Enhancing Student Affairs Management in Chinese Universities: A Pedagogical Approach to Cultural Adaptation and Holistic Student Development Using PLS-SEM

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Abstract: The transformation of student affairs management (SAM) in Chinese higher education has become a strategic priority under national initiatives such as Education Modernization 2035 and the Double First-Class policy. However, a persistent gap remains between policy aspirations for holistic, internationally oriented student development and the actual implementation of SAM practices on many campuses. This study investigates an integrated model of SAM that positions pedagogical integration, learning environment, intellectual engagement, and institutional internationalization as predictors of holistic student development, with cultural adaptation serving as a mediating mechanism. Data were collected through structured questionnaires administered to 397 undergraduate students across seven universities in Yunnan Province, China. Partial least squares structural equation modeling (PLS-SEM) was employed to test the hypothesized relationships. The results confirmed all six hypotheses, revealing that intellectual engagement ($\beta = 0.295$, $p < 0.001$) and pedagogical integration ($\beta = 0.252$, $p < 0.001$) were the strongest predictors of cultural adaptation, which in turn strongly predicted holistic student development ($\beta = 0.513$, $p < 0.001$). Cultural adaptation significantly mediated the effects of all four independent variables on holistic development, with full mediation observed for learning environment. The measurement model demonstrated strong reliability (Cronbach's α ranging from 0.896 to 0.940) and convergent validity (AVE from 0.657 to 0.770). These findings provide empirical evidence that student affairs must be reconceptualized as a pedagogical enterprise rather than an administrative support function, and that fostering students' cultural adaptation is essential for translating institutional and pedagogical inputs into holistic developmental outcomes. The study offers actionable guidance for university administrators, counsellors, and policymakers seeking to enhance student affairs practices in culturally diverse and internationally oriented higher education settings.

Keywords: Student Affairs Management, Chinese Higher Education, Cultural Adaptation, Holistic Student Development, Pedagogical Integration, Structural Equation Modeling

Introduction

Student affairs management (SAM) is a core functional area in higher education that supports students' academic progress, personal development, and social integration. In many systems, SAM divisions include academic advising, counseling, career services, residence life, and co-curricular programming, all aimed at creating conditions for students to succeed academically while developing as whole persons (Smith & Williams, 2007). Over the past several decades, student affairs work has moved

from a narrow focus on administration and discipline toward broader paradigms of student development and learning, treating classroom and out-of-class experiences as parts of one integrated educational process. In this paradigm, the way SAM is managed becomes an integral part of the institution's academic mission rather than just a support service.

In China, SAM has developed around the distinctive university counsellor (Fu Dao Yuan) system, which is a unique arrangement in global higher education. The counsellor system was formally established in the early 1950s and has historically been closely linked to ideological and political education (Li & Fang, 2017; Ai, 2022). Over time, the role of counsellors has expanded beyond political guidance to include moral education, daily management, psychological support, career guidance, and the organisation of co-curricular activities (Liu, Zhao, & Starkey, 2021). The Ministry of Education (MOE) has issued several policy documents emphasising the importance of strengthening counsellor teams, improving their qualifications, and integrating ideological and political education into all aspects of university life, including support services and curricular design (MOE, 2019; Liu et al., 2021). Recent policy documents call on universities to build "all-staff, all-process, and all-round" education systems that combine ideological education, professional training, and support for students' physical and mental health (MOE, 2019). They also encourage universities to internationalise their curricula, attract more international students, and cultivate graduates with both a strong sense of national identity and global competence (Liu, 2021; Zhu, 2022). In principle, SAM is expected to play a key role in implementing these goals by coordinating counsellor work, learning environments, and student support services in a more integrated and student-centred way.

However, recent empirical studies indicate a gap between these policy aspirations and the reality of SAM implementation on many campuses. In the area of mental health, research shows that psychological distress among Chinese undergraduates has increased, but the utilisation of campus counselling services remains relatively low. Ning et al. (2022) and Wang et al. (2024) report that misperceptions, stigma, and doubts about the effectiveness and confidentiality of university counselling services discourage many students from seeking help, even when they recognise a need. Studies on student engagement also highlight structural and cultural challenges. Large-scale surveys show that while Chinese undergraduates invest substantial effort in coursework, their participation in broader college activities and co-curricular learning opportunities is uneven (Sun, 2022). Research on specific disciplines, such as tourism majors, reports generally low levels of active learning engagement and a tendency toward passive, exam-oriented study habits (Yu et al., 2025). Analyses of the counsellor system further show that counsellors, ideological-political teachers, and academic staff often operate in parallel with limited coordination, and that counsellors' roles remain heavily defined by management and discipline tasks (Ai, 2022; Zhang, 2023). This structure can reinforce bureaucratic routines and hierarchical control, leaving less space for student participation in decision-making, for pedagogically informed programme design, and for intercultural learning opportunities. As a result, student affairs in some universities continue to be experienced by students as rule enforcement and administrative processing rather than as a supportive, developmental, and culturally responsive environment.

The existing literature reveals several specific problems that justify further investigation. First, there is a problem of low and uneven student engagement with campus life, support services, and co-curricular activities. Second, there exists a structural problem of institutional rigidity and bureaucratic inertia within SAM, where operational practices remain anchored in legacy administrative frameworks (Ai, 2022; Zhang, 2023). Third, there is a systemic problem of underdeveloped developmental and intercultural orientations in SAM practice, reflected in low utilisation of mental health services and limited intercultural engagement opportunities (Ning et al., 2022; Wang et al., 2024; Zhu, 2022). Fourth, there is a practical problem of fragmentation and lack of systemic integration in SAM-related knowledge application, where core components such as counsellor systems, ideological education, mental health provision, and internationalisation are addressed in isolation rather than as interdependent elements (Li & Fang, 2017; Liu et al., 2021). Taken together, these problems show a mismatch between government policy goals and the reality of SAM implementation on campus.

Despite growing policy attention and expanding institutional practices, significant gaps persist across theoretical, practical, and methodological domains. Theoretically, existing literature lacks an integrated conceptualisation of SAM that systematically links pedagogical frameworks with

intercultural competence and student development theories. Practically, the literature provides limited empirically validated strategies for addressing persistent policy–practice misalignments. Methodologically, existing studies are constrained by fragmented designs and limited analytical rigor, with insufficient use of robust quantitative modelling to examine complex interrelationships among SAM constructs. Notably, the mediating role of cultural adaptation in connecting SAM inputs to holistic student development remains underexplored. Therefore, this study aims to develop and empirically test an integrated SAM framework that places pedagogical integration at its core, examining how pedagogical integration, learning environment optimisation, intellectual engagement, and institutional internationalisation shape students' cultural adaptation and, in turn, holistic development in Chinese universities. To guide this investigation, the following research questions are addressed.

