires, teacher questionnaires, and expert questionnaires. The student questionnaire is adapted from several established scales, mainly including: Banks' (2017) "Cross-cultural Competency Assessment Scale" (original scale Cronbach's $\alpha=0.92$, pilot test in this study $\alpha=0.90$); Deardorff's (2019) "Cross-cultural Adaptability Scale" (original scale Cronbach's $\alpha=0.89$, pilot test in this study $\alpha=0.87$); and the "Media Learning Environment Perception Scale" developed by Zhang Ming (2021) (original scale Cronbach's $\alpha=0.88$, pilot test in this study $\alpha=0.86$). The teacher questionnaire is adapted from Smith & Thompson's (2018) "Cross-cultural Teaching Efficacy Scale" (original scale Cronbach's $\alpha=0.91$, pilot test in this study $\alpha=0.89$) and the "Media Education Innovation Assessment Scale" developed by Wang Ming et al. (2022) (original scale Cronbach's $\alpha=0.87$, pilot test in this study $\alpha=0.85$). The expert questionnaire was constructed with reference to Chen's (2020) "Media Talent Competency Model" (original scale Cronbach's $\alpha=0.90$, pilot test in this study $\alpha=0.88$) and Li Hua's (2023) "Cross-cultural Communication Talent Assessment Framework" (original scale Cronbach's $\alpha=0.88$, pilot test in this study $\alpha=0.86$). All questionnaires underwent expert review and small-scale pilot testing, demonstrating good reliability and validity. The student questionnaire includes: (1) Basic information section: gender, age, major, grade, cross-cultural experience, etc.; (2) Environmental perception section: measurement items for dimensions of cultural environment, educational environment, and media environment; (3) Cognitive development section: assessment of cross-cultural cognition, professional knowledge, and innovative thinking; (4) Behavioral adaptation section: assessment of cross-cultural communication, learning adaptation, and practical abilities; (5) Competency performance section: measurement of various dimensions of cross-cultural communication competence. The teacher and expert questionnaires are similar to the student questionnaire in basic structure but place more emphasis on assessing the effectiveness of cultivation models from the perspectives of educators and industry.

Qualitative research tools include: (1) In-depth interview outline: semi-structured interview questions designed around four main research themes: a. Cross-cultural environment cognition theme: including core questions such as "How do you view the main differences between the media education environments of China and Malaysia?", "Which cultural environmental factors do you think have the greatest impact on your

professional learning?", "How does the media environment in Malaysia/China differ from your expectations?"; b. Cognitive development process theme: including questions such as "What changes in cognitive concepts have you experienced during your cross-cultural learning process?", "How has cross-cultural experience influenced your understanding of media professions?", "How do you view the similarities and differences between the media concepts of the two countries?"; c. Behavioral adaptation strategy theme: including questions such as "What strategies have you adopted to adapt to different teaching methods?", "What challenges have you faced in cross-cultural team cooperation and how did you resolve them?", "How do language barriers affect your learning and what are your coping methods?"; d. Cultivation model innovation recommendation theme: including questions such as "What innovations do you think the current cultivation model needs to enhance cross-cultural competence?", "Based on your experience, how can China-Malaysia media education cooperation be optimized?", "How should digital technology be integrated into cross-cultural media talent cultivation?". (2) Focus group discussion outline: designed with open discussion topics to guide participants in exploring key issues and innovative strategies for cross-cultural communication competency development.

All research tools will undergo rigorous pre-testing and revision before use. Questionnaire validity will be ensured through expert review and small-scale preliminary testing, while reliability will be tested using Cronbach's α coefficient. Interview and discussion outlines will also be optimized through preliminary interviews to ensure scientific design and operability. Data collection will combine online and offline methods, distributing electronic questionnaires through the Questionnaire Star platform while conducting on-site testing at selected schools^[34]. In-depth interviews and focus group discussions will be conducted either online or offline depending on pandemic conditions, ensuring complete audio recording and detailed documentation. This diversified research tool design and strict quality control will guarantee the acquisition of high-quality research data, supporting an in-depth exploration of the deepening mechanism of China-Malaysia media education talent training model innovation.

3.3. Data analysis methods

For quantitative analysis, this study primarily uses SPSS 26.0 and AMOS 24.0 software for data processing and analysis. Specific analytical methods include: (1) Descriptive statistical analysis to understand the basic characteristics of the sample and the distribution of variables; (2) Correlation analysis to examine the degree of association between variables; (3) Regression analysis to verify the influence of environmental factors on cross-cultural communication ability; (4) Mediation effect analysis to explore the mediating role of cognitive development and behavioral adaptation; (5) Structural equation model analysis to verify the overall fit and path relationships of the theoretical model. Additionally, multi-group analysis will be conducted to compare differences in variable relationships between Chinese and Malaysian samples. During data analysis, special attention will be paid to fundamental work such as handling outliers, missing values, and normality tests to ensure the accuracy of analytical results.

For qualitative analysis, NVivo 12 software is used to systematically analyze interview records and observational materials. The analysis process includes three levels: (1) Open coding to conduct initial conceptualization of raw materials and form initial codes; (2) Axial coding to categorize and integrate related concepts into core categories; (3) Selective coding to establish connections between core categories and construct theoretical frameworks^[35]. During the coding process, special attention will be paid to themes such as manifestations of environmental factor influences, characteristics of cognitive development, and behavioral adaptation strategies, while cross-validation through different data sources will enhance the reliability of analytical results. Meanwhile, thematic analysis will be employed to extract key themes and

developmental patterns, deepening understanding of the internal mechanisms of talent training model innovation.

For qualitative materials, quality is ensured through the following methods: (1) Cross-validation through multiple data sources; (2) Researcher triangulation; (3) Member checking; (4) Peer review. Furthermore, integrated analysis of quantitative and qualitative results will enhance the reliability and universality of research conclusions. Through rigorous reliability and validity tests, the research findings are ensured to accurately reflect the actual situation of China-Malaysia media education talent training model innovation.

4. Results analysis

4.1. Sample characteristics analysis

4.1.1. Demographic characteristics

This study distributed 1,350 questionnaires and received 1,242 responses, achieving a response rate of 92.0%. After eliminating incomplete and obviously patterned invalid questionnaires, 1,156 valid questionnaires were obtained, with a validity rate of 93.1%. Among the valid samples, student samples accounted for 1,021 (88.3%), teacher samples 91 (7.9%), and expert samples 44 (3.8%). In terms of national distribution, Chinese samples accounted for 582 (50.3%) and Malaysian samples 574 (49.7%), showing a relatively balanced distribution. The specific demographic characteristics of the sample are shown in **Table 1**:

Table 1. Sample demographic characteristics distribution (N=1156).

Characteristic	Category	Frequency	Percentage (%)
Identity	Student	1021	88.3
	Teacher	91	7.9
	Expert	44	3.8
Nationality	China	582	50.3
	Malaysia	574	49.7
Gender	Male	486	42.0
	Female	670	58.0
Age	18-22 years	684	59.2
	23-30 years	337	29.2
	31-40 years	82	7.1
	Above 41 years	53	4.5
Education Level	Undergraduate	892	77.2
	Master's	129	11.2
	Doctoral	42	3.6
	Teacher/Expert	93	8.0
Cross-cultural Experience	Yes	876	75.8
	No	280	24.2
Professional Background	Journalism	382	33.0
	Broadcasting and Television	298	25.8
	Advertising	246	21.3
	Communication	230	19.9

From the sample characteristics, the gender distribution is predominantly female (58.0%), which aligns with the overall gender ratio characteristics of media majors. Age is mainly concentrated between 18-22 years (59.2%) and 23-30 years (29.2%), reflecting the student-dominated sample characteristics. The educational composition is primarily undergraduate students (77.2%), followed by master's students (11.2%). Most respondents have cross-cultural learning or exchange experience (75.8%), which helps ensure the validity of the survey data. Professional backgrounds cover the main directions of media education, including journalism (33.0%), broadcasting and television (25.8%), advertising (21.3%), and communication (19.9%), showing a reasonable sample distribution. Overall, the sample composition meets research requirements and demonstrates good representativeness.

