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Overcoming cultural and language barriers: Explore the experiences of Lao students at universities of education in Vietnam

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Abstract

This study investigates the cultural and language barriers faced by Lao students at Vietnamese universities of education and proposes solutions for enhancing their academic and social integration. We analyzed the experiences of 624 Lao students across eight major universities in Vietnam through online surveys and in-depth interviews employing a mixed-methods approach. This study revealed that Lao students face significant language and cultural challenges that manifest in difficulties with Vietnamese language proficiency and adaptation to the academic culture in Vietnam. Despite these challenges, support from the Vietnamese student and teacher communities plays a crucial role in their adaptation process. The research underscores the need for enhanced teaching methodologies and the development of robust support systems for international students highlighting the pivotal role of language and cultural support in improving the educational experiences of Lao students. Addressing the language and cultural barriers faced by Lao students is essential for fostering their successful integration and participation in the Vietnamese educational system. Enhanced language support and culturally sensitive pedagogical strategies are recommended to enhance the academic success and social integration of these students, thereby contributing to a more inclusive educational environment.

Keywords: Cultural adaptation, International education, Language barrier, Lao students, Vietnamese education.

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Contribution of this paper to the literature

This study is the first in Vietnam to investigate the language and cultural barriers faced by Lao students at universities of education analyzing a broad dataset from across the country to ensure data reliability and provide a comprehensive understanding of their integration challenges.

1. Introduction

International student mobility has become a notable phenomenon in the context of global educational integration particularly within the Southeast Asian region. Vietnam is gradually gaining popularity among foreign students, especially those from Laos because of its geographical and cultural proximity contributing to its ongoing efforts to raise the standard of education and provide a friendly safe living environment (Hao & Thoa, 2023; MoET, 2021b). However, language and cultural differences between the two countries still pose significant challenges for Laotian students despite these similarities (Hang, 2019; Nam, 2021).

The primary objective of this study is to explore and analyze the cultural and language barriers that Laotian students face while studying at universities in Vietnam as well as to propose solutions to assist these students in overcoming these challenges, thereby improving their academic and life experiences.

Previous research has indicated that understanding and adapting to new cultures and languages not only improves effective communication but also promotes respect and diversity in today's global society (Nazir & Özçiçek, 2022; Thu, 2023). However, integrating into a new cultural and linguistic environment is not an easy process for everyone, particularly international students including Laotian students in Vietnam.

This study surveys the opinions of 624 Laotian students across eight key universities of education in Vietnam through qualitative and quantitative methods, including online surveys and in-depth interviews acknowledging the importance of cultural and linguistic adaptation (MoET, 2021b). The findings will provide insights into the challenges faced by Laotian students and propose solutions for their study and life in Vietnam.

According to this perspective, the current study not only aims to expand the existing knowledge on international education but also to offer useful information for educational institutions and policy makers, helping them to better accommodate international students especially those from Laos, thereby promoting an open, inclusive and culturally diverse educational environment.

2. Literature Review

Culture is not only a set of values, beliefs, lifestyles and traditional customs but also a reflection of the values of each society. Culture is a way of life, a way of thinking, applications, experiential knowledge, the language we use, and the objects we create. Culture is a set of customs, capacities, ideas, values, rules, institutions and cultural products created by society and passed down from generation to generation (Fiske, 2002). Culture is the set of distinctive spiritual, material, intellectual and emotional features of society or a social group encompassing value systems, traditions and beliefs not only in art and literature but also in lifestyles and ways of living together (UNESCO, 2001). Culture can include two elements: Material culture and intangible culture (UNESCO, 2001) or it can also be divided into three components: Spiritual entities (values, worldview, ideas, attitudes and beliefs), social behavior and social organizational products. Culture plays the most important role among the spiritual factors of human life (Hofstede, 2001) affecting and influencing human behavior in society.

Language is humanity's most special and important signaling system as a means of thinking and a tool for social communication. In the context of globalization, language is the most important tool of cultural exchange between peoples. Therefore, language is also an inseparable part of culture. Each language provides not only words and grammatical structures but also ways of expressing the feelings, thoughts and perceptions of a community. Language represents the deepest manifestation of a culture. Language ability not only helps people convey messages but also contributes to developing and preserving culture. Culture and language are closely related to each other. Language is not only a resource for expressing values but is also used to change cultural values in the context of communication. Conversely, cultural values and communication situations impact language use. Language is closely related to culture and the relationship between language and culture is complex (Nazir & Özçiçek, 2022; Thu, 2023). Culture impacts how language is formed and used. Language is the main tool for maintaining and transmitting culture from one generation to the next. Understanding cultures and languages enhances diversity and respect in today's global society in addition to providing opportunities for more effective interaction.

This integration now has to occur across multiple countries with various languages and cultures due to globalization (Whitman & Hervé, 2006). Educational institutions are increasingly becoming multicultural environments where students interact with classmates from many different countries. Culture and language are important factors that create this diversity and educational opportunities for international students (Yuges, 2023). This provides opportunities for diversity and multidimensional understanding for learners but it also poses many challenges for international students. Many previous studies also mentioned cultural and language acculturation and the effects of cultural and language contact on international students (Ali, Yoenanto, & Nurdibyanandaru, 2020; Kashima & Loh, 2006; Moussa, 2021; Zhang et al., 2023). When studying in another country, the bicultural network becomes a tool and condition for international students to reach their own academic and professional goals (Kashima & Loh, 2006).