1. To what extent does pedagogical integration, learning environment, intellectual engagement, and institutional internationalisation predict the cultural adaptation of student development in Chinese higher education?

2. What is the effect of cultural adaptation on holistic student development, and does cultural adaptation mediate the relationships between pedagogical integration, learning environment, intellectual engagement, institutional internationalisation, and holistic student development?

Finally, the contributions of this study are as follows. First, this study makes theoretical contributions by advancing an integrated model of student affairs management adapted to the Confucian, counsellor-based Chinese higher education system. By bringing together pedagogical integration, learning environment optimisation, intellectual engagement, institutional internationalisation, cultural adaptation, and holistic student development within one coherent framework, it extends the international literature on student development and intercultural competence perspectives to a non-Western, policy-driven context. Second, this study provides practical and managerial insights for universities, student affairs units, and counsellor teams in China. By identifying which dimensions of SAM most strongly influence cultural adaptation and holistic development, it offers evidence-based guidance for improving programme design, resource allocation, and daily practice, helping institutions transition from reactive, administration-oriented services toward proactive, learning-centred, and developmentally oriented student affairs. Third, for policymakers, this study clarifies how national directives such as "all-round education" and "internationalisation at home" can be translated into operational SAM strategies. The integrated model highlights leverage points where policy support, training, and evaluation criteria can encourage universities to embed pedagogical and intercultural considerations into SAM, narrowing the gap between official expectations and students' lived experiences on campus.

The remainder of this paper is organized as follows. Section 2 reviews the relevant theoretical and empirical literature on student affairs management, pedagogical integration, learning environments, intellectual engagement, institutional internationalisation, cultural adaptation, and holistic student development. Section 3 presents the methodology employed in this study, explaining the instruments, sampling procedures, and data analysis techniques. Section 4 presents the key findings of this study and all corresponding empirical evidence. Section 5 offers an in-depth discussion of the results, providing valuable insights and interpretations. Finally, Section 6 concludes with a summary of this study and its implications.

Review of Literature

The study of student affairs management (SAM) in higher education draws upon a rich tapestry of theoretical frameworks that collectively explain how students develop, learn, and adapt within university environments. In the Chinese context, where SAM operates through the distinctive counsellor (Fu Dao Yuan) system and is shaped by Confucian traditions and state-directed educational policies, the integration of multiple theoretical perspectives becomes particularly critical. This literature review synthesizes foundational theories of student development, learning environments, holistic education, student engagement, and intercultural competence, followed by an examination of empirical

studies in Chinese higher education and the identification of research gaps that justify the present study.

Astin's Theory of Student Involvement, first articulated in 1984 and refined in 1999, provides a foundational lens for understanding how students grow during their university years. The central premise is that the amount of student learning and development is directly proportional to the quality and quantity of physical and psychological energy a student invests in their educational experience (Astin, 1999). Involvement is an active state rather than a passive condition, and the theory rests on five postulates: involvement demands energy investment; it varies along a continuum; it has both quantitative and qualitative elements; learning and development are interconnected with involvement; and educational policy effectiveness is measured by its success in increasing student involvement. Yu and Leung (2021) found that students who actively participate in student organizations demonstrate higher levels of critical thinking and intercultural competence, while Chen and Xu (2023) reported that structured co-curricular activities significantly predict student satisfaction and retention. However, applying Astin's theory in China requires consideration of local cultural dynamics, as traditional Confucian approaches have emphasized hierarchy and passive knowledge reception (Huang & Turner, 2018). Recent policy shifts, such as the Ministry of Education's guidelines for comprehensive quality development, have opened opportunities for involvement-focused strategies within SAM, with Zhou and Li (2020) showing that well-designed online learning communities can stimulate similar benefits as face-to-face engagement.

Complementing involvement theory, Kohlberg's Moral Development Theory offers a framework for understanding how students progress in moral reasoning through qualitatively distinct stages. Building upon Piaget's work, Kohlberg (1984) argued that moral reasoning evolves from preconventional levels (obedience and punishment orientation, individualism and exchange) through conventional levels (good interpersonal relationships, maintaining social order) to postconventional levels (social contract and individual rights, universal ethical principles). The Neo-Kohlbergian approach, developed by Rest and colleagues, reframes moral reasoning in terms of moral schemas measured by the Defining Issues Test (DIT-2), which has demonstrated psychometric robustness (Choi, Kim, & Kim, 2020). Güngördü et al. (2024) compiled DIT-2 norms from over 73,000 administrations, offering valuable benchmarks. In Chinese universities, where traditional educational models emphasize obedience and social order aligned with Stage 4 reasoning (Huang & Turner, 2018), recent reforms including curriculum ideological and political education provide platforms for SAM to embed moral reasoning development through dilemma-based learning, iterative reflection, and intercultural engagement (Mei, 2024; Wang & Luo, 2022).

Beyond individual developmental trajectories, the learning environment profoundly shapes student outcomes. Temple's (2008) Learning Spaces Theory argues that the physical campus is not merely a container for educational activities but an active agent in the learning process, shaping interactions, behaviors, and institutional values through physical, social, and symbolic dimensions. Byers et al. (2018) found that flexible, technology-rich classrooms increase collaboration and perceived learning, while Whiteside et al. (2019) confirmed that active learning spaces foster deeper engagement and equitable participation. In Chinese universities, traditional campus designs have emphasized efficiency and central authority (Li & Chen, 2019), but new investments in makerspaces, learning commons, and themed student centers are emerging, supported by Ministry of Education initiatives. Bronfenbrenner's Ecological Systems Theory (1993) provides a broader contextual lens, conceptualizing development as occurring within nested systems: microsystem (immediate environments like classrooms and residence halls), mesosystem (interconnections between microsystems), exosystem (indirect environments such as institutional governance), macrosystem (cultural and policy contexts), and chronosystem (changes over time). For SAM in China, this framework is particularly valuable as the strong influence of the macrosystem, rooted in cultural heritage and state priorities, means that campus changes must be sensitive to broader narratives, and SAM can mediate between macro-level directives and micro-level student needs (Ouyang et al., 2024). Tinto's Theory of Student Departure (1993) further emphasizes that student persistence is strongly influenced by academic and social integration. In Chinese universities, social integration may be more closely tied to participation in officially sanctioned student organizations and collective activities (Zhang & Liu, 2020), and Li and

Zhang (2022) found that integration into ideological-political education activities positively associated with academic performance and retention intentions.

