



# Academic adaptation of international students in China, under convergence management: Confirmatory factor analysis and influential factors

Junli Yang\*, Arisara Leksansern

Department of Education, Faculty of Social Sciences and Humanities, Mahidol University, Nakhon Pathom 73170, Thailand

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## Abstract

Academic adaptation is to the process by which people effectively adapt to a new educational setting. For international students, academic adaptation is required to promote their wellbeing during university life. With convergence management, the integration of education and management for international students in China, encompassing various aspects such as education, research, and daily life, international students would be directed to engage in extracurricular activities. This study aimed at investigating the factors as the construct of the academic adaptation and the influencing factors of academic adaptation of international students in China under the convergence management of Guangxi University. Four hundred and three were sample groups and Confirmatory Factor Analysis and regression analysis were employed in this study. The findings revealed that academic adaptation consists of five constructs; Course Learning, Teacher-Student Relationship, Academic Goals, Academic Performance, and Satisfaction with University Environment. For the factors affecting academic adaptation of international students in China, seven factors were counted; Language Competence, Research Competence, Teaching Methods, Psychological Adaptation, Self-efficacy, Social Integration, and Acculturation. These findings offer valuable insights for educational administrators, guiding them in enhancing international students' study experiences and overall wellbeing. Also, the research equips stakeholders with a nuanced understanding, facilitating the development of targeted strategies to address academic adaptation challenges and foster a more supportive educational environment.

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\* Corresponding author.

E-mail address: [junliyang224@gmail.com](mailto:junliyang224@gmail.com) (Yang, J.).

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## Introduction

China has emerged as a leading choice for foreign students, particularly those from countries located along the Belt and Road (Ding, 2016). The Ministry of Education in China reports that international students from 196 countries and regions are studying in the country. The countries with the largest number of international students in China are South Korea, Thailand, Pakistan, India, the United States, Russia, Indonesia, Laos, Japan, Kazakhstan, Vietnam, Bangladesh, France, Mongolia, and Malaysia (Ministry of Education of the People's Republic of China, 2018). Undoubtedly, foreign students hailing from ASEAN nations have emerged as the predominant cohort among the international student population in China. The quantity of foreign students in Guangxi is indicative of the caliber of education and the level of competitiveness of educational services for Chinese students within the framework of globalization.

Nevertheless, pursuing education at a foreign university presents difficulties due to the contrasting cultural, linguistic, and academic milieu of the host institution compared to the international student's home country (ChenFg & Fox, 2008). International students sometimes struggle to adapt to their new living environment due to the significant cultural differences between their home country and the host country. Hence, international students frequently resort to the strategy of "embracing and familiarizing oneself" to mitigate cultural conflicts, resulting in the development of a distinct "circle culture." This entails forming social circles with fellow international students who share the same language, similar lifestyles, and minimal cultural disparities. Conversely, students with more pronounced cultural differences encounter difficulties in gaining entry into these circles (Lee, 2017; Li, 2015).

In essence, these individuals tend to create a close-knit community with other foreign students who share the same language and similar lifestyles, resulting in fewer cultural disparities. Conversely, students with more pronounced cultural differences have challenges while attempting to integrate into this exclusive social circle. Specialized management often hampers communication and integration among international students from diverse cultural backgrounds, depriving them of the chance to engage with other cultures and impeding the integration of multiculturalism. This hinders the ability of international students to adapt to the social and cultural environment of the host country, and it also widens the divide between international students and

their home countries. This is detrimental not only to the exchange of Chinese and foreign cultures but also to the process of cross-cultural adaptation between Chinese and foreign teachers and students. Research has shown that overseas students who come to China have significant hurdles throughout the process of adapting to their new environment. These challenges include being unfamiliar with Chinese culture and teaching methods, facing language barriers, experiencing difficulty in daily living, and dealing with psychological issues (Gong et al., 2021).

Several previous studies have investigated the socio-cultural and psychological adjustment of international students in China, especially focusing on the challenges identified (An & Chiang, 2015). Institutional integration refers to the process of incorporating the student into the educational institution and assessing the degree to which the individual is aligned with the institutional environment (Steele & Douglas, 2021). Chinese researchers propose substituting the existing segregated management system for foreign and local students with a convergence management model. The Ministry of Education has issued a paper detailing updated regulations for the administration and functioning of foreign student education in Chinese higher education institutions. These standards include the need to facilitate the amalgamation of administration and provisions for both Chinese and international students. The conventional management method, which was custom-made for addressing the requirements of international student education in the past, is now facing more difficulties in adapting to the changing demands of the present period. The rise of convergence management is now an inevitable trend in the progress of international student education.