International students often have to deal with new cultures and languages. This also creates opportunities for all students to learn and practice new languages and intercultural communication skills. Interaction and integration help students become flexible learners in diverse environments (Beregovaya & Kudashov, 2019; Ribeiro, 2007). In addition, exposure to new cultures and languages helps international students broaden their horizons and improve their understanding of the world's diversity helping them develop respect for distinctiveness. In addition, international students also face a series of challenges when studying abroad as they have to adapt to the new country. These challenges can be related to academic, socio-cultural and personal characteristics such as language, culinary habits, working and living time, the art of communication, social behavior habits, understanding

of ethics and law, their ability to integrate, etc. They even face difficulties in psychological and socio-cultural adaptation due to homesickness, loneliness or discrimination and prejudice leading to trends and symptoms of psychological depression (Yu, Md Sahariar, & Xun, 2023). Among them, language barriers appear to be one of the most challenging issues that international students face (Beregovaya & Kudashov, 2019; Ribeiro, 2007; Yuges, 2023).

In Vietnam, there are currently more than 16,000 Laotian students studying at colleges and universities across the country accounting for about 80% of the total number of international students in Vietnam (Ninh, 2022). Vietnam and Laos being located in the Southeast Asia region and based on the main wet rice agricultural civilization have similarities in their common cultural environment. Ancestor worship, polytheism, animist belief and other priceless cultural and spiritual qualities are products of agricultural culture. One of the advantages for Lao students studying in Vietnam is that there are similarities in culture and history that enable them to find a common language. However, differences in language, climate characteristics, living and learning environment and communication also pose many challenges for Lao students.

Lao, the official and predominantly used language of Laos is classified within the Tai-Kadai language family and features tonal syllables characteristics of isolating languages (Thu, 2023). In contrast, Vietnamese (part of the Austro-Asiatic language family) also operates as an isolating language but distinguishes itself with a richer tonal system and unique syllabic articulation. This linguistic disparity poses notable challenges for Lao students learning Vietnamese particularly in mastering its complex tonality, grammar and lexicon. The inherent differences in tonal range between the two languages often result in pronunciation errors among Lao learners impacting their confidence and consequently diminishing their willingness to communicate (Hao & Thoa, 2023). Additionally, their academic integration becomes challenging when they have to adjust to Vietnam's distinctive educational framework which is defined by credit-based courses, requirements for independent study and unique teaching methodologies (Ninh, 2022).

International students in general and Lao students in particular facing the above opportunities and challenges, need to establish and maintain a relatively stable and compatible relationship with the learning environment (Kim, 2008). Kim asserted that the process of cross-cultural adaptation is determined by two main components: the individual's internal tendencies and abilities and the environment or in other words, readiness for change, the degree of compatibility between the host culture and the home country and the individual's personality (Kim, 2017).

Moreover, many researchers have also affirmed the role of language in overcoming cultural difficulties for international students. If learners invest in a language, they do so with the understanding that they will acquire a wider range of symbolic and material resources which will in turn increase the value of their cultural capital and social power. Thus, if Lao students know how to regulate their moods, promote their own internal abilities and invest in practicing the Vietnamese language, they can connect with Vietnamese students, expand their social network and learn from the cultural diversity of Vietnam . Besides, if researchers identify the challenges and levels of influence of language and culture, propose solutions and strategies to support Lao students, create incentives for cultural and social adaptation (Yang, Zhang, & Sheldon, 2018) develop guidance and social support, reducing acculturative stress and cultural adaptation (Smith & Khawaja, 2011) promote cultural exchanges (Kashima & Loh, 2006) and develop relationships between Lao and Vietnamese students, the adaptability of Lao students will be improved, thereby effectively improving the quality of learning of Lao students in Vietnam.

In this context, the authors currently aim to build on existing international student research to further explore the specific cultural and language challenges of Laotian students studying in Vietnam. Then, analyze the impact and identify effective support strategies for Lao students studying in Vietnam. In this way, the authors not only aim to expand existing knowledge but also contribute to the development of practical and effective solutions, thereby facilitating greater inclusion and success for Lao students as well as other international students in Vietnam.

This research holds substantial significance as it delves into the cultural and linguistic challenges faced by Lao students in Vietnamese universities of education. Understanding these barriers is crucial for fostering a more inclusive and supportive educational environment concerning the increasing integration within Southeast Asia. This study not only highlights the specific obstacles Lao students face but also proposes actionable solutions aimed at improving their academic and social integration. This research contributes to the broader goal of enhancing the quality of international education and promoting cultural diversity within academic settings by addressing these challenges. This supports the development of a more globalized, empathetic and culturally aware society.

This research was conducted to answer the research questions: (1) What are the main cultural and language barriers faced by Lao students at universities of education in Vietnam? (2) How do these barriers affect their academic performance and social integration? (3) What strategies can be implemented by educational institutions to support Lao students in overcoming these challenges?

3. Research Methods

3.1. The Study's Objectives

In this study, the authors explore and analyze the cultural and language barriers that Lao students face when studying at universities of education in Vietnam. We thereby propose solutions to help students overcome these challenges and improve their learning and life experiences.

3.2. Research Design

We use a combined qualitative and quantitative approach to gain a comprehensive and multi-dimensional view of the issue. Qualitative methods help us explore students' personal experiences, emotions and perspectives in depth. Quantitative methods allow us to collect and analyze specific and measurable data helping us have a broader perspective with more audiences across regions in Vietnam. The results obtained increase the reliability of the study.