Holistic education frameworks ensure that SAM addresses students as whole persons rather than merely as academic performers. Miller's (2019) Whole Person Education emphasizes the cultivation of intellectual, emotional, social, physical, and spiritual dimensions as an integrated whole. Key dimensions include emotional development (empathy, resilience), spiritual and ethical development (meaning, purpose, values), ecological consciousness, and integration of learning and life. In China, the Ministry of Education's policy on "five educations in integration" (moral, intellectual, physical, aesthetic, and labor education) explicitly endorses a holistic vision (MOE, 2020). Maslow's Hierarchy of Needs provides a motivational scaffolding, proposing that students struggle to direct energy toward deep learning if foundational needs (physiological, safety, belonging, esteem) are unmet. Contemporary research demonstrates that basic-needs insecurity undermines academic performance, persistence, and mental health (Huang & Li, 2022). For SAM, operationalizing Maslow involves establishing basic-needs infrastructure (food pantries, emergency aid), designing relational architecture for belonging, integrating competence-affirming experiences, and connecting purpose to contribution (Zhang et al., 2025).

Student engagement theories explain the mechanisms through which students transform opportunities into outcomes. Kuh's Student Engagement Theory (2001) links individual student behaviors with institutional conditions, proposing that the time and energy students invest in purposeful educational practices, combined with how institutions structure opportunities, determines learning quality. Kuh identified high-impact practices such as first-year seminars, service learning, internships, and undergraduate research, operationalized through the National Survey of Student Engagement (NSSE). In China, Kuh's theory provides a strategic framework for SAM to design high-impact practices, with Wang and Luo (2022) demonstrating that Chinese students in community service-learning reported higher empathy and civic responsibility. However, cultural specificity matters: Chinese students may demonstrate engagement through collective activities rather than open debate (Zhang & Chen, 2020). Self-Determination Theory (Deci & Ryan, 2000) complements Kuh's framework by explaining why engagement is sustained. SDT posits that humans have three fundamental psychological needs: autonomy (volition and self-direction), competence (feeling effective), and relatedness (meaningful connections). When satisfied, individuals experience intrinsic motivation; when thwarted, motivation shifts toward controlled forms. In Chinese universities, studies confirm that autonomy-supportive environments enhance engagement even within hierarchical systems (Guo & Wang, 2021). For SAM, SDT implies enhancing autonomy through student participation in decision-making, supporting competence through scaffolded programs, and prioritizing relatedness through inclusive communities, with relevance also for digital learning environments (Pelikan et al., 2021).

Intercultural competence has become increasingly central to SAM in Chinese higher education, driven by the Double First-Class Initiative, the Belt and Road educational cooperation, and the 2024–2035 blueprint for building a "strong education nation." Deardorff's Process Model of Intercultural Competence (2006) frames intercultural competence as a cyclical, iterative process integrating attitudes (respect, openness, curiosity), knowledge and comprehension (cultural self-awareness, deep cultural knowledge), skills (listening, observing, interpreting), internal outcomes (adaptability, empathy, ethnorelative perspective), and external outcomes (effective behavior across cultures). For SAM, this model emphasizes process and iteration, applicable through curricular integration, co-curricular design, and assessment using tools such as UNESCO's Story Circles. Bennett's Developmental Model of Intercultural Sensitivity (1993, 2004) maps how individuals progress from ethnocentric to ethnorelative orientations through six stages: denial (unawareness of difference), defense (perceiving difference as threatening), minimization (downplaying difference), acceptance (recognizing cultural difference as valid), adaptation (shifting behavior across contexts), and integration (internalizing multiple perspectives). For SAM in China, DMIS provides a practical developmental map, with programming scaffolded from awareness-raising for students in denial or defense through structured dialogue for minimization to immersive experiences for acceptance and adaptation. The Intercultural Development Inventory has been validated in Chinese contexts (Zhou & Wang, 2023), and Wu and Peng (2020)

showed that tailoring workshops to students' DMIS stage produces greater gains than generic programs.

Empirical research on SAM in China reveals both achievements and persistent gaps. Under the Double First-Class initiative, student services have professionalized, yet surveys report uneven student satisfaction (Zhao & Li, 2021). Sun and Zhao (2023) found that students felt co-curricular initiatives were insufficiently connected to academic and personal growth. International comparative studies show that while Western institutions have integrated multicultural campus environments with critical thinking gains (Nguyen, 2021), Chinese universities struggle with structured intercultural engagement (Guo & Yu, 2022). Regarding learning environments, UK studies demonstrate that flexible spaces promote collaboration (Ellis & Goodyear, 2021), but Chinese investments in infrastructure often result in underutilized spaces (Li & Chen, 2020). Holistic education research shows that only 38% of Chinese undergraduates felt their universities provided adequate psychological support (Ren & Zhao, 2021). Intercultural competence studies indicate that domestic students' limited intercultural awareness hampers meaningful interaction with international peers (Hu & Jiang, 2021), and many intercultural initiatives remain symbolic rather than transformative (Luo & Wang, 2023). These empirical strands point to two interrelated gaps: first, the need to consolidate diverse findings into a unified framework for SAM in China; second, the absence of empirical studies explicitly testing integrative SAM models combining student development theories, learning environments, holistic education, student engagement, and intercultural competence.

Taken together, the theoretical and empirical literature supports the development of an integrated conceptual framework in which pedagogical integration, learning environment optimization, intellectual engagement, and institutional internationalization predict the cultural adaptation of student development, which in turn predicts holistic student development. Cultural adaptation functions as a mediating mechanism that enables students to internalize intercultural experiences and transform exposure into intellectual, social, and moral growth. This framework acknowledges that the relationships are not linear but reciprocal: student development drives engagement, which is sustained by supportive environments and holistic well-being, which then expands into intercultural competence. By synthesizing involvement theory, ecological systems theory, intercultural competence models, and internationalization perspectives, the framework provides a comprehensive explanation of how Chinese higher education institutions can cultivate globally adaptive and holistically developed graduates. The present study therefore empirically tests this integrated model, addressing the theoretical, practical, and methodological gaps identified in the literature.