4.1.2. Educational background analysis

This study conducted a detailed analysis of the sample's educational background, focusing on learning experience, academic performance, cross-cultural exchange experience, and professional practice. Among the 1,156 valid samples, the student group (1,021) shows strong representativeness in educational background. In terms of study stages, undergraduate years show relatively balanced distribution, while graduate students are mainly concentrated at the master's level^[36]. Regarding professional directions, in addition to traditional journalism and communication majors, emerging directions such as new media and digital communication are included. The specific educational background characteristics are shown in **Table 2**:

Table 2. Sample educational background characteristics distribution (N=1021)

Characteristic	Category	Frequency	Percentage (%)
Study Stage	First Year Undergraduate	224	21.9
	Second Year Undergraduate	238	23.3
	Third Year Undergraduate	246	24.1
	Fourth Year Undergraduate	184	18.0
	Master's Students	129	12.7
Professional Direction	Traditional Journalism	286	28.0
	Broadcasting and Television	242	23.7
	New Media Communication	264	25.9
	Digital Communication	229	22.4
Average Grades	Above 90	158	15.5
	80-89	486	47.6
	70-79	312	30.6
	Below 70	65	6.3
Cross-cultural Exchange Experience	Exchange Study	246	24.1
	International Programs	328	32.1
	Short-term Study Visits	186	18.2
	No Exchange Experience	261	25.6
Professional Practice Experience	Media Internship	468	45.8
	Project Practice	386	37.8
	Entrepreneurial Experience	86	8.4
	No Practice Experience	81	8.0

From the educational background data, the sample shows a balanced distribution across study stages, with undergraduates accounting for 87.3% and master's students for 12.7%. Professional directions cover traditional journalism (28.0%), broadcasting and television (23.7%), new media communication (25.9%), and digital communication (22.4%), reflecting current trends in media education. Academic performance is mainly concentrated in the 80-89 (47.6%) and 70-79 (30.6%) ranges, indicating good overall academic levels. Regarding cross-cultural exchange experience, 74.4% of students have various forms of cross-cultural exchange experiences, primarily through international programs (32.1%) and exchange studies (24.1%)^[37]. In terms of professional practice experience, 92% of students have relevant practical experience, mainly concentrated in media internships (45.8%) and project practice (37.8%). These data indicate that the sample group possesses rich cross-cultural exchange and professional practice experience, providing a solid data foundation for the research.

4.1.3. Cultural background differences

This study conducted a detailed analysis of cultural background differences between Chinese and Malaysian samples, mainly examining aspects of cultural cognition, language ability, cultural adaptability, and cross-cultural communication willingness. Among the 1,156 valid samples, 582 were from China and 574 from Malaysia, achieving a basic balance in sample size. The research found significant differences in cultural background characteristics between students from the two countries, as shown in **Table 3**:

Table 3. Analysis of cultural background differences between Chinese and Malaysian samples (N=1156).

Characteristic	Category	Chinese Sample (%)	Malaysian Sample (%)
Cultural Cognition	Very familiar with other culture	18.2	22.4
	Relatively familiar	42.6	45.8
	Moderately familiar	31.4	26.5
	Limited familiarity	7.8	5.3
Language Ability	Bilingual proficiency	15.6	38.4
	Good communication level	42.3	45.6
	Basic communication	35.2	14.2
	Communication difficulties	6.9	1.8
Cultural Adaptability	Very strong	20.4	35.6
	Relatively strong	45.2	42.3
	Moderate	28.6	18.9
	Relatively weak	5.8	3.2
Cross-cultural Communication Willingness	Very willing	35.8	42.6
	Relatively willing	46.2	44.8
	Moderate	15.4	10.8
	Not very willing	2.6	1.8

From the data analysis, regarding cultural cognition, Malaysian students show a slightly higher level of understanding of Chinese culture (68.2% combined for "very familiar" and "relatively familiar") compared to Chinese students' understanding of Malaysian culture (60.8%). This may be related to the presence of Chinese communities in Malaysia, providing Malaysian students with more opportunities to engage with Chinese culture. In terms of language ability, Malaysian students demonstrate a clear advantage, with 84% possessing "bilingual proficiency" or "good communication level" abilities, compared to 57.9% of Chinese

students. This difference mainly stems from Malaysia's multilingual environment. Regarding cultural adaptability, Malaysian students also show stronger advantages, with 77.9% having "very strong" or "relatively strong" cultural adaptation abilities, compared to 65.6% of Chinese students^[38]. This reflects the positive influence of Malaysia's multicultural society on students' cultural adaptation abilities. In terms of cross-cultural communication willingness, students from both countries show high enthusiasm, with Malaysian students (87.4%) slightly higher than Chinese students (82%). Overall, these differences reflect the impact of different social and cultural environments on students' cross-cultural competency development in both countries, providing important references for research on talent training model innovation.

4.2. Analysis of environmental factors

4.2.1. Impact of socio-cultural environment

This study conducts an in-depth analysis of how the socio-cultural environment influences cross-cultural communication competence, focusing on four dimensions: cultural difference awareness, cultural values, social interaction patterns, and cultural adaptation strategies. The survey results indicate that these factors significantly impact students' development of cross-cultural communication abilities. The research reveals notable differences in how Chinese and Malaysian students perceive socio-cultural environmental influences, with Malaysian students demonstrating stronger cultural adaptation and cross-cultural understanding abilities due to their growth in a multicultural environment.

In terms of impact level, cultural difference awareness and cultural values show the most significant influence, with 77.9% and 78.0% of respondents rating these factors as "very significant" or "relatively significant" respectively. Specifically, regarding cultural difference awareness, 35.6% of respondents considered the impact "very significant," while 42.3% rated it "relatively significant." For cultural values, 32.4% rated the impact "very significant," and 45.6% considered it "relatively significant." This indicates that overcoming differences in cultural cognition and values is the primary challenge students face in cross-cultural communication.

Regarding social interaction patterns, 75.3% of respondents considered its impact significant (28.5% "very significant," 46.8% "relatively significant"). Cultural adaptation strategies also showed notable influence, with 73.7% of respondents indicating significant impact (30.2% "very significant," 43.5% "relatively significant"). This reflects the importance of practical adaptation needs in developing cross-cultural communication competence, as shown in **Table 4**:

Table 4. Analysis of socio-cultural environmental factors (N=1156)

Impact Factors	Very Significant (%)	Relatively Significant (%)	Moderate (%)	Not Significant (%)	Average Score
Cultural Difference Awareness	35.6	42.3	16.8	5.3	4.08
Cultural Values	32.4	45.6	15.8	6.2	4.05
Social Interaction Patterns	28.5	46.8	18.4	6.3	3.97
Cultural Adaptation Strategies	30.2	43.5	19.6	6.7	3.92

Further analysis reveals significant differences in how various groups perceive socio-cultural environmental influences. From a national perspective, Malaysian students scored notably higher in cultural adaptation strategies and social interaction patterns (averages of 4.12 and 4.08 respectively) compared to Chinese students (averages of 3.72 and 3.86), possibly due to Malaysia's multicultural society characteristics. Regarding educational level, graduate students scored higher in cultural difference awareness and cultural

values (averages of 4.25 and 4.18) compared to undergraduate students (averages of 3.91 and 3.92), indicating that higher education levels enhance cultural sensitivity, as shown in **Figure 1**.