Table 1. General information about survey subjects

	Gender		Field of study		Study regions in Vietnam		Number of years of study in Vietnam			
Research samples (n=624)	Male	Female	Other gender	Social sciences and humanities	Natural sciences	The Northern	The Central	The Southern	Less than 1 year	From 1 year or more
Number (Person)	249	372	3	328	296	258	120	246	242	382
Rate (%)	39.9	59.6	0.5	52.6	47.4	41.3	19.2	39.4	38.8	61.2

Table 2. Information about in-depth interview subjects.

Research samples (n=8)	G	ender	Field of study		Study regions in Vietnam		Number of years of study in Vietnam		
	Male	Female	Natural sciences	Social sciences and humanities	The Northern	The Central	The Southern	Less than 1 year	From 1 year or more
Number (person)	5	3	4	4	4	3	1	0	8
Rate (%)	62.5	37.5	50.0	50.0	50.0	37.5	12.5	0	100

3.3. The Study's Subjects and Samples

The research subjects are Lao students studying at universities of education in Vietnam. We conducted the survey from October 22, 2023 to December 18, 2023. According to statistics in 2022, about 14,000 Lao students are studying in Vietnam (MoET, 2021b). They are studying evenly in all three regions of Vietnam, the Northern, Central and Southern regions. In Vietnam, there are 8 key Universities of Education (MoET, 2021a): Hanoi National University of Education, Hanoi University of Education 2, Ho Chi Minh City University of Education, University of Education within Hue University, University of Education within Thai Nguyen University, University of Education within Vietnam National University, Hanoi and Vinh University. These are also the main schools responsible for fostering and improving Vietnamese language skills for Lao students for a period of 6 months to 1.5 years (based on the entrance capacity of international students). They will attend Vietnamese schools in subject areas after fulfilling their required Vietnamese language skills (Hang, 2019; Hao & Thoa, 2023). We randomly invited 100 Lao students from 8 key universities of education in Vietnam to participate in answering the interview questionnaire to conduct the study. We received 624 responses (reaching 78.0%), suitable for us to analyze and exceed our initial expectations (desired to receive 60% of responses only) (see Table 1). At each school, we selected 01 student who has an influence on Lao students at that school (usually group leaders) for an in-depth interview (see Table 2). They are international students with good Vietnamese language skills and understanding of the situation of Lao students where they are studying. Thereby, they voiced not only their own opinions but also the viewpoints of other Lao students around them.

3.4. Data Collection

Data are collected through two main methods: survey forms and in-depth interviews. The survey form was designed to assess cultural and language barriers as well as other factors that may affect the learning experience of Lao students. The survey forms will be sent online on the Google Form platform. Responding online does not cause difficulties for research subjects because they are familiar with working online especially after the COVID-19 pandemic (Trang & Ngoc, 2022). Most in-depth interviews are conducted online on the Google Meet or Meeting Zoom platforms. However, 2 out of 8 interviews were still conducted by phone (due to limitations in interview tools for the interviewees). Each in-depth interview lasted 10 to 15 minutes.

3.5. Data Analysis

In the data analysis phase of our study, both quantitative and qualitative data were subjected to in-depth examination to uncover the nuances of cultural and linguistic challenges faced by Lao students in Vietnam. For quantitative analysis, SPSS software version 20.0 was used to process the cleaned and screened data. This phase focused on descriptive statistics including the distribution of respondents by number, gender, study region and the duration of their study in Vietnam as well as inferential statistics to explore relationships between variables. The analysis included calculating means, medians, standard deviations and conducting various tests such as ANOVA and regression analyses to determine the significance of differences and correlations among variables.

The qualitative data gleaned from in-depth interviews were analyzed through a rigorous content analysis process. This involved coding the data into thematic categories and identifying patterns that emerged across the dataset. The aim was to interpret the lived experiences of Lao students with a focus on identifying common themes related to cultural adaptation, language barriers and their impact on academic and social integration. This dual approach allowed us to triangulate our findings providing a more comprehensive understanding of the issues.

Both strands of analysis were underpinned by a critical examination of the data ensuring the reliability and validity of our conclusions. The quantitative data provided a broad overview of the challenges and experiences of Lao students while the qualitative analysis offered depth and insight into their personal experiences and perceptions. These analyses form the cornerstone of our findings shedding light on the multifaceted nature of the cultural and linguistic barriers encountered by Lao students in Vietnamese universities of education.

3.6. Assumptions in Research

We assume that

- Cultural and language barriers have a significant impact on the learning and life experiences of Lao students at universities in Vietnam.
- There are differences in language and cultural barriers for Lao students at universities of education in Vietnam when considering the characteristics of the subjects such as study region (area), gender and number of years of study in Vietnam.
- Existing support programs and services may not fully meet the needs of Lao students studying at universities in Vietnam.

This research approach provides a framework to better understand the challenges faced by Lao students and how they adapt to their new environment. Thereby, we hope to propose useful solutions and contribute to improving the quality of education and life for international students.

4. Research Findings

4.1. General Analysis Results

We evaluate the reliability of the data obtained by using Cronbach's alpha reliability coefficient to test the relationship between observed variables. If any observed variable has a Cronbach's alpha coefficient less than 0.6 or a relationship with the total variable (Corrected Item-Total Correlation) less than 0.3, it will be deleted. The Cronbach's alpha coefficient in the study has a value of 0.812 (see Table 3) showing that the measurement scale is good (Hair, 2011).