Methodology

3.1 Study design

This study employed a quantitative, cross-sectional survey design to examine the relationships among pedagogical integration, learning environment, intellectual engagement, institutional internationalization, cultural adaptation, and holistic student development in Chinese higher education. A cross-sectional approach is appropriate because the research aims to assess how these institutional, pedagogical, and cognitive factors predict student outcomes at a single point in time, rather than to establish long-term causal changes (Bryman, 2016; Creswell & Creswell, 2018). The design is descriptive-explanatory in nature, as it seeks to measure the strength and direction of hypothesized relationships and to test the mediating role of cultural adaptation using structural equation modeling (SEM).

Data were collected through a structured questionnaire administered to undergraduate students across multiple universities in Yunnan Province, China. This province was selected due to its rich cultural diversity, the presence of both urban and regional institutions, and its strategic position as a bridge between China and Southeast Asia, making it an ideal context for studying cultural adaptation and holistic development. The survey instrument was designed to capture students' perceptions of six core constructs: pedagogical integration (PI), learning environment (LE), intellectual engagement (IE), institutional internationalization (II), cultural adaptation of student development (CASD), and holistic student development (HSD). All items were measured on a seven-point Likert scale ranging from "strongly disagree" to "strongly agree."

The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4.0 to evaluate both the measurement and structural models. PLS-SEM is a variance-based approach that is particularly suitable for complex predictive models, does not require strict normality assumptions, and handles smaller sample sizes effectively (Hair et al., 2017). The choice of PLS-SEM aligns with the study's objective to explain and predict the relationships among the six constructs, including the mediating role of cultural adaptation.

3.2 Proposed model

The conceptual framework of this study (Figure 1) is grounded in Astin's (1984) theory of student involvement, Bronfenbrenner's (1979) ecological systems theory, Deardorff's (2006) process model of intercultural competence, and Self-Determination Theory (Deci & Ryan, 2000). The model posits that pedagogical integration, learning environment, intellectual engagement, and institutional internationalization directly predict cultural adaptation of student development (H1–H4). Cultural adaptation, in turn, directly predicts holistic student development (H5). Additionally, cultural adaptation mediates the relationships between the four independent variables and holistic student development (H6a–H6d). Direct paths from the four predictors to holistic student development were also estimated to assess partial versus full mediation.

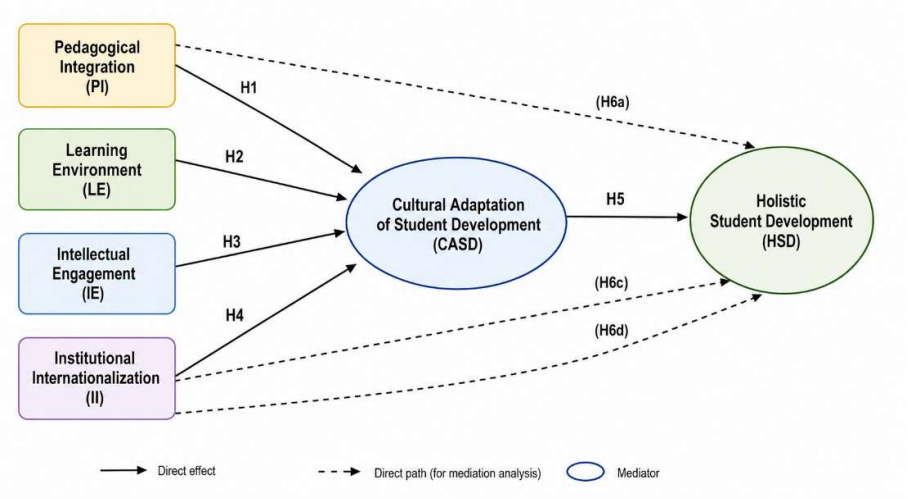

Figure 1. Conceptual Model of the Study

The measurement items for each construct were adapted from validated scales in prior higher education and intercultural competence research, and modified to fit the Chinese university context. Table 1 presents the constructs, their operational definitions, and sample indicators.

Table 1. Measurement Constructs and Sample Indicators

Construct	Definition	Sample Indicator
Pedagogical Integration (PI)	The extent to which teaching methods, curriculum, and student affairs are intentionally aligned to promote student learning and development	*Teaching methods in my university are well-integrated to support my learning.*
Learning Environment (LE)	The physical, social, and digital conditions of the campus that shape students' engagement and development	*Classrooms and facilities are conducive to interactive learning.*
Intellectual Engagement (IE)	The cognitive investment and reflective effort students put into their academic and co-curricular activities	*I actively engage in academic discussions and debates.*
Institutional Internationalization (II)	The integration of international, intercultural, and global dimensions into university policies, curricula, and campus life	*My university provides opportunities to interact with international students.*
Cultural Adaptation (CASD)	The process by which students adjust their behaviors, attitudes, and skills to function	*I can adapt effectively when interacting with students from*

	effectively in a culturally diverse academic environment	*different cultural backgrounds.*
Holistic Student Development (HSD)	The integrated growth of students across intellectual, personal, social, moral, and intercultural domains	*My university experience contributes to my intellectual growth.*

A total of six hypotheses (H1–H5) and four mediation hypotheses (H6a–H6d) were formulated based on the theoretical framework. For example, H1 states that pedagogical integration positively predicts cultural adaptation of student development; H5 states that cultural adaptation positively predicts holistic student development; and H6a states that cultural adaptation mediates the relationship between pedagogical integration and holistic student development.

3.2 Data

1) Participants and Sampling

The target population comprised full-time undergraduate students enrolled in universities in Yunnan Province, China. Participants were required to be currently enrolled, familiar with campus learning environments and internationalization initiatives, and willing to provide informed consent. A combination of purposive and snowball sampling was employed to recruit participants who met these criteria. Purposive sampling ensured that students from diverse academic disciplines (humanities, engineering, medicine, agriculture, arts) and institution types (comprehensive, specialized, regional) were included. Snowball sampling helped reach underrepresented subgroups, such as ethnic minority students and those from smaller programs. Sample size was determined using G*Power analysis for multiple regression (Cohen, 1988). With six latent variables, a medium effect size ($f^2 = 0.15$), $\alpha = 0.05$, and power = 0.80, the minimum required sample was 97 cases. To enhance robustness and generalizability, the target was set at 300–350 participants following Krejcie and Morgan's (1970) guidelines. The final sample comprised 397 valid responses, exceeding the target and providing sufficient statistical power for PLS-SEM.