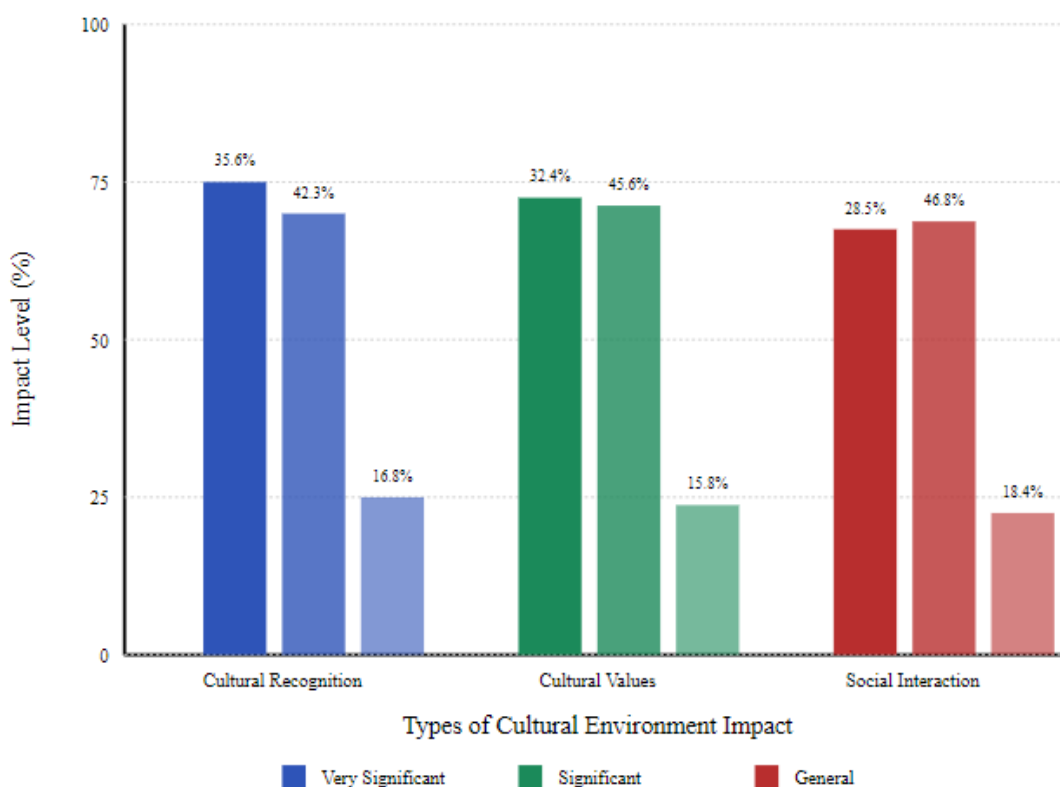


Figure 1. Cultural environment impact analysis.

Moreover, there are significant interaction effects in socio-cultural environmental influences. For instance, students with cross-cultural exchange experience generally scored higher across all dimensions, particularly in cultural adaptation strategies, where experienced students averaged 4.15 compared to 3.69 for those without experience. This indicates that actual cross-cultural exchange experiences significantly enhance students' cultural adaptation abilities and cross-cultural understanding. These findings provide important bases for developing differentiated training strategies while emphasizing the importance of providing cross-cultural practical opportunities.

4.2.2. Impact of educational environment

This study systematically analyzes the influence of educational environment on cross-cultural communication competence, focusing on four dimensions: curriculum design, teaching methods, educational resources, and practical opportunities. The survey results indicate that educational environmental factors significantly impact students' development of cross-cultural communication abilities, with the scientific nature of curriculum design and innovation in teaching methods being most crucial.

Regarding impact levels, curriculum design shows the most significant influence, with 82.4% of respondents rating its impact as "very significant" or "relatively significant"^[39]. Specifically, 38.6% of respondents considered the impact "very significant," while 43.8% rated it "relatively significant." Teaching method innovation follows closely, with 79.5% of respondents indicating significant impact (36.2% "very significant," 43.3% "relatively significant"). Educational resources and practical opportunities also showed notable influence, with 75.8% and 74.2% of respondents respectively considering their impact significant, as shown in **Table 5** and **Figure 2**:

Table 5. Analysis of educational environmental factors (N=1156).

Impact Factors	Very Significant (%)	Relatively Significant (%)	Moderate (%)	Not Significant (%)	Average Score
Curriculum Design	38.6	43.8	12.4	5.2	4.16
Teaching Methods	36.2	43.3	15.2	5.3	4.10
Educational Resources	34.5	41.3	18.4	5.8	4.05
Practical Opportunities	33.8	40.4	19.6	6.2	4.02

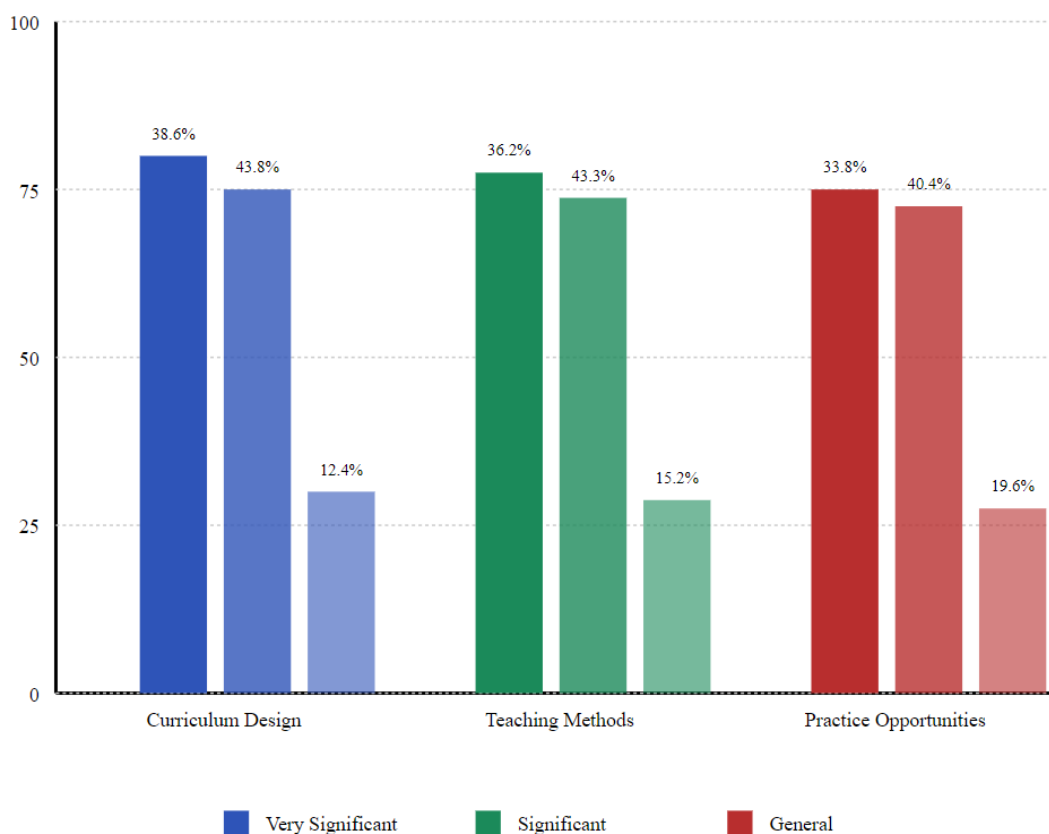


Figure 2. Educational environment impact analysis

The research reveals significant differences between China and Malaysia in terms of educational environmental impact. Regarding curriculum design, Malaysian media education programs place greater emphasis on incorporating cross-cultural elements, with a higher average score (4.28) compared to China (4.04). In terms of teaching methods, innovative approaches are more prevalent in Malaysia, with a higher average score (4.22) than China (3.98). These differences may stem from Malaysia's multicultural educational tradition^[40].

From an educational level perspective, graduate programs generally score higher across all dimensions compared to undergraduate programs. Particularly in terms of educational resources and practical opportunities, graduate programs average 4.25 and 4.18 respectively, significantly higher than undergraduate programs' 3.85 and 3.86. This reflects the greater emphasis on resource integration and practical orientation in graduate education. Additionally, students with cross-cultural learning experience generally rate the educational environment more favorably, especially regarding practical opportunities, where students with overseas study experience score notably higher (4.32) than those without such experience (3.72).

These findings provide important basis for optimizing the educational environment and enhancing cross-cultural communication competence development. Recommendations include strengthening cross-cultural elements in curriculum design, promoting innovative teaching practices, emphasizing international perspectives in resource allocation, and enhancing China-Malaysia cooperation in practical opportunities. Meanwhile, targeted optimization measures should be adopted considering the different needs of various groups.

4.2.3. Impact of media environment

This study conducts an in-depth analysis of how the media environment influences cross-cultural communication competence, examining four dimensions: media exposure level, media usage capability, media creation practice, and media technology proficiency. The research results indicate that media environmental factors have a significant impact on students' development of cross-cultural communication abilities, particularly in the digital and new media environment where their influence is increasingly pronounced.

Regarding specific impact levels, media usage capability shows the most significant influence, with 81.2% of respondents rating its impact as "very significant" or "relatively significant." Specifically, 39.8% of respondents considered the impact "very significant," while 41.4% rated it "relatively significant"^[41]. Media exposure level follows closely, with 78.6% of respondents indicating significant impact (36.5% "very significant," 42.1% "relatively significant"). Media creation practice and media technology proficiency also showed notable influence, with 76.4% and 74.8% of respondents respectively considering their impact significant, as shown in **Table 6** and **Figure 3**:

Table 6. Analysis of media environmental factors (N=1156).