Table 3. Results of evaluating Cronbach's alpha coefficient and item-total statistics.

Reliability statistics				
Cronbach's alpha No. of items				
0.748	11			

Item-to	tal statistics			
	Scale means if	Scale variance:	Corrected item:	Cronbach's alpha:
	an item is	If an item is	Total	If an item is
	deleted.	deleted.	correlation	deleted.
Q5	35.834	20.000	0.450	0.721
Q6	37.778	21.647	0.285	0.742
Q7	36.061	20.224	0.458	0.721
Q8	36.697	20.481	0.431	0.725
Q9	36.971	20.699	0.393	0.729
Q10	35.918	20.701	0.480	0.721
Q11	36.022	20.513	0.316	0.741
Q12	35.993	20.430	0.334	0.738
Q13	35.966	19.747	0.436	0.723
Q14	36.910	20.801	0.340	0.736
Q15	36.008	20.030	0.451	0.721

Statistical results describing the mean values of observed variables are shown in Table 4.

Table 4. Descriptive statistics of the mean values of observed variables.

Question	Mean	Std. deviation	Median	Variance	Minimum	Maximum
Q5	4.181	0.854	4.000	0.730	1.00	5.00
Q6	2.239	0.742	2.000	0.551	1.00	5.00
Q7	3.955	0.802	4.000	0.643	1.00	5.00
Q8	3.319	0.787	3.000	0.619	1.00	5.00
Q9	3.045	0.794	3.000	0.630	1.00	5.00
Q10	4.098	0.686	4.000	0.470	2.00	5.00
Q11	3.994	0.957	4.000	0.915	1.00	5.0
Q12	4.022	0.944	4.000	0.892	1.00	5.00
Q13	4.050	0.922	4.000	0.850	1.00	5.00
Q14	3.106	0.853	3.000	0.727	1.00	5.00
Q15	4.008	0.847	4.000	0.717	1.00	5.00

According to Table 4, it can be seen that Lao students at Vietnamese universities of education face certain challenges in adapting to Vietnamese culture and language but still make positive progress (Q5-Q7). The mean score of 4.1811 for the question about difficulty adapting to Vietnamese culture shows that students tend to find it quite easy to adapt. However, the mean score of 2.2388 for the question about comfort using Vietnamese shows a significant challenge in communicating in the local language. Students were accepted and included in the student community (mean score of 3.9551) which reflects a positive multicultural environment and support from the student community despite language difficulties. The standard deviations of the questions (.85416, .74245 and .80203 respectively) indicate a relative variation in student responses reflecting diversity in personal experiences and perspectives. This also indicates that there are general trends though individual student experiences can vary significantly based on individual factors and specific circumstances.

Research results obtained from a group of questions focusing on the learning experiences of Lao students at Vietnamese universities of education (Q8-Q10) show an overall view that is quite positive but not lacking challenges. The mean score of 3.3189 for the question about satisfaction with teaching quality indicates that the majority of students feel quite satisfied although not completely. The mean score of 3.0449 for the question about the suitability of learning materials and teaching methods to students' learning needs indicates a fairly high fit although there is still room for improvement. The highest mean score was 4.0978 on the question about the support from teachers and school staff indicating strong and effective support.

The standard deviations of the questions in this group (.78666, .79398, and .68583) reflect a moderate variation in student responses which may be due to differences in individual expectations and experiences. These figures show that students still feel certain improvements are needed especially in the quality of teaching and the suitability of learning materials despite generally positive evaluations of the learning experience.

Research findings obtained from a group of questions focusing on Lao students' evaluation of support and services for international students at Vietnamese universities of education (Q11-Q13) show a significantly satisfied with these support services. The average scores of 3.9940 for satisfaction with support services, 4.0224 for information about available support sources and 4.0497 for access to support sources indicate that students have a very positive perception of the support they receive. The relatively low standard deviations (.78666, .79398 and .68583) for each question also indicate that the majority of students had similar views on these factors. These findings not only reflect a good international student support system at Vietnamese universities of education but also show the need to maintain and continuously improve these services to meet the needs of students from many different cultures.

Research findings of a group of questions to evaluate the participation of Lao students in community activities and exchanges at Vietnamese universities of education (Q14-Q15) show a notable difference: the mean score was 3.1058 for participation in community activities indicating a medium level of participation while the mean score was significantly higher at 4.0080 for feeling that these activities helped with inclusion and soft skills development

showing that students appreciate the benefits from these activities. The relatively high standard deviations (.85274 and .84701) indicate that there are differences in the level of participation and awareness of the benefits of community activities among students. These findings highlight the importance of encouraging more active participation in community activities to enhance experiences of inclusion and personal development.

4.2. Results of ANOVA Analysis by Subject Group

In this study, we examine whether there are differences between groups of subjects (independent and qualitative variables) and observed variables (dependent and quantitative variables). The results of the ANOVA analysis show that there are no differences between groups of subjects in sentences 5, 8, 13, 14 and 15. However, there are differences in the remaining sentences.

In the observed variable (Q6), when Lao students were asked about their comfort when communicating in Vietnamese, the results of the Anova analysis are as shown in Table 5.

Table 5. Results of ANOVA analysis by each observed variable Q6.

Subjects classified	F	Sig.
Gender	1.181	0.308
Field of study	0.063	0.802
Region	4.081	0.017
Number of years of study in Vietnam	2.332	0.127

We can observe that the region variable's significance value is less than 0.05 in the Anova table above.