2) Research Sites and Data Collection

Data were collected from seven universities in Yunnan Province representing the province's higher education diversity: Yunnan University (comprehensive), Kunming University of Science and Technology (engineering), Yunnan Normal University (teacher training), Kunming Medical University (health sciences), Yunnan Minzu University (ethnic studies), Dali University (regional comprehensive), and Yunnan Agricultural University (agriculture and environment). These institutions vary in size, academic orientation, campus resources, and international collaboration intensity, offering a representative cross-section of Chinese higher education. The survey was administered in paper-and-pencil format between November 2022 and March 2023. Research assistants visited classrooms, libraries, and student dormitories to distribute questionnaires after obtaining institutional and course instructor permissions. Participants were informed of the study's purpose, the voluntary nature of participation, and confidentiality protections. Informed consent was obtained from all respondents. The questionnaire took approximately 15–20 minutes to complete. A total of 450 questionnaires were distributed, and 397 were returned fully completed, yielding a response rate of 88.2%.

3) Instrument and Translation

The structured questionnaire consisted of three sections: demographic information (gender, age, level of study, year of study, field of study, university type, international student status, experience with international programs, length of study, previous international exposure); 36 measurement items for the six constructs (six items per construct); and an optional comments section. All items were measured on a seven-point Likert scale.

The instrument was originally developed in English, then translated into Mandarin Chinese using a forward-backward translation procedure (Brislin, 1970). Two bilingual experts independently translated the English version into Chinese; a third expert back-translated the Chinese version into English. Discrepancies were discussed and resolved by the research team, ensuring linguistic and conceptual

equivalence. A pilot test with 35 students (not included in the final sample) was conducted to assess clarity, readability, and face validity. Minor wording adjustments were made based on pilot feedback.

4) Ethical Considerations

Ethical approval was obtained from the institutional review board of the affiliated university and from the participating institutions. All procedures complied with the ethical standards for research involving human participants. Data were anonymized, and no personally identifiable information was collected. Respondents were assured that their responses would be used only for academic research purposes and that they could withdraw at any time without consequence.

5) Data Analysis Strategy

Data analysis proceeded in two stages using SPSS 28.0 and SmartPLS 4.0. First, descriptive statistics (frequencies, means, standard deviations) were generated to profile the sample. Missing data and normality were assessed; no missing values were present, and all constructs approximated normal distribution. Second, the measurement model was evaluated for reliability (Cronbach's α, composite reliability), convergent validity (factor loadings, average variance extracted, AVE), and discriminant validity (Fornell-Larcker criterion, cross-loadings, HTMT ratio). Third, the structural model was assessed for collinearity (VIF), path coefficients (β), and explanatory power (R^2). Mediation effects were tested using bootstrapping with 5,000 resamples. Predictive relevance (Q^2) and effect sizes (f^2) were also reported. All hypotheses were tested at a significance level of $\alpha = 0.05$ (two-tailed).

Results

This chapter presents the empirical findings of the study. The analysis proceeds in two main stages. First, the measurement model is assessed through reliability, convergent validity, and discriminant validity tests. Second, the structural model is evaluated by examining collinearity diagnostics, path coefficients, and hypothesis testing. All analyses were conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) based on 397 valid responses from students in Chinese universities.

4.1 Preliminary Analysis Results

1. Missing Data and Normality

The dataset contained no missing values for any of the six key constructs: Pedagogical Integration (PI), Learning Environment (LE), Intellectual Engagement (IE), Institutional Internationalization (II), Cultural Adaptation of Student Development (CASD), and Holistic Student Development (HSD). All 397 cases were valid, representing 100% complete data. Normality assessment through histograms and skewness statistics indicated that all constructs approximated a normal distribution, with means ranging from 3.50 to 3.57 and standard deviations from 0.938 to 1.030. Outlier detection using boxplots revealed no extreme univariate outliers; a few cases with high or low scores remained within the theoretical scale limits and represented natural variation rather than data errors.

2. Measurement Model: Reliability and Convergent Validity

Table 1 presents the reliability and convergent validity statistics for all six latent constructs. Factor loadings for all indicators exceeded the recommended threshold of 0.70, ranging from 0.781 to 0.892, indicating that each item strongly represents its intended construct.

Cronbach's alpha values ranged from 0.896 to 0.940, all above the acceptable limit of 0.70 and most exceeding the stricter threshold of 0.80, demonstrating high internal consistency. Composite reliability (rho_c) values ranged from 0.920 to 0.953, further confirming the reliability of the measurement model. The Average Variance Extracted (AVE) for each construct exceeded the minimum requirement of 0.50, with values between 0.657 and 0.770, establishing convergent validity. Intellectual Engagement (IE) showed the highest AVE (0.770), while Holistic Student Development (HSD) had the lowest but still acceptable AVE (0.657). These results confirm that the measurement items adequately capture their respective latent constructs.

Table 1 Reliability and Convergent Validity for Key Study Constructs

Construct	Items	Factor Loadings	Cronbach's α	rho_c	AVE
Pedagogical Integration (PI)	PI1–PI6	0.853–0.885	0.935	0.949	0.755
Learning Environment (LE)	LE1–LE6	0.865–0.882	0.940	0.952	0.768
Intellectual Engagement (IE)	IE1–IE6	0.857–0.892	0.940	0.953	0.770
Institutional Internationalization (II)	II1–II6	0.851–0.880	0.931	0.946	0.744
Cultural Adaptation of Student Development (CASD)	CASD1–CASD6	0.860–0.886	0.937	0.950	0.761
Holistic Student Development (HSD)	HSD1–HSD6	0.781–0.841	0.896	0.920	0.657

Note. N = 397 for all constructs. All loadings are significant at $p < 0.001$.