Research on international students has shown that international students away from family and friends often face a variety of difficulties and challenges. All international students who want to achieve academic success must face these academic problems head on (Baklashova et al., 2016). It showed that international students face the following three main areas of problems in China: academic, socio-cultural and linguistic, which suggests that factors such as the new education system, new curriculum design, academic requirements, and understanding of the study material make it difficult for international students in China, and these factors can also lead to difficulties in achieving the desired academic success, as well as psychological and social problems resulting from this.

Convergence management is a flexible kind of management that takes into account cross-cultural differences. Instead, it is a dynamic process that facilitates

the reciprocal interchange, integration, and influence of language, knowledge, culture, and emotion. The goal of convergence management is to efficiently oversee university education in order to promote the reciprocal engagement and integration of disparate cultures. The promotion of convergence management serves the twin objective of facilitating the assimilation of cultural disparities among international students and enhancing their sense of inclusion in China. Moreover, it is an essential approach for promoting the cross-cultural adaptation of foreign students (Sun et al., 2023a). In recent years, there has been increasing interest in the implementation of convergent management and co-management approaches in Chinese institutions. This attention is mostly directed towards the integration of different management methods and addressing the limited progress of foreign students at a smaller scale (Xia et al., 2023). Encouraging the implementation of convergent teaching management and collaborative teaching innovation, as well as fostering cooperative scientific research, may lead to reciprocal advantages and improve the quality of education (Li & Xue, 2022).

China's higher education sector, especially Guangxi University has seen an increase in international collaboration, shown by the creation of Sino-foreign joint ventures, Confucian Institutes, and proposals for establishing university campuses abroad. Nevertheless, this collaboration is accompanied by strong cautions about the potential threats to Chinese sovereignty, emphasising the intricate equilibrium between global integration, independent decision-making inside institutions, and the authority to govern educational matters (Zhu & Warner, 2019).

Academic adaptation is one significant element that helps propel international students studying in China to live with wellbeing and to achieve academic goals. The academic adaptation of international students in China is a multifaceted process that involves not only achieving academic goals but also ensuring overall wellbeing. Scholars have extensively studied this phenomenon, shedding light on the various factors that influence international students' ability to adapt successfully to their academic and social environments. According to a study by Huang (2012), cultural differences and language barriers are significant challenges faced by international students in China, impacting their academic performance and psychological well-being. These challenges often necessitate coping mechanisms, such as seeking social support, engaging in cultural exchange programs, and developing language proficiency. Additionally, research by Wang and Rode (2010) emphasizes the role

of institutional support services, including orientation programs, counseling, and language assistance, in facilitating the academic adaptation of international students. Such support structures contribute not only to academic success but also to the overall well-being of international students during their study abroad experience in China.

The academic integration of foreign students in China, in comparison to Western nations such as the UK, USA, and Australia, exhibits notable disparities that are driven by a range of variables (Zhu et al., 2022). International students in China have distinct obstacles stemming from cultural disparities, linguistic hindrances, and divergent educational frameworks compared to Western nations. Adapting to the educational environment in China may require acclimating to distinct teaching methods, academic standards, and cultural values (Hussain & Shen, 2019). In contrast, Western countries such as the UK, USA, and Australia, which have historically attracted foreign students, may provide distinct obstacles and support systems throughout the academic adaptation process. These nations provide robust international student programmes, comprehensive support systems, and various cultural contexts that may aid in the adjustment process for foreign students (Zheng & Ishii, 2023). Moreover, the educational systems in these Western nations are often more recognisable to foreign students as a result of their worldwide renown and extensive experience in accommodating overseas students. Moreover, the impact of social support on academic adjustment may differ between China and Western nations. Although both contexts prioritise the significance of social assistance for the adjustment of foreign students, the characteristics and accessibility of support networks may vary. Western nations often provide a wider range of well-developed support systems for overseas students, which may include both local and remote support networks. These resources can have a good effect on the process of adapting to a new environment.