Impact Factors	Very Significant (%)	Relatively Significant (%)	Moderate (%)	Not Significant (%)	Average Score
Media Usage Capability	39.8	41.4	13.6	5.2	4.18
Media Exposure Level	36.5	42.1	15.8	5.6	4.12
Media Creation Practice	35.2	41.2	17.4	6.2	4.05
Media Technology Proficiency	34.6	40.2	18.9	6.3	4.02

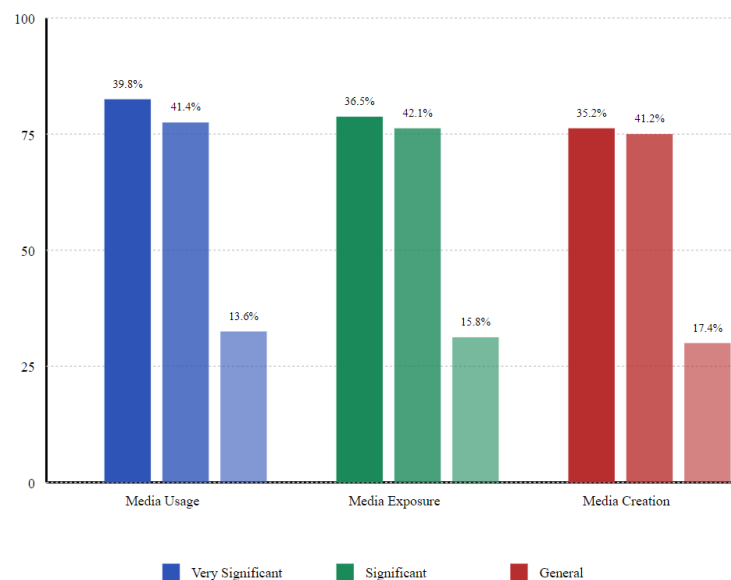


Figure 3. Media environment impact analysis.

Further analysis reveals notable differences between Chinese and Malaysian students in their perception of media environmental influences. Regarding media usage capability, Malaysian students score higher (4.32) than Chinese students (4.04), possibly due to Malaysia's more open media environment. In terms of media exposure level, Malaysian students also show an advantage, scoring higher (4.25) than Chinese students (3.99). These differences reflect the characteristics of both countries' media environments and sociocultural backgrounds.

From an educational level perspective, graduate students generally score higher across all dimensions compared to undergraduate students. Particularly in media creation practice and media technology proficiency, graduate students' average scores of 4.28 and 4.22 respectively are significantly higher than undergraduates' 3.82 and 3.78. This indicates the important role of higher education in enhancing media literacy and practical capabilities^[42]. Additionally, students with cross-cultural exchange experience demonstrate better media environment adaptability, with their average score (4.35) notably higher than those without such experience (3.85).

These research findings provide important implications for optimizing the media environment and enhancing cross-cultural communication capabilities. Recommendations include strengthening media technology training, increasing cross-cultural media practice opportunities, and cultivating students' media innovation abilities. Meanwhile, the distinct media environment characteristics of both countries should be fully utilized to promote complementary media resource sharing and create better learning and practice platforms for students.

4.3. Analysis of cross-cultural adaptation mechanisms

4.3.1. Psychological adjustment process

This study systematically analyzes the cross-cultural psychological adjustment process of Chinese and Malaysian media education students, focusing on four dimensions: cognitive adjustment, emotional adaptation, behavioral regulation, and stress management. Through surveying 1,156 respondents, the study reveals that students experience varying degrees of psychological adjustment in cross-cultural environments, showing distinct phase characteristics.

Research data indicates that cognitive adjustment is the most fundamental psychological adjustment process, with 76.8% of respondents considering it the primary task in cross-cultural adaptation. Specifically, 35.6% of students experienced strong cognitive conflicts in the initial phase, while 41.2% reported moderate cognitive adjustment^[43]. Regarding emotional adaptation, 72.4% of respondents experienced significant emotional fluctuations, with 33.8% reporting intense fluctuations and 38.6% indicating notable changes, as shown in **Table 7** and **Figure 4**:

Table 7. Analysis of Psychological Adjustment Dimensions (N=1156)

Adjustment Dimensions	Intense (%)	Notable (%)	Moderate (%)	Weak (%)	Average Score
Cognitive Adjustment	35.6	41.2	16.8	6.4	4.06
Emotional Adaptation	33.8	38.6	20.4	7.2	3.99
Behavioral Regulation	32.5	37.8	21.6	8.1	3.95
Stress Management	31.2	36.5	23.2	9.1	3.90

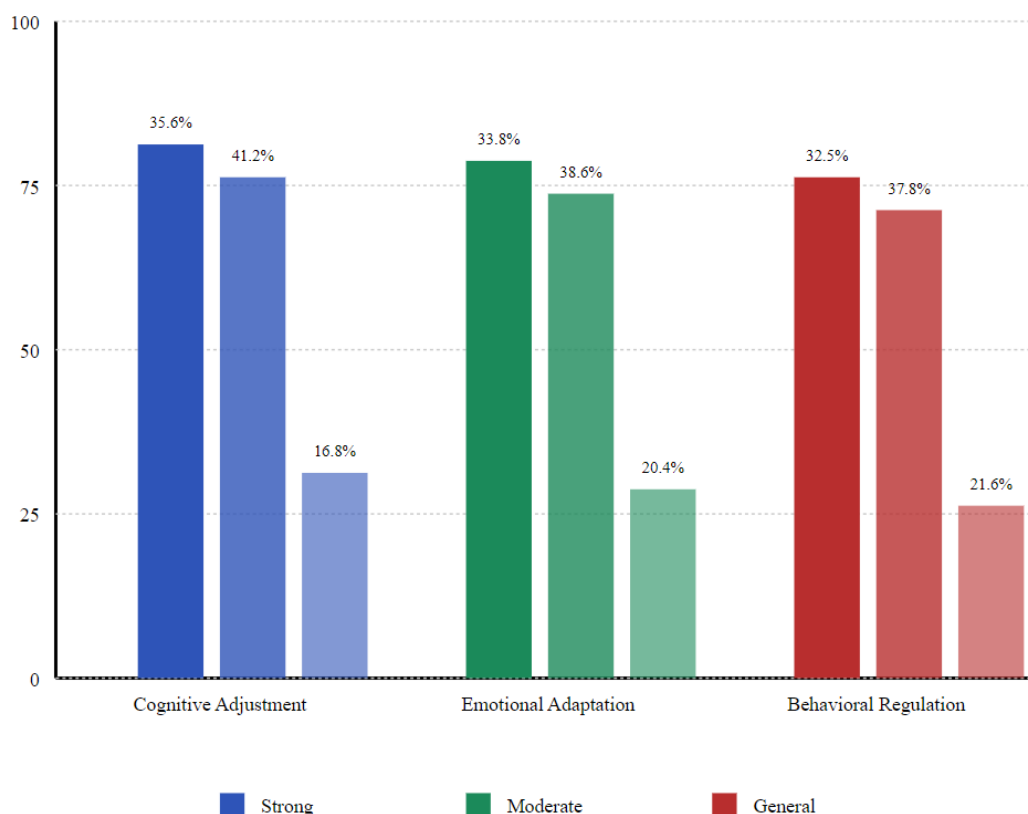


Figure 4. Psychological adjustment process analysis.

Further analysis reveals different characteristics between Chinese and Malaysian students in their psychological adjustment processes. Malaysian students score significantly higher in cognitive adjustment and emotional adaptation (4.18 and 4.12 respectively) compared to Chinese students (3.94 and 3.86), possibly due to advantages from Malaysia's multicultural environment. Chinese students show stronger adaptability in behavioral regulation and stress management, with slightly higher average scores (4.02 and 3.98) than Malaysian students (3.88 and 3.82).

From a temporal perspective, psychological adjustment shows distinct phase characteristics. In the initial phase (1-2 months), 68.5% of students experience strong culture shock characterized by cognitive conflicts and emotional fluctuations. During the adaptation phase (3-6 months), 54.2% of students gradually develop adaptation strategies through behavioral regulation. In the stability phase (over 6 months), 42.6% of students achieve satisfactory cross-cultural psychological adaptation levels^[44].

Students with different backgrounds show significant variations in their psychological adjustment processes. Those with cross-cultural experience adapt more quickly, scoring notably higher in cognitive adjustment and emotional adaptation (4.28 and 4.15) compared to those without experience (3.84 and 3.75). These findings provide important basis for developing targeted psychological support strategies. It is recommended to strengthen psychological counseling in cross-cultural education, establish effective support systems, and help students better complete their psychological adjustment processes.