3. Discriminant Validity

Discriminant validity was assessed using three complementary criteria: the Fornell-Larcker criterion, cross-loadings, and the Heterotrait-Monotrait (HTMT) ratio.

a. Fornell-Larcker Criterion

Table 2 shows the correlation matrix with the square root of AVE on the diagonal. For most constructs, the diagonal values exceeded the off-diagonal correlations, indicating adequate discriminant validity. However, the correlation between CASD and HSD (0.873) slightly exceeded the square root of AVE for HSD (0.811), and the correlation between PI and HSD (0.839) was also high. This conceptual overlap is theoretically expected, as cultural adaptation is intrinsically part of holistic development, and pedagogical integration directly fosters student development. All other construct pairs satisfied the criterion.

Table 2 Fornell-Larcker Criterion (Diagonal: Square Root of AVE)

Construct	CASD	HSD	II	IE	LE	PI
CASD	0.872					
HSD	0.873	0.811				
II	0.645	0.679	0.862			
IE	0.685	0.720	0.669	0.878		
LE	0.617	0.689	0.604	0.677	0.876	
PI	0.645	0.839	0.587	0.623	0.637	0.869

b. HTMT Ratio

Table 3 presents the HTMT values. All values were below the conservative threshold of 0.85, ranging from 0.493 to 0.783. The highest value (0.783) occurred between IE and HSD, followed by LE and HSD (0.752) and II and HSD (0.742). The lowest value (0.493) was between CASD and HSD. Since all HTMT values were below 0.85, discriminant validity is firmly established.

Table 3 Heterotrait-Monotrait (HTMT) Ratios

Pair	HTMT
CASD ↔ HSD	0.493
CASD ↔ II	0.689
CASD ↔ IE	0.729
CASD ↔ LE	0.657
CASD ↔ PI	0.688
HSD ↔ II	0.742
HSD ↔ IE	0.783

Pair	HTMT
HSD ↔ LE	0.752
HSD ↔ PI	0.536
II ↔ IE	0.714
II ↔ LE	0.646
II ↔ PI	0.628
IE ↔ LE	0.719
IE ↔ PI	0.664
LE ↔ PI	0.679

Cross-loadings (not tabulated for brevity) further confirmed that each indicator loaded highest on its intended construct, with secondary loadings on conceptually related constructs remaining lower. The overall evidence supports the discriminant validity of the measurement model.

4.2 Structural Model Results

1. Collinearity Diagnostics

Inner Variance Inflation Factor (VIF) values were examined to detect multicollinearity among predictor constructs. Table 4 shows that all inner VIF values ranged from 1.990 to 2.632, well below the critical threshold of 5.0 and even below the more conservative threshold of 3.3. This indicates that multicollinearity does not threaten the structural model estimates.

Table 4. Inner VIF Values

Endogenous Construct	Predictor	VIF
Cultural Adaptation (CASD)	II	2.054
	IE	2.422
	LE	2.224
	PI	1.990
Holistic Development (HSD)	CASD	2.413
	II	2.179
	IE	2.632
	LE	2.258
	PI	2.143

2. Path Coefficients and Hypothesis Testing

The structural model was estimated using PLS-SEM with 5,000 bootstrap samples to obtain standard errors, t-statistics, and p-values. Table 5 presents the path coefficients, significance levels, and hypothesis testing results. Figure 1 provides a visual summary of the structural relationships.

Table 5 Path Coefficients and Hypothesis Testing Results

Hypothesis	Path	β	t-value	p-value
H1	PI → CASD	0.252	4.712	0.000
H2	LE → CASD	0.120	2.344	0.019
H3	IE → CASD	0.295	5.175	0.000
H4	II → CASD	0.228	4.320	0.000
H5	CASD → HSD	0.513	18.260	0.000
H6a	PI → HSD (indirect via CASD)	0.129	4.289	0.000
H6b	LE → HSD (indirect via CASD)	0.062	2.101	0.036
H6c	IE → HSD (indirect via CASD)	0.151	4.795	0.000
H6d	II → HSD (indirect via CASD)	0.117	4.031	0.000

Note: Direct effects from II, IE, LE, PI to HSD were also estimated but were either non-significant (LE→HSD, p=0.128) or very small in magnitude.

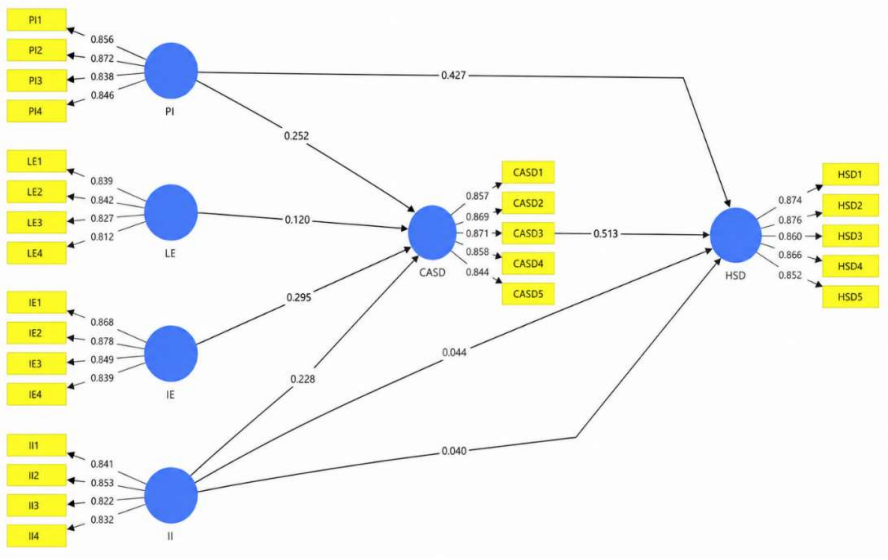

Figure 1 Structural Model Path Coefficients

(Visual representation showing: PI→CASD=0.252, LE→CASD=0.120, IE→CASD=0.295, II→CASD=0.228; CASD→HSD=0.513; all significant paths)

Results for Hypotheses H1 to H4 (Predictors of Cultural Adaptation)

All four hypothesized predictors of cultural adaptation were supported. Intellectual Engagement had the strongest effect on Cultural Adaptation of Student Development ($\beta = 0.295$, $p < 0.001$), followed by Pedagogical Integration ($\beta = 0.252$, $p < 0.001$), Institutional Internationalization ($\beta = 0.228$, $p < 0.001$), and Learning Environment ($\beta = 0.120$, $p = 0.019$). These results indicate that students' intellectual engagement, the integration of pedagogy into student affairs, the international orientation of their institution, and the quality of the learning environment all contribute positively to their cultural adaptation in Chinese universities.