Alexander Astin's theory of involvement and Vincent Tinto's college departure theory are two influential frameworks that help explain the academic adaptation of students in higher education. Astin's (1984) idea of participation posits that more student engagement in their college experience leads to greater learning and personal development. The level of student learning and personal growth in an educational programme is closely linked to the extent and excellence of student engagement in the programme (Milem & Berger, 1997). Astin categorises many types of college student involvement, such as residential location, participation in honours programmes,

academic engagement, and contact with faculty, sports participation, and membership in student government. Contrarily, Vincent Tinto's (1993) perspective on college leave focuses on the issue of student retention and persistence in higher education. Tinto's hypothesis suggests that the extent to which students are academically and socially integrated into the collegiate environment affects their choice to either remain enrolled or withdraw from college. Tinto asserts that as a student gets more integrated into the college environment, both socially and intellectually, their commitment to graduation and likelihood of being retained also increase. Tinto's theory acknowledges that when students begin college, they possess various factors such as their prior experiences, aspirations, level of dedication, and loyalty to the institution. These attributes, combined with the nature of their social and academic interactions at the campus, ultimately influence their ability to persist.

Language competence was found one factor relevant to an academic adaptation of international students. It refers to an individual's inherent understanding and knowledge of a language, whereas language proficiency refers to the capacity to surpass or exceed in that language competency (Llurda, 2000). Competence in analyzing language is the most reliable indicator of one's writing, listening, and speaking skills (Sparks et al., 2007). Language competency and language proficiency are crucial since they directly impact students' employability, communication skills, recognition as exceptional workers, and overall confidence (Josephine & Selvarkumar, 2015). According to Luo et al. (2019), competence in language skills significantly impacts academic performance and overall life contentment in a very favorable manner. Non-native English-speaking students may experience a decline in their academic performance due to a lack of proficiency in the English language. Oral presentations, evaluating reading materials, and learning language relevant to their primary topics are activities that adversely impact their grades (Berman & Cheng, 2001).

Research Competence encompasses a range of skills and abilities, such as the capacity to formulate research problems, hypotheses, and research plans, proficiency in identifying innovative and valuable research, the ability to acquire new research methods, expertise in conducting research and effectively communicating the results to the public, emotional drive, fundamental knowledge, a satisfactory level of intelligence, and self-reflection. According to Li and Campbell (2006), international students have difficulties when it comes to doing research, completing writing assignments, and properly citing sources. This is due to their limited understanding of the

citation practices and writing formats used in the country they are studying in. It is obvious that this competence has an impact on individual academic adaptation, especially for international students.

Teaching methods are another significant factor related to an academic adaptation of international students. It refers to structured systems and procedures designed to facilitate students' acquisition of new skills and unfamiliar ideas. The pleasure of overseas students in university life is influenced by their academic adaptation and cultural adaptation. Novel atmosphere entails a new instructional approach, while the majority of participants are well-adjusted and quite content with university life. However, some individuals also express that upon first arrival, they anticipate relying on a stringent instructor who would directly educate and guide them towards achieving academic achievement. According to Li and Campbell (2006), this finding suggests that students who are able to adjust to a new teaching method achieve academic adaptability.

Another relevant factor impacting an academic adaptation of international students is Psychological adaptation, which takes place inside within a person when they find themselves in a new setting. International students will use positivity and actively seek social support, much like their counterparts from the host country. According to Sapranaviciute et al. (2012), foreign students have more severe symptoms of depression compared to other groups when they also exhibit depressive symptoms. This is attributed to their specific coping methods and exposure to more stressful life events. If college students fail to acquire psychological adaptation, their learning and educational success as well as their ability to communicate and interact with others will decline. According to Fateel (2019), there is a strong and positive correlation between psychological adaptation and academic performance. In order to facilitate the adaptation process, it is important for both students and the institution to work together in developing strategies and policies that reduce stressful situations and promote the integration of foreign students (Mesidor & Sly, 2016).

Zulkosky (2009) defines self-efficacy as the belief in one's ability to successfully perform an action or achieve a goal, regardless of whether it is abstract or physical in nature. It refers to the conviction in one's own ability to achieve success, whereas the other end of the spectrum entails a perception that everything is unattainable. The interaction between self-efficacy, academic expectation, and adaptation is characterized by a strong correlation. When a person combines academic expectations with self-

efficacy, they are more likely to achieve higher adaptation and academic performance. Self-efficacy motivates students to invest more time, effort, and resources to meet their own academic expectations (Campos et al., 2022). San and Guo (2022) found that self-efficacy is the most reliable predictor of academic adaptation among foreign students at mainland China colleges. This is because self-efficacy helps to alleviate stress, which may sometimes hinder problem-solving abilities.