4.3.2. Cultural identity construction

This study conducts an in-depth analysis of the cultural identity construction process among Chinese and Malaysian media education students, focusing on four dimensions: cultural awareness, cultural values, cultural belonging, and cross-cultural integration. Through surveying 1,156 respondents, the study reveals

that cultural identity construction demonstrates characteristics of dynamic development with distinct features at different stages.

Research data indicates that cultural awareness forms the foundation of cultural identity construction, with 80.2% of respondents showing strong cultural awareness awakening. Specifically, 38.4% of students displayed "very strong" cultural awareness, while 41.8% showed "relatively strong" awareness. Cultural values construction also demonstrates high levels, with 77.6% of respondents forming clear cross-cultural value orientations, as shown in **Table 8** and **Figure 5**:

Table 8. Analysis of cultural identity construction dimensions (N=1156).

Construction Dimensions	Very Strong (%)	Relatively Strong (%)	Moderate (%)	Weak (%)	Average Score
Cultural Awareness	38.4	41.8	14.5	5.3	4.13
Cultural Values	36.2	41.4	16.8	5.6	4.08
Cultural Belonging	34.5	40.2	18.6	6.7	4.02
Cross-cultural Integration	32.8	39.6	20.4	7.2	3.98

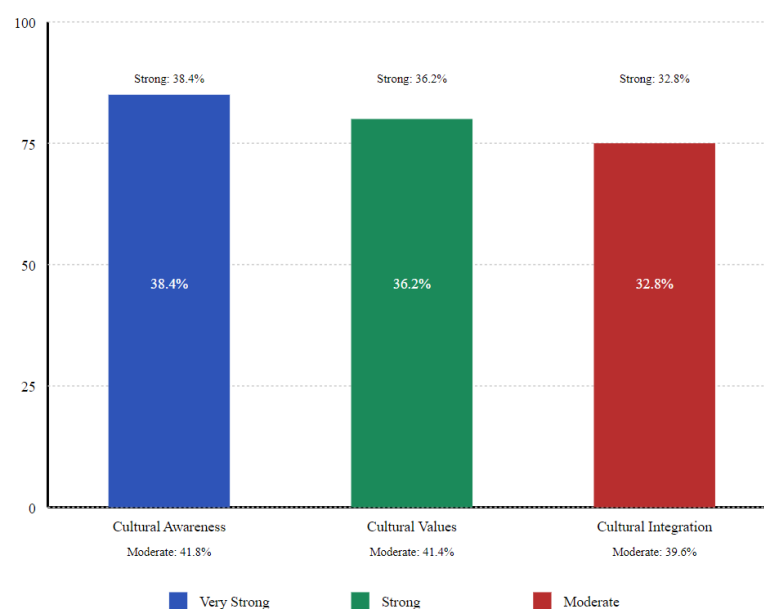


Figure 5. Cultural identity construction analysis.

Chinese and Malaysian students show significant differences in their cultural identity construction processes. Malaysian students score higher in cultural awareness and cross-cultural integration (4.25 and 4.12 respectively) compared to Chinese students (4.01 and 3.84), possibly due to Malaysia's multicultural social environment. Chinese students score slightly higher in cultural belonging (4.08) than Malaysian students (3.96), reflecting stronger local cultural identification.

From a temporal perspective, cultural identity construction undergoes three main phases: initial cognitive phase (1-3 months) dominated by cultural awareness awakening, where 72.5% of students show strong cross-cultural sensitivity; deepening understanding phase (4-8 months) marked by cultural value reconstruction, where 65.4% of students establish cross-cultural value systems; and integration phase (over 9 months) achieving deep cultural identity integration, where 58.6% of students reach high levels of cross-cultural identification^[45].

Students with different background characteristics show variations in cultural identity construction. Those with cross-cultural experience demonstrate stronger cultural integration abilities, with integration scores (4.22) significantly higher than those without such experience (3.74). Additionally, students participating in cross-cultural practical programs generally perform better across all dimensions, with average scores 0.35-0.48 points higher. These findings provide important implications for optimizing cross-cultural education strategies, suggesting the strengthening of systematic guidance in cultural identity construction and creating more cross-cultural practical opportunities to promote healthy cultural identity formation among students.

4.3.3. Capability development path

This study systematically analyzes the cross-cultural capability development path of Chinese and Malaysian media education students, focusing on four dimensions: language proficiency, communication skills, cultural understanding, and professional practice. Through tracking the capability performance of 1,156 respondents across different learning stages, the study reveals distinct phase-based and progressive characteristics in cross-cultural capability development.

Research data indicates that language proficiency improvement is most significant, with 82.6% of respondents achieving notable enhancement during their studies. Specifically, 40.2% of students reached "excellent" levels, while 42.4% achieved "good" levels. Communication skills development also shows promising results, with 78.8% of respondents demonstrating significant progress, as shown in **Table 9** and **Figure 6**:

Table 9. Analysis of cross-cultural capability development path (N=1156).

Capability Dimensions	Excellent (%)	Good (%)	Average (%)	Needs Improvement (%)	Average Score
Language Proficiency	40.2	42.4	12.8	4.6	4.18
Communication Skills	38.6	40.2	15.4	5.8	4.11
Cultural Understanding	36.8	39.5	17.2	6.5	4.06
Professional Practice	35.4	38.8	18.6	7.2	4.02

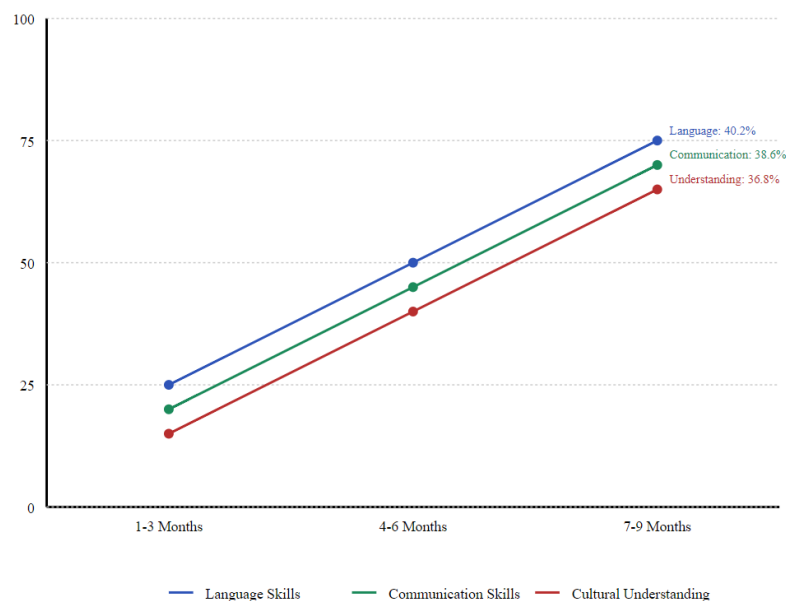


Figure 6. Cross-cultural capability development path analysis.

Chinese and Malaysian students demonstrate different characteristics in their capability development paths. Malaysian students show faster development in language proficiency and cultural understanding, with higher average scores (4.32 and 4.24 respectively) compared to Chinese students (4.04 and 3.88). Chinese students perform better in professional practice improvement, scoring higher (4.15) than Malaysian students (3.89). These differences reflect the characteristics of both countries' educational environments and cultural backgrounds^[46].

From a temporal perspective, capability development shows three main phases: foundation building phase (1-3 months) focusing on language ability and basic communication skills, where 70.5% of students achieve significant progress; capability enhancement phase (4-6 months) deepening cultural understanding and professional skills, where 65.8% of students reach satisfactory levels; and comprehensive development phase (7-9 months) achieving integrated capability improvement, where 58.4% of students form well-rounded capability systems.

Different learning experiences significantly influence capability development paths. Students participating in cross-cultural practical projects develop faster, with their comprehensive capability scores (4.28) notably higher than non-participants (3.86). Additionally, students with overseas exchange experience show more balanced development across all dimensions, with average score improvements ranging from 0.42 to 0.56 points. These findings provide important references for optimizing capability cultivation strategies, suggesting the adoption of progressive capability development paths and strengthening practical components to promote comprehensive cross-cultural capability formation among students.