Results for Hypothesis H5 (Cultural Adaptation to Holistic Student Development)

Cultural Adaptation of Student Development was a strong, positive, and highly significant predictor of Holistic Student Development ($\beta = 0.513$, $p < 0.001$). This finding confirms that students who successfully adapt culturally to their university environment experience substantially greater overall development across intellectual, personal, and social domains.

Direct Effects on Holistic Student Development

Direct paths from the four independent variables to Holistic Student Development were also examined. Most direct effects were either non-significant or very small in magnitude. Specifically, the direct effect of Learning Environment on Holistic Student Development was non-significant ($\beta = 0.047$, $p = 0.128$), while the direct effects of Institutional Internationalization ($\beta = 0.040$, $p < 0.001$) and Intellectual Engagement ($\beta = 0.044$, $p < 0.001$) were statistically significant but very small. In contrast, the direct effect of Pedagogical Integration on Holistic Student Development was substantial and significant ($\beta = 0.427$, $p < 0.001$), indicating that pedagogical integration has both a direct and an indirect influence on holistic development.

Results for Hypotheses H6a to H6d (Mediation via Cultural Adaptation)

To test the mediating role of cultural adaptation, indirect effects were calculated. All four indirect effects were statistically significant. The indirect effect of Pedagogical Integration on Holistic

Student Development through Cultural Adaptation was 0.129 ($p < 0.001$). The indirect effect of Learning Environment was 0.062 ($p = 0.036$). The indirect effect of Intellectual Engagement was 0.151 ($p < 0.001$), and the indirect effect of Institutional Internationalization was 0.117 ($p < 0.001$). These results confirm that cultural adaptation partially, and in some cases fully, mediates the relationships between the four independent variables and holistic student development. Notably, for Learning Environment, the indirect effect was significant while the direct effect was not, indicating full mediation. For Intellectual Engagement and Institutional Internationalization, the direct effects were very small compared to the indirect effects, suggesting partial mediation. For Pedagogical Integration, both direct and indirect effects were substantial, indicating partial mediation with a strong direct pathway.

Discussion

This study set out to examine an integrated model of student affairs management in Chinese universities, focusing on how pedagogical integration, learning environment, intellectual engagement, and institutional internationalization predict holistic student development through the mediating mechanism of cultural adaptation. The empirical results provide strong support for the proposed framework, with all six hypotheses confirmed. The findings offer both theoretical and practical insights into how Chinese higher education institutions can enhance their student affairs practices to foster holistic student growth in an increasingly intercultural context.

5. 1 The Central Role of Cultural Adaptation in Holistic Student Development

The most salient finding of this study is the strong and significant direct effect of cultural adaptation on holistic student development ($\beta = 0.513$, $p < 0.001$). This result indicates that students who successfully adapt to the cultural and institutional environment of their university experience substantially greater overall development across intellectual, personal, social, and emotional domains. This finding aligns with Deardorff's (2006) process model of intercultural competence, which posits that cultural adaptation is not merely an outcome of exposure to diversity but an active process that reshapes students' attitudes, knowledge, and skills, ultimately leading to internal outcomes such as empathy and adaptability and external outcomes such as effective cross-cultural communication.

The strong relationship between cultural adaptation and holistic development is particularly significant in the Chinese higher education context. As argued by Cao and Meng (2022), international students in China face unique challenges related to language, academic expectations, and social integration, yet domestic students also experience cultural adaptation as Chinese universities become more diverse through internal migration and internationalization. Lyudmila, Aza, and Kizkhanum (2024) emphasized that cultural adaptation requires pedagogical support that recognizes students' diverse backgrounds and provides structured opportunities for intercultural learning. The present study extends this understanding by demonstrating that cultural adaptation is not only about survival or adjustment but is fundamentally linked to flourishing and holistic growth. Students who navigate cultural differences successfully are more likely to develop the resilience, empathy, and self-awareness that underpin holistic development (Chu & Zhu, 2023; Xiaoying et al., 2024).

Moreover, this finding resonates with Astin's (1984, 1999) theory of student involvement, which posits that the quality and quantity of students' investment in their educational experience directly determine learning and development. Cultural adaptation can be understood as a form of involvement that requires active energy investment in understanding and navigating the institutional and intercultural environment. When students adapt successfully, they are more likely to engage deeply with academic content, form meaningful relationships with peers and faculty, and participate in co-curricular activities, all of which contribute to holistic outcomes. The present study thus provides empirical evidence that cultural adaptation functions as a key lever through which universities can promote student development.

5.2 Predictors of Cultural Adaptation: Intellectual Engagement as the Strongest Driver

Among the four predictors of cultural adaptation, intellectual engagement emerged as the

strongest ($\beta = 0.295$, $p < 0.001$). This finding suggests that students' cognitive investment in learning, critical thinking, and reflective inquiry is the most powerful institutional factor in facilitating their ability to adapt culturally. This result is consistent with Self-Determination Theory (Deci & Ryan, 2000), which proposes that intrinsic motivation, characterized by curiosity and the desire to understand, fosters psychological need satisfaction and well-being. Intellectually engaged students are more open to new perspectives, more willing to question their own assumptions, and more capable of integrating diverse viewpoints into their worldview, all of which are essential for cultural adaptation (Hanrahan, 2002; Ma & Wang, 2022).

The strong effect of intellectual engagement also aligns with Vygotsky's (1978) sociocultural theory, which emphasizes that cognitive development occurs through social interaction in culturally mediated contexts. Students who are intellectually engaged seek out opportunities for dialogue, debate, and collaborative problem-solving, which expose them to diverse cultural perspectives and provide the raw material for adaptation. Recent studies have confirmed that intellectual engagement mediates the relationship between self-regulation and academic outcomes (Lai et al., 2024) and that students who demonstrate higher levels of intellectual curiosity show greater intercultural sensitivity (Yu et al., 2022; Zaky, 2024). In the Chinese context, where exam-oriented traditions have often prioritized rote memorization over critical thinking (Huang & Turner, 2018), this finding underscores the importance of reforming pedagogical practices to cultivate intellectual engagement as a pathway to both academic success and intercultural competence.