Social integration can be counted as one factor related to an academic performance. It refers to the process by which an individual assimilates into society, forming strong reciprocal connections with fellow members and becoming an integral part of a larger collective. According to Zhang and Rienties (2017), international students in mainland China discovered that a significant number of local students, who primarily speak Chinese, use interactions with international students as an opportunity to practice their English speaking and listening skills. As a result, the connections between local and foreign students tend to weaken quickly and rarely develop beyond superficial levels. Zhu et al. (2022) found that three components, namely life adaptation, training system, and interpersonal communication, are predictive of the amount of academic adaptation.

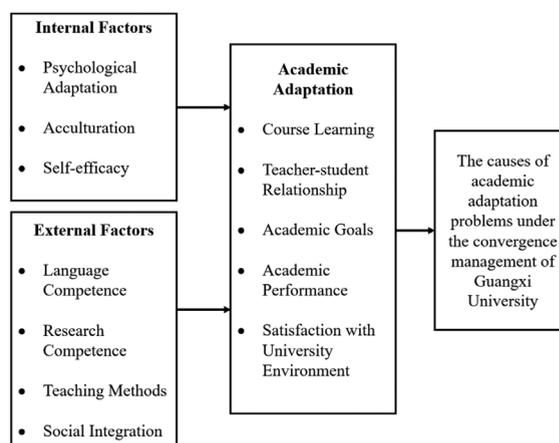
Acculturation is the last factor included in the study. It is the process that an individual or group encounters a culture that is different from their own as will undergo a process of adaptation that might lead to changes in their behavior, attitude, or characteristics. Optimal methods of acculturation linked to successful adaptation in a learning environment. Chinese international students who employ marginalization and separation strategies demonstrate superior adaptation in both academic and psychological domains. Additionally, receiving greater assistance from family members, relatives, acquaintances in one's home country, Chinese instructors, and peer groups in China would enhance the degree of academic adaption and academic achievement (Mao et al., 2023).

Due to a few numbers of researches on academic adaptation of international students under convergence management by examining the theoretical constructs of measurement, this study intended to propose the relevant factors propelling international students to achieve academic adaptation and live in different learning environments happily. Therefore, this research aimed at investigating the factors as the construct of the academic adaptation and the influencing factors of academic adaptation of international students in China under the convergence management of Guangxi University.

## Methodology

The researcher has opted to employ a quantitative research method to answer two objectives; (1) to examine the factors as the construct of the academic adaptation of international students in Guangxi university, China under convergence management and (2) to investigate the influencing factors of academic adaptation of international students in China under the convergence management of Guangxi University, and the conceptual framework is represented in Figure 1.

This study was conducted on international students studying in Guangxi University under co-management, including current undergraduate, master and doctoral students. The total number of population in this study was 762. The sample size was 403 international students, selected by quota sampling. The analysis included Confirmatory Factor Analysis, correlation, and descriptive statistics.

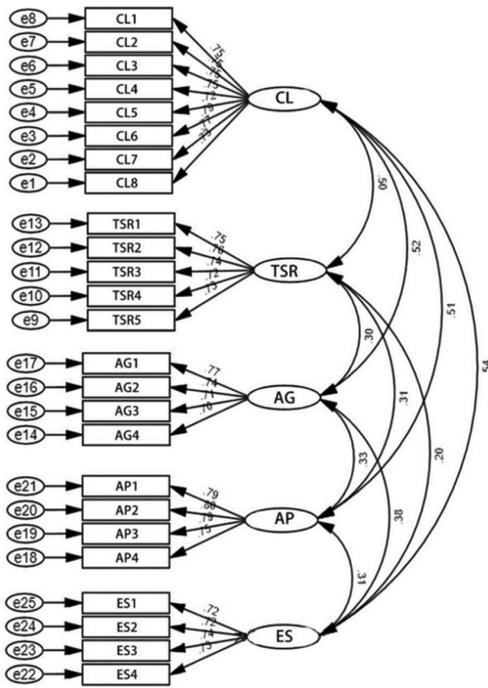


**Figure 1** conceptual framework in quantitative study

## Results

### *Section I: Confirmatory Factor Analysis of the Academic Adaptation of International Students*

Due to the dependent variable, academic adaptation constructs included Course Learning, Teacher-Student Relationship, Academic Goals, Academic Performance, and Satisfaction with University Environment, taking into account the international and academic characteristics of international students in China. In this section, AMOS 26.0 software was used to conduct a Confirmatory Factor Analysis (CFA) on the five mentioned factors of academic adaptation and the result is as represented in Figure 2.