Therefore, there are statistical regional differences that affect Lao students' comfort when communicating in Vietnamese. There are no differences in variables regarding field of study or years of study.

In the observed variable Q7, when asked about the difficulty in integrating with the student community in Vietnam, the Anova analysis results are as shown in Table 6.

Table 6. Results of Anova analysis by each observed variable (Q7).

Subjects classified	F	Sig.
Gender	4.064	0.018
Field of study	0.529	0.467
Region	3.192	0.042
Number of years of study in Vietnam	0.103	0.748

We can observe that the significant values of the variables such as gender and region are both less than 0.05 in the Anova table above. Therefore, there is a statistical difference in whether gender and region of study affect Lao students' feelings of acceptance and integration into the Vietnamese community.

In the observed variable (Q9), when learning about learning materials and teaching methods suitable to the learning needs of Lao students at schools of education in Vietnam, the results of the Anova analysis are as shown in Table 7.

Table 7. Results of Anova analysis by each observed variable (Q9)

Subjects classified	F	Sig.
Gender	0.064	0.938
Field of study	2.213	0.137
Region	3.532	0.030
Number of years of study in Vietnam	0.283	0.595

We can see that the independent variable region's significance value is less than 0.05 in the Anova table above. Therefore, there are statistical differences in regions that affect the suitability of learning materials and teaching methods for the learning needs of Lao students. The remaining variables have significant values greater than 0.05. Therefore, there is no statistical difference.

Table 8 shows the results of the Anova analysis for the observed variable (Q10) which refers to the help that students receive from teachers and school personnel if they experience challenges.

Table 8. Results of Anova analysis by each observed variable Q10.

Subjects classified	F	Sig.
Gender	3.065	0.047
Field of study	1.385	0.240
Region	0.682	0.506
Number of years of study in Vietnam	0.841	0.359

The gender-independent variable has a significance value of less than 0.05 as shown in the Anova table above. Therefore, there is a statistical difference in gender that affects the perception of adequate support from teachers and school staff when Lao students encounter learning difficulties. The remaining variables have significant values greater than 0.05. Therefore, there is no statistical difference.

In the observed variable (Q11), when learning about satisfaction with international student support services at the school, the results of the Anova analysis are as shown in Table 9.

Table 9. Results of Anova analysis by each observed variable (O11).

Subjects classified	F	Sig.
Gender	4.219	0.015
Field of study	0.068	0.795
Region	1.406	0.246
Number of years of study in Vietnam	4.113	0.043

We can see that the independent variables of gender and years of study have significant values less than 0.05 in the Anova table above. Therefore, there are statistical differences in gender and years of study that affect perceived satisfaction with international student support services at the school. The remaining variables have significant values greater than 0.05. Therefore, there is no statistical difference.

In the observed variable (Q12), when finding out whether the school has provided sufficient information about available support sources for international students, we obtained the results as shown in Table 10.

Table 10. Results of Anova analysis by each observed variable (Q12).

Subjects classified	F	Sig.
Gender	2.136	0.091
Field of study	30.570	0.000
Region	0.516	0.597
Number of years of study in Vietnam	4.595	0.032

The ANOVA table shows that the years of study, the field of study and independent variables have significance values less than 0.05. Therefore, there are statistical differences in field of study and years of study that influence the perception of being well-informed about the support sources available to international students on campus. The remaining variables have significant values greater than 0.05. Therefore, there is no statistical difference.

4.3. Results of in-Depth Interviews

We obtained important information about their experiences in in-depth interviews with eight Lao students studying at schools of education in Vietnam (see Table 2). These students shared about their decision to study in Vietnam often due to good educational opportunities, wanting to explore Vietnam and encouragement from family and community. However, they also have a lot of difficulty adapting to the lifestyle and educational environment here including having trouble pronouncing words correctly in Vietnamese, having difficulty interpreting texts in Vietnamese and having difficulty finding part-time work in their free time.

The strength of the curriculum that students found included the professionalism and dedication of the teachers as well as the modern facilities. However, they also pointed out some weaknesses such as a lack of flexibility in teaching methods and not enough diversity in course content. Students when facing difficulties receive support from teachers and classmates but they also emphasize that this support is sometimes not enough.

In terms of learning and personal development opportunities, students appreciate exposure to an international learning environment and the opportunity to learn from different cultures. They felt that this experience not only helped them develop academically but also in their life and communication skills.

Finally, students proposed a number of improvements to enhance the learning experience for international students especially Lao students. They proposed increasing Vietnamese language courses, improving flexibility in teaching and evaluation and creating opportunities for greater cultural exchange. Some students also emphasized the importance of a better support system including academic advise and psychological support. They also want to have one-on-one study groups combining Lao and Vietnamese students.

Thus, Lao students appreciate the opportunity to study in Vietnam, though they still feel that certain improvements are needed to make their learning experience more perfect. This not only helps international students adapt better to the learning environment but also contributes to improving the quality of education at universities in Vietnam.

5. Discussion

In this study, the authors explored the experiences of Lao students at Vietnamese universities of education by analyzing the results from surveys and in-depth interviews. The results reveal a complex picture of international students' learning experiences and cultural adaptation.