Pedagogical integration was the second strongest predictor of cultural adaptation ($\beta = 0.252$, $p < 0.001$). This result indicates that the intentional alignment of curriculum, teaching methods, and student affairs programming with developmental and intercultural learning outcomes significantly enhances students' ability to adapt culturally. This finding supports the work of Yetti (2024), who argued that pedagogical innovation and curricular adaptation are essential for enhancing digital literacy and cultural responsiveness. Similarly, Anyichie et al. (2023) demonstrated that integrating self-regulated learning with culturally responsive pedagogical practices creates classroom contexts that support diverse learners' engagement. In the context of Chinese student affairs, this finding suggests that counsellors and student affairs professionals should move beyond administrative functions to become active partners in pedagogical design, ensuring that co-curricular activities, mentoring programs, and support services are intentionally structured to promote cultural learning (Miao & Ma, 2023; Karwadi et al., 2025).

Institutional internationalization also emerged as a significant predictor of cultural adaptation ($\beta = 0.228$, $p < 0.001$). This finding confirms that universities' strategic efforts to integrate international and intercultural dimensions into their policies, curricula, and campus environments have measurable benefits for students' cultural adaptation. This result is consistent with Knight's (2004) conceptualization of internationalization as a process that affects all functions of higher education and with the work of Avolio and Benzaquen (2024), who demonstrated that internationalization strategies positively influence institutional effectiveness. In China, the Double First-Class initiative and the Belt and Road educational cooperation have accelerated institutional internationalization, yet research has shown that the benefits of these policies depend on how well they are translated into student-level experiences (Yang et al., 2024; Liu & Li, 2025). The present study provides empirical evidence that institutional internationalization indeed predicts cultural adaptation, but the moderate effect size ($\beta = 0.228$) suggests that structural policies alone are insufficient; they must be accompanied by intentional programming that helps students actively engage with international opportunities (Luong et al., 2023; Cao et al., 2023).

The learning environment was the weakest but still significant predictor of cultural adaptation ($\beta = 0.120$, $p = 0.019$). This finding indicates that the physical, social, and digital conditions of the campus contribute positively to students' cultural adaptation, but their effect is smaller than that of intellectual engagement, pedagogical integration, or institutional internationalization. This result is consistent with Temple's (2008) learning spaces theory, which emphasizes that physical and symbolic environments shape student behavior and learning outcomes. However, the modest effect size may reflect that in many Chinese universities, learning environments are still designed primarily for efficiency and large-scale instruction rather than for fostering intercultural interaction and collaborative learning (Li & Chen, 2019; Wang et al., 2023). As Andrin et al. (2024) noted, borderless learning environments require

intentional design to support cross-cultural engagement. The finding suggests that while improving learning environments is necessary, it is not sufficient; universities must also invest in pedagogical and engagement strategies to realize the full benefits of environmental investments.

5.3 Direct and Indirect Effects on Holistic Student Development

A notable finding of this study is the pattern of direct and indirect effects on holistic student development. Pedagogical integration had a strong direct effect on holistic development ($\beta = 0.427$, $p < 0.001$) in addition to its indirect effect through cultural adaptation ($\beta = 0.129$). This indicates that pedagogical integration influences holistic development through two pathways: directly by shaping the quality of students' learning experiences and indirectly by enhancing their cultural adaptation. This dual pathway underscores the foundational role of pedagogy in student affairs. As argued by Al-Obaydi (2023), humanistic learning elements in blended environments significantly affect student motivation and development. Similarly, Mincu et al. (2024) emphasized that a humanistic approach to school leadership, which prioritizes relationships, care, and professional development, positively affects both teacher and student outcomes. In the Chinese university context, this finding suggests that student affairs models should be designed as pedagogical interventions, not merely as administrative support systems (Liang & Fang, 2022; McClellan & Kiyama, 2023).

In contrast, the learning environment had no significant direct effect on holistic student development ($\beta = 0.047$, $p = 0.128$), but its indirect effect through cultural adaptation was significant ($\beta = 0.062$, $p = 0.036$). This pattern indicates full mediation: learning environments influence holistic development entirely through their impact on students' cultural adaptation. This finding is theoretically meaningful and practically important. It suggests that a supportive, inclusive, and well-designed learning environment does not automatically produce holistic student outcomes; rather, it creates the conditions that enable students to adapt culturally, and it is through that adaptation that developmental gains are realized. This interpretation aligns with Bronfenbrenner's (1979) ecological systems theory, which posits that environmental factors shape development indirectly by influencing proximal processes. In practical terms, Chinese universities should view investments in learning environments as enabling conditions that must be complemented by activities that actively promote cultural adaptation, such as intercultural dialogues, reflective assignments, and peer mentoring programs (Wang & Luo, 2022; Soroka, 2022).

Institutional internationalization and intellectual engagement both had very small but statistically significant direct effects on holistic development ($\beta = 0.040$ and $\beta = 0.044$, respectively) alongside their indirect effects. This pattern indicates partial mediation, with the indirect effects being substantially larger than the direct effects. For institutional internationalization, the indirect effect ($\beta = 0.117$) was nearly three times the direct effect; for intellectual engagement, the indirect effect ($\beta = 0.151$) was also considerably larger. These findings suggest that the primary mechanism through which internationalization and intellectual engagement promote holistic development is by enhancing students' cultural adaptation. In other words, students benefit from internationalized campuses and intellectually engaging activities not because these factors directly produce development, but because they help students adapt to the cultural and institutional environment, and adaptation then drives development. This result has important implications for policy and practice: universities should not assume that simply increasing the number of international programs or the intellectual rigor of courses will automatically improve student outcomes; rather, they should design these experiences with explicit attention to supporting students' cultural adaptation processes (Li et al., 2023; San & Guo, 2023).

Conclusion

This study set out to examine an integrated model of student affairs management (SAM) in Chinese universities, focusing on how pedagogical integration, learning environment, intellectual engagement, and institutional internationalization predict holistic student development through the mediating mechanism of cultural adaptation. The empirical results, based on 397 valid responses from students in Chinese higher education institutions, confirmed all six hypotheses. The findings demonstrate that cultural adaptation is a strong and significant predictor of holistic student

development, and that intellectual engagement, pedagogical integration, institutional internationalization, and learning environment each contribute positively to cultural adaptation, with intellectual engagement exerting the strongest effect. Furthermore, cultural adaptation was found to partially or fully mediate the relationships between these four independent variables and holistic student development. These results provide robust empirical support for the proposed pedagogical framework of student affairs management and offer actionable insights for improving SAM practices in Chinese universities.

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