**Figure 2** factor loadings of the constructs of academic adaptation

Model fit was first tested to validate each scale of the academic adaptation dimension. The data collected from the questionnaire were imported into the AMOS26 software and the model fitting parameters obtained by applying the maximum likelihood method are shown in Table 1. As shown in the table, CMIN/DF is 1.220, which is less than 3; GFI, IFI, TLI, and CFI are 0.988, 0.986, and 0.988 is greater than 0.9; RMSEA is 0.023, which is less than 0.08, which indicates that the scales of Course Learning, Teacher-Student Relationship, Academic Goals, Academic Performance, and Satisfaction with University Environment constructed in this study have a good fitness.

From the results of the convergent validity test, it can be seen that the standardized factor loadings of the scale of Course Learning, Teacher-Student Relationship, Academic Goals, Academic Performance, and Satisfaction with University Environment ranged from 0.699 to 0.793, which is greater than 0.6; the combined reliability (CR value) ranges from 0.8181 to 0.9112, which is greater

than 0.6; and the average variance extracted (AVE value) ranges from 0.5296 to 0.6107, which is greater than 0.5, indicating that the scale designed in this study has good convergent validity.

In terms of the discriminant validity test, it indicates that the correlation coefficients between the variables range from 0.200 to 0.542, which are all less than the square root of the AVE of the variable, so it can be assumed that Course Learning, Teacher-Student Relationship, Academic Goals, Academic Performance, and Satisfaction with University Environment scales designed in this study have a good discriminant validity.

*Section 2: Correlation Analysis of Academic Adaptation and Influential Factors*

To investigate the influencing factors of academic adaptation of international students in China under the convergence management of Guangxi University, this section employed Pearson correlation analysis to examine the significance and direction of the linear correlation between the two variables, when using Pearson correlation analysis, the researcher generally used the correlation coefficient (*r*) to describe the degree of linear correlation between the variables, if the correlation coefficient *r* < 0, then it indicates that the correlation between the two variables is negative, while if the correlation coefficient *r* > 0, then it indicates that the correlation between the two variables is positive, and if the correlation coefficient *r* = 0, it indicates that the two variables have no correlation with each other. Correlation analysis was used to investigate the correlation between eight items of Academic adaptation, Research Competence, Language Competence, Teaching Methods, Psychological Adaptation, Self-efficacy, Social Integration, and Acculturation, and Pearson’s correlation coefficient was used to indicate the strength of the correlation.

Table 2 indicates the value of correlation coefficient between Academic adaptation and Research Competence is .522 and shows a significant level of .01. The correlation coefficient between Academic adaptation and Language Competence is .426, indicating a significant level of .01. The correlation coefficient between Academic adaptation and Teaching Methods is .484 and the correlation coefficient between Academic adaptation

**Table 1** Model fitness results of academic adaptation

Fitness parameter	CMIN	DF	CMIN/DF	GFI	IFI	TLI	CFI	RMSEA
Result	323.176	265	1.22	0.942	0.988	0.986	0.988	0.023
Standard			<3	>0.8	>0.9	>0.9	>0.9	<0.05

**Table 2** Correlation analysis of academic adaptation and influential factors

Variable	Correlation level	Academic adaptation	Research Competence	Language Competence	Teaching Methods	Psychological Adaptation	Self-efficacy	Social Integration	Acculturation
Academic adaptation	Pearson Correlation <i>p</i> (two-tailed)	1							
Dimension									
Research	Pearson Correlation	0.522**	1						
Competence	<i>p</i> (two-tailed)	0							
Language	Pearson Correlation	0.426**	0.346**	1					
Competence	<i>p</i> (two-tailed)	0	0						
Teaching	Pearson Correlation	0.484**	0.281**	0.302**	1				
Methods	<i>p</i> (two-tailed)	0	0	0					
Psychological	Pearson Correlation	0.490**	0.330**	0.275**	0.237**	1			
Adaptation	<i>p</i> (two-tailed)	0	0	0	0				
Self-efficacy	Pearson Correlation	0.479**	0.320**	0.304**	0.372**	0.290**	1		
	<i>p</i> (two-tailed)	0	0	0	0	0			
Social Integration	Pearson Correlation	0.481**	0.242**	0.279**	0.297**	0.343**	0.357**	1	
	<i>p</i> (two-tailed)	0	0	0	0	0	0		
Acculturation	Pearson Correlation	0.513**	0.319**	0.310**	0.269**	0.298**	0.338**	0.342**	1
	<i>p</i> (two-tailed)	0	0	0	0	0	0	0	