Although Lao PDR is geographically adjacent to Vietnam and has some cultural similarities (Thong, 2011) the study still shows that cultural and language adaptation is a major challenge. This is consistent with research by Beregovaya and Kudashov (2019); Ribeiro (2007) and Thakur (2017) who found that foreign students frequently struggle to adjust to new languages and cultures. Ortega and Shin (2021) have a more positive view that language barriers are a driving force for education to develop and push policymakers to come up with measures more suitable for learners. Previous studies have shown that grammatical complexity and pronunciation difficulties are major obstacles for Vietnamese language learners (Hao & Thoa, 2023). The Vietnamese language has a complex grammatical system with many unique structures not found in other languages including Lao. This often makes learning and using the Vietnamese language difficult for international students (Thong, 2011). Furthermore, the difference in sound and accent systems in Vietnamese language is also a challenge for learners especially when they try to pronounce it correctly (Thao, 2023). These difficulties not only affect students' communication skills but also act as barriers to following and understanding courses taught in Vietnamese. They need support from other classmates to act as interpreters but this can distort the content they want to convey (Ribeiro, 2007). They also often have to use non-verbal communication (Jain & Krieger, 2011).

Our study brings new insight into the level of integration and acceptance that Lao students receive from the Vietnamese student community, an aspect that has not been emphasized in previous studies such as those of Hao and Thoa (2023) and Hien, Mai, Phuong, and Phuong (2024). This integration not only reflects the adaptation of international students to the new environment but also shows the openness and acceptance of cultural diversity in

the Vietnamese community in general and Vietnamese students in particular. The positive attitude and acceptance of Vietnamese students may result from international student support policies and an academic culture that emphasizes diversity (Minh, 2023; Thong, 2011). This creates a favorable environment for Lao students helping them not only integrate into their studies but also participate in social activities. This inclusion is important not only educationally but also socially contributing to building a diverse and inclusive academic community (Al-Zubaidi & Rechards, 2010; Khuwaileh, 2000). However, more research is needed to gain a deeper understanding of how and why this integration occurs. Further studies could focus on exploring in more detail the policies and initiatives of Vietnamese universities in creating academic environments with cultural diversity accepted and supported.

In terms of education, a positive development in Vietnamese universities of education is students' contentment with the quality of education and guidance from their teachers which is consistent with Juan's published study findings (Freire & Valdez, 2017). This reflects recent efforts by Vietnamese universities to improve education quality and student support (MoET, 2021b; Nam, 2021). At the same time, our study also points out the need for appropriateness of learning materials and teaching methods that previous studies have not mentioned (Cyparsade, Auckloo, Belath, Dookhee, & Hurreeram, 2013; Kamalova, Umbetova, & Putulyan, 2020; Ladum & Burkholder, 2019).

This study also provides new insight into support and services for international students. Although overall satisfaction was high, the variability in student responses suggests a need for personalization in support services, an aspect that has received little attention in previous studies (Gritsenko et al., 2021).

The reason for the good signals from Lao students at universities of education in Vietnam as mentioned above is the efforts of the Vietnamese government and schools of education to improve the experience of international students especially Lao students. The Vietnamese government has implemented many initiatives to improve the quality of teaching and facilities while focusing on supporting international students in all aspects (Khanh, Lam, & Ngoc, 2013). This not only demonstrates a commitment to providing a high-quality educational environment but also reflects Vietnam's goal to become an attractive destination for international students.

Schools of education in Vietnam have also focused on improving learning and living conditions from upgrading facilities to diversifying curriculum and teaching methods (MoET, 2021b; Thong, 2011). These efforts not only aim to meet the increasing needs of international students but also help Vietnam become more competitive in the global education context. The focus on improving the quality of teaching and student support from various aspects such as consultation, language and cultural support shows an interest in creating a high-quality academic environment and support for international students.

This study has provided insight into the experiences of international students especially Lao students in the Vietnamese education system. The findings highlight the importance of cultural and language support along with the essential need to improve teaching methods and the quality of learning materials to meet the diverse needs of students. In the study, the authors also provide useful information for teachers and policymakers. Listening and responding to the needs of international students from universities will improve not only students' learning experiences but also contribute to improving the quality of education while promoting integration and cultural diversity in educational environments.

6. Conclusion

This study has significantly contributed to understanding the cultural and language barriers faced by Lao students in Vietnamese universities of education. Several critical findings emerged through a comprehensive analysis of both quantitative and qualitative data collected from 624 Lao students across eight major universities. Firstly, it was evident that Lao students face substantial challenges in adapting to the Vietnamese language and culture which impacts their academic performance and social integration. The support from Vietnamese peers and faculty has been instrumental in facilitating Lao students' adaptation process despite these obstacles.

The study highlighted the need for educational institutions to implement more robust support mechanisms and pedagogical strategies that are sensitive to the cultural and linguistic needs of international students. Enhancing language support programs, incorporating culturally diverse content into the curriculum and providing platforms for cultural exchange were identified as key areas for improvement. Furthermore, the research underscored the importance of creating an inclusive educational environment that celebrates cultural diversity and promotes mutual understanding among students from different backgrounds. In a nutshell, addressing the language and cultural barriers experienced by Lao students is pivotal to their successful integration into the Vietnamese educational system.

7. Significance of the Research

This study significantly illuminates the cultural and linguistic hurdles faced by Lao students in Vietnamese education institutions, a topic of growing importance in the context of world integration. By offering a comprehensive analysis of both the challenges faced and the coping mechanisms developed by these students, it not only enriches our understanding of their experiences but also serves as a crucial guide for educational policymakers and institutions. The findings underscore the necessity for tailored support systems and inclusive pedagogical strategies that acknowledge the diverse linguistic and cultural backgrounds of international students. Implementing such measures will not only enhance the academic and social integration of Lao students but also foster a more inclusive, empathetic and culturally aware educational environment. This research contributes significantly to the broader discourse on international education and cultural adaptation, offering valuable insights for both scholars and practitioners interested in improving the educational experiences of international students in Vietnam and beyond.