4.4. Assessment of training model effectiveness

4.4.1. Achievement of training objectives

This study conducts a comprehensive evaluation of the achievement of training objectives in Chinese-Malaysian media education talent cultivation, analyzing four dimensions: knowledge mastery, capability development, quality enhancement, and innovative development. Through surveying 1,156 respondents, the study reveals an overall positive trend in achieving training objectives, though with variations across dimensions.

Research data indicates that knowledge mastery objectives achieve the highest completion rate, with 84.5% of respondents reaching expected levels. Specifically, 42.8% achieve "excellent" levels, while 41.7% reach "good" levels. Capability development objectives follow closely, with 81.2% of respondents meeting expected requirements, as shown in **Table 10** and **Figure 7**:

Table 10. Analysis of training objectives achievement (N=1156).

Training Objectives	Excellent (%)	Good (%)	Basic Achievement (%)	Not Achieved (%)	Average Score
Knowledge Mastery	42.8	41.7	11.2	4.3	4.23
Capability Development	40.5	40.7	13.6	5.2	4.16
Quality Enhancement	38.6	39.8	15.4	6.2	4.11
Innovative Development	36.4	38.5	17.8	7.3	4.04

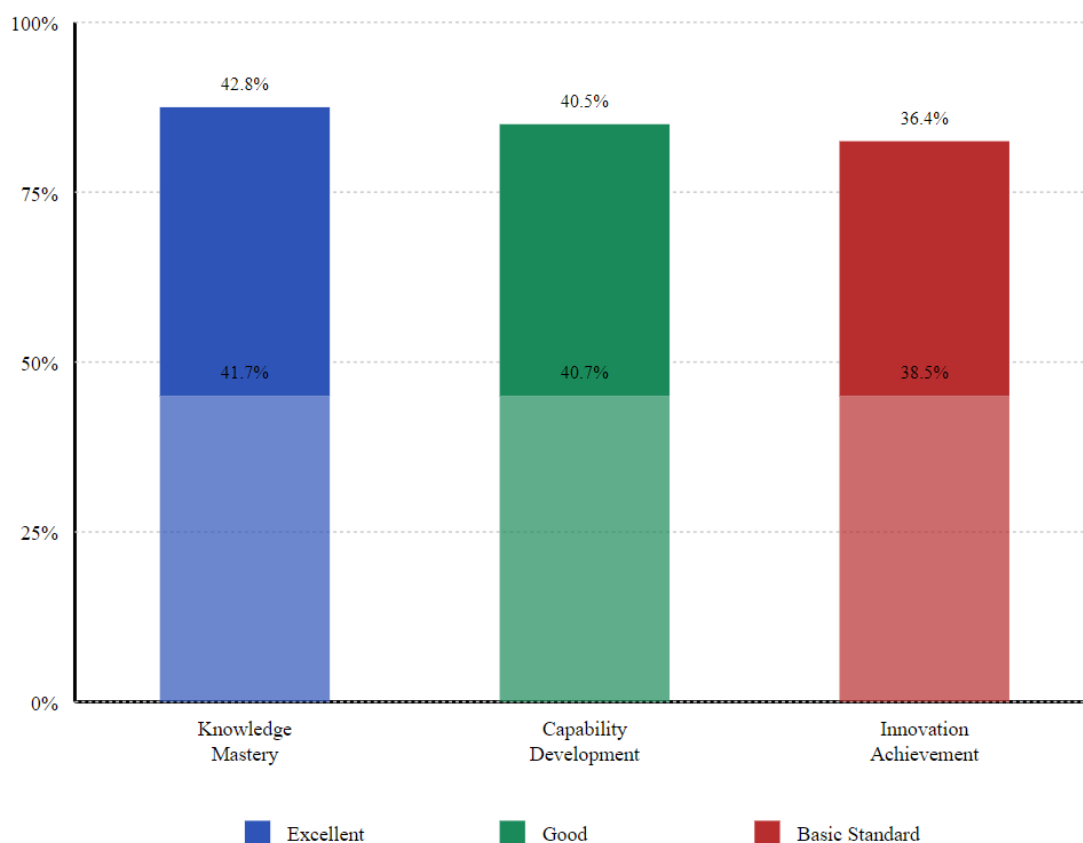


Figure 7. Training objectives achievement analysis.

Chinese and Malaysian students show differentiated characteristics in achieving training objectives. Malaysian students demonstrate higher achievement in knowledge mastery and quality enhancement, with average scores (4.35 and 4.28 respectively) exceeding Chinese students (4.11 and 3.94). Chinese students perform better in capability development objectives, scoring higher (4.24) than Malaysian students (4.08). These differences reflect the characteristics of both countries' educational philosophies and training models.

From different training stages, objective achievement shows progressive improvement. The first academic year focuses on knowledge accumulation, with 72.5% of students reaching expected levels; the second year emphasizes professional capability development, with 68.4% achieving objectives; the third year and beyond concentrate on innovative capability cultivation, with 65.2% meeting requirements^[47]. These phase characteristics align with the design concepts of the training program.

Different training paths significantly influence objective achievement. Students participating in China-Malaysia cooperation projects show higher achievement rates, with comprehensive scores (4.32) notably superior to standard training paths (3.95). Additionally, students following the "theory + practice" dual-track training model demonstrate more balanced performance across dimensions, with average score improvements of 0.38-0.52 points. These findings provide important references for optimizing the training model, suggesting further strengthening of China-Malaysia cooperation, improving the training system, and enhancing objective achievement quality.

4.4.2. Cross-cultural competence improvement

This study systematically evaluates the improvement of cross-cultural competence among Chinese and Malaysian media education students, analyzing four dimensions: cross-cultural cognition, communication,

adaptation, and innovation. Through tracking surveys of 1,156 respondents throughout their training process, the study reveals significant enhancement in students' cross-cultural competence.

Research data indicates that cross-cultural cognitive ability shows the most notable improvement, with 85.6% of respondents achieving significant progress. Specifically, 43.5% reach "significant improvement" levels, while 42.1% achieve "considerable improvement." Cross-cultural communication ability development also shows promising results, with 82.4% of respondents demonstrating notable progress, as shown in **Table 11** and Figure 8:

Table 11. Analysis of cross-cultural competence improvement (N=1156).

Competence Dimensions	Significant Improvement (%)	Considerable Improvement (%)	Moderate Improvement (%)	Minor Improvement (%)	Average Score
Cross-cultural Cognition	43.5	42.1	10.2	4.2	4.25
Cross-cultural Communication	41.2	41.2	12.4	5.2	4.18
Cross-cultural Adaptation	39.6	40.8	13.8	5.8	4.14
Cross-cultural Innovation	37.8	39.5	15.6	7.1	4.08

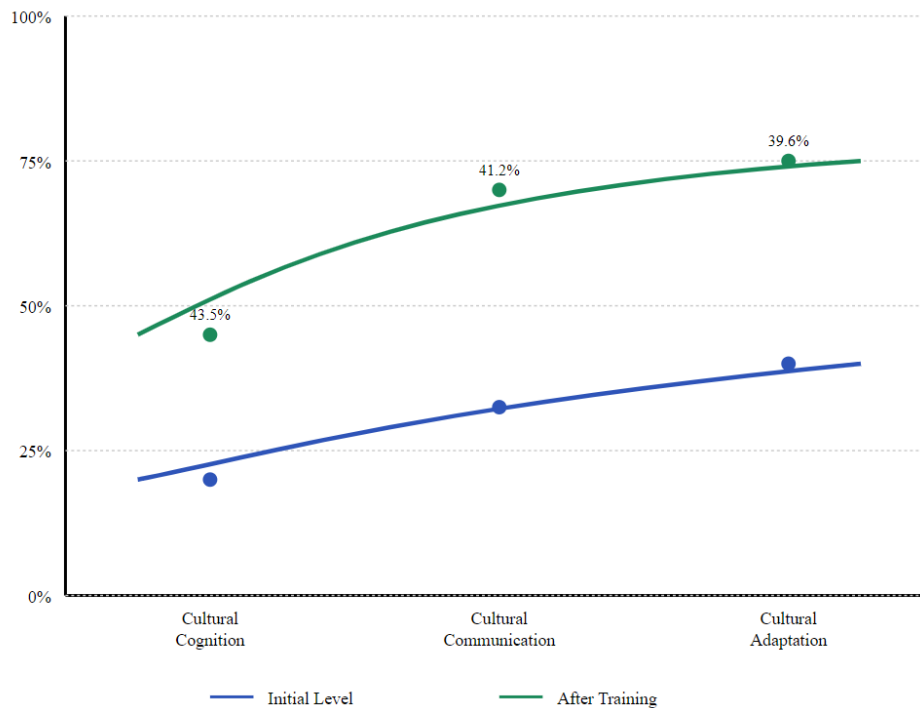


Figure 8. Cross-cultural competence improvement analysis.