Note: \**p* < .05, \*\**p* < .01.

and Psychological Adaptation is .490, indicating a significant level of .01. The correlation coefficient between Academic adaptation and Self-efficacy is .479 while the value between Academic adaptation and Social Integration is .481. Finally, the correlation coefficient between Academic adaptation and Acculturation is .513, indicating a significant level of .01.

*Section 3: Regression Analysis between Academic Adaptation and Influential Factors*

Regression analysis is a statistical method used to determine if there is a relationship between variables. It involves analyzing correlations and describing how independent variables affect the dependent variable, allowing for accurate predictions of variable values. This research employs a methodology known as multiple linear regression analysis. The factors influencing Academic adaptation, including Language Competence, Research Competence, Teaching Methods, Psychological Adaptation, Self-efficacy, Social Integration, and Acculturation were taken as independent variables, and the dimensions of Academic adaptation were taken as dependent variables for hierarchical linear regression, and a total of seven models were put into the regression by putting each of the independent variables into order, and the results are shown in the Table 3 and Table 4.

According to Table 3 and Table 4, the study illustrated that after controlling for the influencing factors, the hierarchical regression showed that Model 1: Research Competence had a significant positive effect on Academic adaptation (beta = 0.32, *p* < .05). Model 2: Language Competence had a significant positive effect on Academic adaptation (beta = 0.205, *p* < .05). Model 3: Teaching Methods had a significant positive effect on Academic adaptation (beta = 0.231, *p* < .05). Model 4: Psychological Adaptation had a significant positive effect on Academic adaptation (beta = 0.192, *p* < .05). Model 5: Self-efficacy had a significant positive effect on Academic adaptation (beta = 0.153, *p* < .05). Model 6: Social Integration had a significant positive effect on Academic adaptation (beta = 0.151, *p* < .05). Model 7: Acculturation had a significant positive effect on Academic adaptation (beta = 0.149, *p* < .05). To sum up, Model I to Model VII R-squared were 0.27, 0.337, 0.426, 0.492, 0.52, 0.55, 0.571, respectively, and increased sequentially, and from Model VII, the independent variables, including Language Competence, Research Competence, Teaching Methods, Psychological Adaptation, Self-efficacy, Social Integration, and Acculturation could explain 58.1 percent of the variation in Academic adaptation.

**Table 3** Stratified Regressions of Influential Factors on Academic adaptation (Model 1–4)

Variable	Model I		Model II		Model III		Model IV	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE
A Constant	2.666**	0.098	2.08**	0.13	1.574**	0.137	1.233**	0.137
Research Competence	0.32**	0.026	0.261**	0.027	0.221**	0.025	0.18**	0.024
Language Competence			0.205**	0.032	0.15**	0.03	0.118**	0.029
Teaching Methods					0.231**	0.029	0.207**	0.028
Psychological Adaptation							0.192**	0.026
<i>F</i>	150.062**		103.241**		100.518**		98.491**	
<i>R</i> -square	0.27		0.337		0.426		0.492	
$\Delta F$	150.062**		41.329**		63.045**		53.062**	
$\Delta R$ -square	0.272		0.068		0.09		0.067	

Note: \* $p < .05$ , \*\* $p < .01$ .

**Table 4** Stratified Regressions of Influential Factors on Academic adaptation (Model 5–7)

variable	Model V		Model VI		Model VII	
	Beta	SE	Beta	SE	Beta	SE
A Constant	0.959**	0.145	0.725**	0.147	0.578**	0.144
Research Competence	0.161**	0.024	0.157**	0.023	0.14**	0.023
Language Competence	0.099**	0.028	0.083**	0.028	0.064**	0.027
Teaching Methods	0.171**	0.028	0.153**	0.027	0.143**	0.026
Psychological Adaptation	0.174**	0.026	0.145**	0.026	0.13**	0.025
Self-efficacy	0.153**	0.031	0.121**	0.031	0.098**	0.03
Social integration			0.151**	0.029	0.125**	0.028
Acculturation					0.149**	0.027
<i>F</i>	88.152**		82.735**		80.726**	
<i>R</i> -square	0.52		0.55		0.581	
$\Delta F$	24.014**		26.899**		31.028**	
$\Delta R$ -square	0.029		0.03		0.032	

Note: \* $p < .05$ , \*\* $p < .01$ .