8. Recommendations

In the context of globalized education, improvements in the learning experience for international students, especially Lao students at Vietnamese universities of education require special attention to the development of

curriculum and the provision of cultural and language support. Improvements in the quality of teaching and learning materials through improved and diversified course content will help meet the diverse learning needs of students from different cultures. Simultaneously, integrated flexible teaching methods and the use of technology in education are also important to adapt to each student's unique learning style and needs.

The provision of language courses and cultural support is very important. Vietnamese language courses from basic to advanced not only help international students adapt to the learning and life environment in Vietnam but also act as an important bridge to help them understand and integrate with the local culture. Furthermore, established cultural guidance and exchange programs will contribute to enhancing interaction and mutual understanding between international students and Vietnamese students.

To enhance student support, it is required to develop specialized guidance services, including academic advising, psychological support, and career guidance, not only helping international students overcome initial difficulties but also supporting them throughout their learning and personal development process. Opportunities provided for students to participate in community activities and networking events will help them build social networks and develop soft skills.

Finally, an established continuous feedback mechanism from international students is necessary to evaluate and improve the quality of education and support services, not only helping schools understand the needs and desires of students but also facilitating continuous change and improvement in the education system. These efforts will not only improve the learning experience for Lao students but also contribute to building an inclusive, perfect and culturally diverse academic community.

9. Limitations

In this study, we have attempted to provide a comprehensive view of the experiences of Lao students at universities of education in Vietnam though there are still some limitations to be identified. Although combined qualitative and quantitative methods are effective in collecting and analyzing data from multiple perspectives, they have limitations.

One of the main limitations is the use of online surveys and in-depth interviews through online platforms such as Google Meet or Zoom. This method, although convenient and appropriate in the post-COVID -19 pandemic context may limit the ability to observe and gather more detailed information from participants' non-verbal expressions. Additionally, reaching a limited number of students from each school (only 1 influential student from each school) may also not be fully representative of the entire Lao student community at each school leading to a number of limitations in comprehensive reflections of their experiences. The data collected is also influenced by participants' subjectivity especially in in-depth interviews where personal perspectives can influence the information provided. Simultaneously, quantitative data analyzed using SPSS while providing insights into general trends, may not fully reflect the complexity and depth of individual experiences.

However, the study still provides valuable insights into the experiences of international students, especially Lao students and suggests effective support strategies in the future despite these limitations.

In the future, the research team can continue to develop research on factors affecting the language and cultural barriers of Lao students at universities in Vietnam when using various other research methods such as Exploratory Factor Analysis (EFA), the Delphi research method, the Analytical Hierarchy Process (APH), Structural Equation Modeling (SEM), etc. to complement, inherit and develop the research findings for this article.

9.1. Statement of Research Ethics

During this study, we strictly adhered to the principles of research ethics. All information from participants is collected confidentially and kept confidential. Their participations consent was completely voluntary and they had the right to withdraw from the study at any time without prejudice. We ensure participants are not harmed by this study.

We also hereby confirm that there are no conflicts of interest in this study. All data and results are presented without manipulation or distortion of information. This study was conducted for accurately and honestly academic purposes without commercial or personal gain.

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Appendices

Appendix 1. Main content of the survey for Lao students.

Interview form	•
Personal information:	
Name: Not required	
1. Gender: Male/Female/Do not want to reveal	
2. Field of study: Natural Sciences/Social sciences	
3. Region: The Northern/The Central/The Southe	rn
4. Number of years of study in Vietnam: less than 1	year/ 1 year or more
Interview questions:	
Part 1: Cultural and language adaptation	
5. I find it difficult to adapt to Vietnamese culture. (Very difficult - Very easy)
6. I feel comfortable communicating in Vietnamese	
7. I feel accepted and integrated into the student co	mmunity here. (No - Yes)

Part 2: Learning experience

- 8. I am satisfied with the quality of teaching at school. (Very dissatisfied Very satisfied)
- 9. I find the learning materials and teaching methods suitable for my learning needs. (No Yes)
- 10. I feel I have enough support from teachers and school staff when I have difficulty learning. (No Yes)

Part 3: Support and services for international students

- 11. I feel satisfied with the international student support services at the school. (Very dissatisfied Very satisfied)
- 12. I have enough information about available support sources for international students. (No Yes)
- 13. I feel it is easy to access support sources when needed. (No Yes) $\,$

Part 4: Community exchanges and activities

- 14. I actively participate in community activities and exchanges at school. (No Yes)
- 15. I feel these activities help me integrate and develop soft skills. (No Yes)

In-depth interview form

Personal information:

- 1. Name: Not required
- 2. Age:
- 3. Field of study:
- 4. Number of years of study in Vietnam:

Interview questions:

- 1. Tell us about the process when you decided to study in Vietnam.
- 2. What challenges did you encounter in adapting to the learning and life environment in Vietnam?
- 3. In your opinion, what are the strengths and weaknesses of the curriculum at your school?
- 4. How much support did you receive from the school and classmates when you encountered difficulties?
- 5. What do you think about the opportunities to study and develop yourself here?
- 6. What suggestions do you have to improve the learning experience for international students, especially Lao students?

Appendix 2. Survey results.