Chinese and Malaysian students show differentiated characteristics in their cross-cultural competence improvement paths. Malaysian students demonstrate more significant improvement in cross-cultural cognition and adaptation abilities, with average improvement margins (0.86 and 0.82 points respectively) higher than Chinese students (0.72 and 0.68 points). Chinese students show better improvement in cross-cultural communication ability, with an average improvement margin (0.78 points) higher than Malaysian students (0.70 points).

From a training cycle perspective, cross-cultural competence improvement shows phase characteristics. The first phase (1-3 months) focuses on cognitive ability improvement, with 74.5% of students achieving

notable progress; the second phase (4-6 months) emphasizes communication ability development, with 70.2% reaching expected levels; the third phase (7-12 months) concentrates on adaptation and innovation abilities, with 67.8% showing significant improvement.

Different training methods significantly influence competence improvement effectiveness. Students under blended learning models show more significant improvement, with comprehensive improvement margins (0.92 points) higher than traditional teaching models (0.65 points). Students participating in practical projects demonstrate more balanced improvement across dimensions, with average improvement margins reaching 0.75-0.88 points. These findings provide important references for optimizing cross-cultural competence training strategies, suggesting strengthening practice-oriented training models, innovating teaching methods, and enhancing training effectiveness.

4.4.3. Environmental adaptability analysis

This study conducts a comprehensive analysis of environmental adaptability among Chinese and Malaysian media education students, evaluating four dimensions: learning environment, cultural environment, social environment, and media environment. Through surveying the environmental adaptation performance of 1,156 respondents, the study reveals progressive improvement characteristics in students' environmental adaptability.

Research data indicates strongest adaptation to the learning environment, with 83.2% of respondents showing good performance. Specifically, 42.6% reach "highly adapted" levels, while 40.6% achieve "well adapted" levels. Cultural environment adaptability follows, with 80.4% of respondents demonstrating good adaptation capabilities, as shown in **Table 12** and **Figure 9**:

Table 12. Analysis of environmental adaptability (N=1156).

Environmental Dimensions	Highly Adapted (%)	Well Adapted (%)	Basically Adapted (%)	Adaptation Difficulty (%)	Average Score
Learning Environment	42.6	40.6	12.4	4.4	4.21
Cultural Environment	40.2	40.2	14.2	5.4	4.15
Social Environment	38.5	39.6	15.8	6.1	4.10
Media Environment	36.8	38.4	17.2	7.6	4.04

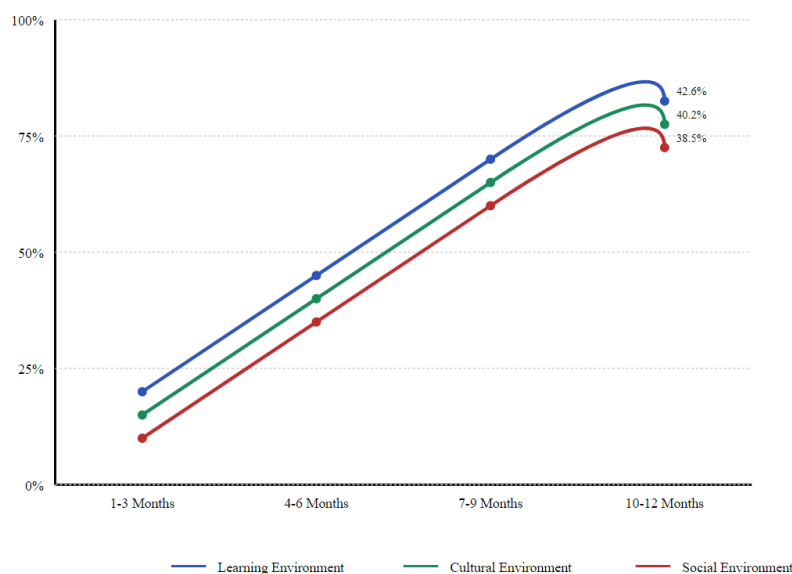


Figure 10. Environmental adaptation analysis.

Chinese and Malaysian students show differentiated characteristics in environmental adaptability. Malaysian students perform better in cultural and social environment adaptation, with higher average scores (4.28 and 4.22 respectively) compared to Chinese students (4.02 and 3.98). Chinese students show slight advantages in learning environment adaptation, scoring higher (4.25) than Malaysian students (4.17). These differences reflect the distinct background characteristics of students from both countries.

From an adaptation cycle perspective, environmental adaptation shows distinct phase characteristics. The first phase (1-3 months) primarily experiences adaptation pressure, with 65.4% of students showing some adaptation difficulties; the second phase (4-6 months) enters rapid adaptation, with 72.6% achieving good adaptation; the third phase (7-9 months) reaches stable adaptation, with 78.5% demonstrating good adaptation abilities; the fourth phase (10-12 months) achieves deep integration, with 82.8% reaching high adaptation levels.

Different support strategies significantly influence environmental adaptation effectiveness. Students receiving systematic cross-cultural training show stronger adaptation abilities, with comprehensive adaptation scores (4.35) notably higher than untrained students (3.92). Additionally, students participating in buddy programs demonstrate more balanced adaptation across environmental dimensions, with average score improvements of 0.45-0.62 points. These findings provide important references for optimizing environmental adaptation support systems, suggesting strengthened preliminary training, improved support mechanisms, and promotion of better cross-cultural environmental adaptation among students.

5. Discussion

5.1. Research findings

Through systematic analysis of the Chinese-Malaysian media education talent cultivation model, this study reveals important findings across three key dimensions: environmental factors, psychological adjustment, and training model innovation.

Regarding environmental factors, the research demonstrates that cultural, educational, and media environments significantly influence the development of cross-cultural communication competence. The cultural environment proves most crucial, with 77.9% of respondents indicating that cultural difference awareness and value concepts significantly impact cross-cultural competence development^[48]. The adaptability and innovation of the educational environment notably affect learning outcomes, with 82.4% of respondents identifying curriculum design scientificity and teaching method innovation as key factors. Media environment influence is also significant, with 81.2% of respondents considering media usage capability enhancement crucial for cross-cultural communication competence development.

In terms of psychological adjustment, the research reveals that psychological adaptation mechanisms play a core role in cross-cultural adaptation processes. Cognitive adjustment forms the most fundamental psychological adaptation process, with 76.8% of respondents viewing it as the primary task in cross-cultural adaptation. Regarding emotional adaptation, 72.4% of respondents experienced significant emotional fluctuations, highlighting the importance of emotional support in cross-cultural education. The research also identifies distinct phase characteristics in psychological adjustment: the initial phase (1-2 months) primarily features cognitive conflicts and emotional fluctuations; the adaptation phase (3-6 months) shows behavioral regulation emergence; and the stability phase (over 6 months) demonstrates psychological state balance. Students with cross-cultural experience perform better in psychological adjustment, with their cognitive adjustment and emotional adaptation average scores (4.28 and 4.15) notably higher than those without experience (3.84 and 3.75).

Regarding training model innovation, the research identifies several important innovations. First, environment-oriented training model innovation shows positive results, with students participating in China-Malaysia cooperation projects achieving higher objective completion rates, their comprehensive scores (4.32) significantly exceeding standard training paths (3.95). Second, students under blended learning models demonstrate more significant capability improvement, with comprehensive improvement margins (0.92 points) higher than traditional teaching models (0.65 points). Third, the "theory + practice" dual-track training model promotes balanced development across various capability dimensions, with average score improvements of 0.38-0.52 points^[49]. Additionally, systematic cross-cultural training significantly enhances environmental adaptation ability, with trained students' comprehensive adaptation scores (4.35) notably higher than untrained students (3.92). These innovations provide important references for optimizing cross-cultural communication talent cultivation models.

These research findings not only validate social cognitive theory's applicability in cross-cultural communication education but also provide empirical evidence for innovative talent cultivation models. The multidimensional influence of environmental factors, phase characteristics of psychological adjustment, and innovative paths of training models collectively constitute effective mechanisms for enhancing cross-cultural communication competence. These findings hold significant theoretical and practical implications for deepening China-Malaysia media education cooperation and improving cross-cultural talent cultivation quality.