An equation 1 shows that academic adaptation is influenced by several key factors, each contributing to the overall ability of a student to adjust successfully to an academic environment.

The Equation (1) is:

$$\begin{aligned} \text{Academic adaptation} = & 0.578 + 0.14 \\ & (\text{Research Competence}) + 0.064 \\ & (\text{Language Competence}) + 0.143 \\ & (\text{Teaching Methods}) + 0.13 \\ & (\text{Psychological Adaptation}) + 0.098 \\ & (\text{Self-efficacy}) + 0.125 (\text{Social Integration}) \\ & + 0.149 (\text{Acculturation}) \end{aligned} \quad (1)$$

## Discussion

According to the findings of the investigation of the factors as the construct of the academic adaptation, course learning such as language assistance programs or ESL (English as a Second Language) courses may be

greatly related to academic adaptation. Foreign students sometimes encounter difficulties pertaining to linguistic aptitude when acclimating to academic environments in a foreign nation (Li, 2015). Language education that is effective in courses assists students in actively participating with academic subject, communicating their thoughts effectively, and achieving high performance in exams (Masgoret & Ward, 2006). Therefore, to measure individual's academic adaptation, course learning is a relevant dimension to be applied as one construct.

Teacher-student relationships (TSR) are an important factor in academic adaptation, especially for first-year college students. According to a recent research conducted by Li (2022), intimate, supportive, and gratifying Teacher-Student Relationships (TSRs) play a key role in the academic adaption of college freshman. This is corroborated by the results of a research that examined the correlation between TSR (Teacher-Student Relationship) and academic adjustment in first-year college students over a period of time. TSR can be a crucial construct related to academic adaptation, particularly for college

freshmen. The findings of recent studies suggest that TSR can influence academic adaptation and vice versa, and enhancing TSR can be a promising avenue to facilitate academic adaptation among college freshmen.

The academic goals of overseas students significantly influence their academic adaptation. Establishing explicit and significant educational objectives may provide guidance, drive, and a feeling of intentionality throughout one's academic pursuit (Locke & Latham, 2002). Setting academic goals enhances the level of motivation among overseas students, which can be an important construct to measure individual's academic adaptation. Locke and Latham's goal-setting theory (2002) states that establishing precise and demanding goals improves motivation and perseverance, which are essential elements in academic adaptation.

Academic performance is closely tied to the successful integration of international students into the academic culture of the host institution. According to Tinto's (1975) model of student departure, positive academic experiences, including successful performance, contribute to a sense of belonging and reduce the likelihood of attrition. Academic performance can impact the psychological well-being of international students. Consistent success in academic endeavors contributes to a positive self-image and a sense of competence, which are crucial for overall adaptation and acculturation (Misra & Castillo, 2004).

The satisfaction of international students with the university environment is a critical aspect that significantly influences their academic adaptation. A positive and supportive university environment contributes to a sense of belonging, engagement, and overall well-being, fostering successful academic adaptation (Kuh et al., 2008). Satisfaction with the university environment is closely linked to social integration and the development of a sense of belonging among international students.

In terms of the findings of the second objective of the study: to investigate the influencing factors of academic adaptation of international students in China under the convergence management of Guangxi University, the first influential factor was research competence. It plays a pivotal role in shaping the academic adaptation of international students in the Chinese higher education system. As Yeoh and Terry (2013) emphasize, the acquisition of robust research skills is essential for international students to successfully navigate the challenges of a foreign academic environment. The ability to conduct independent research not only deepens their understanding of academic subjects but also enhances critical thinking and analytical skills, crucial components of academic adaptation.

Language competence is another influential factor affecting individual's academic adaptation. Proficiency in the language of instruction, especially for overseas students, has been identified as a significant determinant of academic adaptation (San & Guo, 2022). According to Wilczewski and Alon (2022), the study emphasized the intellectual structure of the research on the role of language and communication in international students' adaptation. Ultimately, the manner in which courses are designed and executed has a substantial impact on the academic adaptation of overseas students. In order to foster the success of foreign students, institutions and educators should be cognizant of language difficulties, cultural disparities, and the need of using inclusive teaching methodologies. This viewpoint is consistent with the notion that academic adaptation is a complex process driven by both individual and institutional influences (Ward et al., 2004).