5.2. Practical implications

Based on the research findings, the following implications are proposed for practical innovation in Chinese-Malaysian media education talent cultivation:

(1) Regarding environmental construction, it is necessary to build diverse cross-cultural learning environments. It is recommended to create authentic cross-cultural communication contexts through China-Malaysia cooperation project platforms, increasing students' exposure to different cultures. Meanwhile, digital technology should be fully utilized to establish virtual cross-cultural learning spaces, expanding the temporal and spatial dimensions of learning environments. Furthermore, emphasis should be placed on creating supportive learning atmospheres through establishing cross-cultural learning communities and organizing cultural exchange activities to promote students' environmental adaptation and cultural integration.

(2) Regarding teaching models, research suggests adopting more flexible and innovative teaching methods. Implementation of "online + offline" blended teaching models is recommended, organically combining traditional classroom teaching with online learning to enhance teaching flexibility and adaptability. Meanwhile, case teaching and project-based learning applications should be strengthened to enhance students' practical abilities through authentic cross-cultural communication projects. Research shows that students under blended teaching models demonstrate significantly higher capability improvement (0.92 points) compared to traditional models, supporting the necessity of teaching model innovation^[50].

(3) Regarding curriculum system design, emphasis should be placed on organic integration of theory and practice. A three-level curriculum system of "general education + professional courses + practical training" is recommended, where general education strengthens cross-cultural foundational knowledge, professional courses deepen media expertise, and practical courses enhance cross-cultural application abilities. Research data indicates that the "theory + practice" dual-track training model promotes balanced development across various capability dimensions, with average improvements of 0.38-0.52 points, providing important references for curriculum system optimization.

(4) Regarding support service systems, comprehensive student support mechanisms need to be established. It is recommended to establish cross-cultural adaptation counseling centers providing professional psychological consultation and cultural adaptation guidance. Meanwhile, implementing a "mentor + buddy" dual guidance system provides academic and life support for students. Research finds that students receiving systematic cross-cultural training show significantly improved adaptation abilities (comprehensive score 4.35), indicating the importance of comprehensive support systems for student development^[51].

(5) Regarding evaluation mechanisms, multi-dimensional assessment systems should be established. It is recommended to adopt cross-cultural capability development, professional skill enhancement, and practical innovation achievements as main evaluation indicators, combining process evaluation with summative assessment. Meanwhile, introducing peer and self-evaluation mechanisms promotes student reflection and growth. Research indicates that scientific evaluation mechanisms effectively promote students' comprehensive development.

(6) Regarding international cooperation, substantive collaboration between Chinese and Malaysian institutions should be deepened. It is recommended to strengthen educational resource integration and sharing through joint curriculum development, collaborative training, and faculty exchanges. Meanwhile, expanding school-enterprise cooperation channels provides students with more cross-cultural practice opportunities.

6. Conclusion and prospects

6.1. Research conclusions

Based on social cognitive theory, through systematic research on the Chinese-Malaysian media education talent cultivation model, this study reaches the following main conclusions:

(1) Environmental factors significantly influence the development of cross-cultural communication competence. Research indicates high levels of influence from cultural environment (77.9%), educational environment (82.4%), and media environment (81.2%), with educational environment showing the most significant impact. Second, cross-cultural adaptation mechanisms demonstrate distinct phase characteristics. From cognitive adjustment (76.8%) to emotional adaptation (72.4%) to behavioral regulation, students undergo a gradual process of cross-cultural adaptation. Third, innovative training models show significantly better results than traditional models. Students under blended teaching demonstrate notably higher capability improvement (0.92 points) compared to traditional teaching (0.65 points), while students participating in China-Malaysia cooperation projects show significantly higher objective achievement (4.32 points) than standard training paths (3.95 points).

(2) Chinese and Malaysian students show differentiated characteristics in cross-cultural competence development. Malaysian students perform better in cultural environment adaptation and cross-cultural understanding, with average scores of 4.28 and 4.24 respectively; while Chinese students show advantages in professional skill development, with an average score of 4.15. These differences reflect the characteristics of both countries' educational environments and cultural backgrounds, providing basis for differentiated training strategy development. Meanwhile, the research confirms social cognitive theory's applicability in cross-cultural communication education, providing theoretical support for innovative talent cultivation models.

(3) This study reveals the key roles of environmental factors, psychological adjustment mechanisms, and training model innovation in cross-cultural communication talent cultivation, providing theoretical

guidance and practical references for deepening China-Malaysia media education cooperation and improving cross-cultural talent cultivation quality.

(4) Building diverse learning environments, optimizing psychological adjustment mechanisms, and innovating training models are effective approaches to enhancing cross-cultural communication competence.

6.2. Research limitations

This study has several limitations in exploring the innovation of Chinese-Malaysian media education talent cultivation models.

(1) **Sample Limitations.** Although the study included 1,156 respondents, the sample was mainly concentrated in specific institutions and regions, potentially not fully representing the overall situation of media education in both countries. Meanwhile, students constituted a large proportion of respondents (88.3%), while the proportion of teachers and industry experts was relatively low, possibly affecting the comprehensiveness of research conclusions. Additionally, the study did not achieve balanced coverage across all grade levels, potentially leading to insufficient reflection of characteristics at certain stages.

(2) **Methodological Limitations.** Despite employing mixed research methods, there were inadequacies in the depth of qualitative research. The short time span of in-depth interviews and participatory observations may not fully capture the long-term effects of cross-cultural adaptation. Additionally, research tools faced challenges in cross-cultural measurement equivalence, with potential subtle differences in semantic understanding between the two language versions of questionnaires. Furthermore, the research primarily relied on self-reported data from respondents, lacking more objective assessment indicators.

(3) **Research Perspective Limitations.** The study mainly focused on environmental factors and psychological adjustment mechanisms in the educational process, with insufficient consideration of other factors that might influence cross-cultural communication competence development, such as family background, personal traits, and social support. Meanwhile, dynamic tracking of media industry development trends and talent demand changes in both countries was not sufficiently in-depth, potentially affecting the practical guidance value of research conclusions. Additionally, the study did not fully explore the influence mechanisms of digital technology and new media environments on cross-cultural communication competence cultivation.

These limitations suggest the need to further expand sample scope, improve research methods, and broaden research perspectives in future studies to obtain more comprehensive and in-depth research findings. Meanwhile, these limitations also provide new ideas and directions for subsequent related research.

6.3. Future prospects

Based on the findings and limitations of this study, future research can explore the following directions in depth.

(1) Regarding theoretical research, it is recommended to deepen the application research of social cognitive theory in cross-cultural communication education, particularly exploring the dynamic interaction mechanisms among environmental factors, individual cognition, and behavioral adjustment. Meanwhile, multiple theoretical perspectives such as cultural identity theory and cross-cultural adaptation theory can be introduced to construct a more complete theoretical framework, providing stronger theoretical support for cross-cultural communication talent cultivation.

(2) Regarding research methods, it is recommended to adopt longitudinal tracking research designs to better grasp the dynamic process of cross-cultural competence development through long-term observation

and data collection. Meanwhile, big data analysis techniques can be utilized to combine multiple data sources, including student learning behavior data and social media data, to deeply explore patterns and characteristics of cross-cultural learning. Furthermore, experimental research methods can be employed to investigate the causal effects of different training models on cross-cultural competence development.

(3) Regarding practical exploration, it is recommended to focus on media education innovation in the context of digital transformation. The application of new technologies such as Virtual Reality (VR) and Augmented Reality (AR) in cross-cultural teaching can be explored to develop more immersive learning experiences. Meanwhile, research new forms of cross-cultural communication in the "Internet+" context, exploring talent cultivation models adapted to new media environments. Additionally, deeper cooperation between China and Malaysia in media education can be strengthened, exploring innovative mechanisms such as joint training and credit recognition.

(4) Regarding evaluation systems, it is recommended to construct more scientific and comprehensive evaluation indicator systems, incorporating students' cross-cultural competence development, professional skill enhancement, and innovative practice achievements into the assessment scope. Meanwhile, explore AI-based automatic assessment technologies to improve evaluation efficiency and objectivity. Furthermore, establish a tracking database for cross-cultural competence development to provide data support for long-term research.

Conflict of interest

The authors declare no conflict of interest.

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