The efficacy of instructional techniques or teaching methods used in courses also plays a crucial part in academic adaptation. Implementing active learning practices, collaborative projects, and engaging class discussions may enhance the level of engagement and connection that foreign students have with the academic material (Ward, 2004). Studies indicate that educational methods that prioritize student-centered approaches, in which students actively participate in their own learning process, have a favorable effect on academic achievements (Curtis & Trice, 2013).

The offered sources demonstrate that psychological adaptation and social integration are crucial factors in the academic adaptation of pupils. Psychological adaptation, including elements such as self-efficacy, social support, and perceived prejudice, has been identified as a significant predictor of both psychological and academic adaptation in students. Moreover, the degree of psychological adaptation might impact academic achievements and general adjustment to the academic setting (Shamionov et al., 2020). Conversely, social integration, including elements such as social contact patterns, social activity preferences, and social support, has also been associated with academic adaptation. Students that have a higher level of social integration often exhibit enhanced academic adaptation and overall adjustment to the academic environment. Thus, using the facts from the above sources, it can be inferred that psychological adaptation and social integration are both essential determinants that impact students' academic adaptation. Psychological well-being, social support, and successful social integration play a crucial role in kids' academic adaptation and success in their educational setting (Lai et al., 2023).

From the results of the questionnaire research in this paper, self-efficacy helps international students to develop their academic adaptation in the course of their study program. However, the overall score on self-efficacy of international students is in the middle of the scale of factors affecting academic adaptation, indicating that the self-efficacy of international students is moderate. Crano (1993) pointed out that the self-efficacy of international students is a reflection of the potential they possess, the way they cope with challenges, and the proficiency in the skills, which ensures that they have the ability to complete academic tasks independently and to achieve self-efficacy in an appropriate manner, thus enabling them to develop academic adaptation in the university environment, and from the results of this paper.

Cultural differences are an important indicator of academic adaptation, and they are also keys to obtaining social acceptance. Berry et al. (1992) agreed that socio-cultural differences make it impossible for foreign students to interact effectively with local students, and prevent them from obtaining social support, which in turn affects academic adaptation. Developing cultural sensitivity in the teacher-student connection is crucial for the academic adaptation of foreign students. To effectively educate, one must possess knowledge of cultural subtleties and adapt instructional approaches appropriately, while also fostering an inclusive and encouraging atmosphere (Chen & Starosta, 2000). In addition, the responsibilities of good communication and language assistance are crucial in assisting foreign students in overcoming language obstacles (Smith & Kim, 2007).

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## Conclusion

In summary, the process of academic adaptation for international students in China involves intricate interplays of various factors, such as language competence, psychological adaptation, and social integration. The research underscores the significance of self-efficacy in promoting academic adaptation, with international students demonstrating moderate levels of self-efficacy. The paper emphasizes the pivotal role of psychological adaptation in dealing with academic pressures, highlighting the positive impact of family support on alleviating stress. Cultural differences emerge as key indicators, influencing academic adaptation through factors like acculturation and social integration.

The study delves into the importance of social identity, demonstrating that international students face challenges in establishing connections with local peers. The low

satisfaction with cultural adaptation and social identity indicates room for improvement to enhance academic adaptation. Language competence is identified as a critical factor affecting academic adaptation, influencing not only classroom communication but also socio-cultural adaptation.

Research competence emerges as a linchpin for academic adaptation, fostering critical thinking, effective communication, and the ability to navigate the unique challenges of the Chinese higher education system. The correlation between research competence and successful adaptation underscores the need for targeted pedagogical strategies to support international students in their academic endeavors.

Future study on the academic adaptation of overseas students in other contexts should prioritise investigating the interaction between several elements, including language proficiency, psychological adaptation, and social integration, and how these aspects influence both academic performance and psychological well-being. Furthermore, it is important to conduct interventions and longitudinal research in order to get a thorough comprehension of academic adaptation and its enduring consequences on foreign students.

In conclusion, addressing language barriers, enhancing psychological well-being, promoting social integration, and developing research competence are pivotal for facilitating the academic adaptation of international students in China. Recognizing and addressing these factors will not only contribute to academic success but also foster a more inclusive and supportive educational environment for international students.

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## Conflict of Interest

The authors declare that there is no conflict of interest.

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