Regarding gender: 1 = Male; 2 = Female; 3 = Do not want to reveal. Regarding field of study: 1 = Natural sciences; 2 = Social sciences.

Regarding region: 1 = The Northern; 2 = The Central; 3 = The Southern.

Regarding students' years of study in Vietnam: 1 = Less than 1 year; 2 = 1 year or more.

Gender	Field	Region	Number	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Gender	of	Region	of years of	20	20	χ.	20	20	210	211	212	210	211	210
	study		study											
1	1	3	2	4	2	3	3	2	4	3	5	5	2	4
2	2	1	1	5	3	5	4	4	5	4	4	5	3	3
1	2	1	2	4	2	3	3	2	3	3	4	3	3	3
2	1	3	2	4	2	3	3	2	4	5	5	4	2	4
1	2	1	2	5	3	5	4	4	5	4	4	5	4	5
1	1	1	1	4	2	3	3	2	3	3	4	4	2	3
2	2	3	1	3	1	4	2	3	3	4	3	3	3	3
1	1	1	2	3	1	3	2	2	3	3	2	3	2	3
2	1	2	2	5	3	5	4	4	5	3	5	5	4	5
2	2	2	2	5	3	5	4	4	5	3	3	5	5	5
1	2	3	2	5	3	5	4	4	5	5	5	5	4	5
2	2	1	2	5	2	4	4	3	4	4	3	5	3	4
1	2	2	1	4	2	4	3	3	4	2	3	4	3	4
2	1	2	1	5	3	5	4	4	5	5	5	5	4	5
1	2	2	2	5	2	4	4	5	4	5	4	5	3	4
1	1	1	1	4	2	4	3	3	4	3	4	4	3	4
2	1	1	2	2	1	2	5	1	3	3	5	2	1	3
2	2	1	2	5	2	4	4	3	4	4	4	5	3	4
3	2	1	2	5	2	4	4	3	4	4	3	5	3	4
2	1	1	2	5	3	5	4	4	4	5	5	5	5	4
1	1	2	1	4	2	4	3	3	4	4	3	4	3	4
2	2	1	2	4	2	3	3	2	4	4	2	4	2	4
1	1	1	2	4	2	4	3	3	4	4	4	4	3	4
1	1	1	1	4	3	4	3	3	4	4	5	4	3	4
2	2	3	2	4	2	4	3	3	4	4	3	4	3	4
2	2	1	2	4	2	4	3	3	4	4	4	4	3	4
1	1	3	2	4	2	4	3	3	4	4	4	4	3	4
1	1	1	1	5	3	5	4	4	5	5	5	5	4	5
2	2	3	2	5	3	5	4	4	5	5	1	5	4	5
2	2	1	2	4	2	4	3	3	4	4	3	4	3	4
1	1	3	1	5	2	4	4	3	4	2	5	5	3	4
1	1	1	1	4	1	3	3	5	3	4	2	4	2	3
1 2	1	3	2	4	2	5	3	4	4	3	4	4	4	4
	2	1	1	5	2	5	4	4	4	5	5	5	4	4
1	1	3	2	5	5	5	4	4	5	2	5	5	2	1
1 2	2	3		5	2	5	4	3	4	5	5		4 3	4
2	2	3	1 2	4 5	3	4 5	3	4	4 5	4 5	4	4 5	4	4 5
1	1	1	1	5	5	5	4	4	2	5 2	5	1	2	
2	2	1	2	4	1	4	3	3	3	3	4	3	3	5
Z	2	1	Z	Ŧ	1	Ŧ	J	J	Э	Э	·F	Э	Э	θ

Gender	Field of	Region	Number of years of	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
	study		study											
1	1	3	2	4	2	4	3	3	4	2	5	5	4	4
2	1	2	1	4	2	4	3	3	4	4	4	3	2	3
1	1	2	2	1	4	1	2	4	5	2	3	4	2	4
$\frac{2}{2}$	2 2	3	2 2	3	2	4 3	3	3	3	3	3 5	3 5	2 4	3 5
1	1	1	1	5	2	4	4	3	4	4	5	5	4	5
2	1	3	2	4	2	4	3	3	4	4	5	5	5	5
2	1	1	2	4	1	3	3	2	3	3	5	4	3	4
1	2	3	2	5	3	5	4	4	5	2	4	4	3	2
2	1	2	1	4	2	4	3	5	4	5	5	5	4	5
2	1	3	2	5	3	5	4	4	5	2	5	4	3	5
2	2	1	2	5	3	5	4	4	5	5	4	4	3	4
1	2	1	2	5	1	4	4	3	3	2	2	2	2	3
1	1	3	1	5	3	5	4	4	5	2	5	4	3	4
2	2	1	2	5	3	5	5	4	5	5	5	4	3	4
1	1	3	1	4	2	4	3	3	4	4	5	5	3	5
1	2	2	1	1	4	1	5	2	3	4	4	4	3	4
1	1	3	2	4	3	4	3	3	5	5	4	3	3	4
2	2	2	1	5	3	5	4	4	5	5	4	4	3	4
2	1	1	2	3	3	4	2	3	5	4	4	4	3	4
2	1	2	2	5	2	4	4	3	4	4	4	4	3	4
$\frac{1}{2}$	2	2	1 2	4 5	3	4	3	3	4 5	4 5	4	4	3	4
1	1	2	2	4	2	4	3	3	4	4	5	5	4	4 5
2	1	1	2	5	2	4	4	3	4	2	5	5	4	5
2	1	2	1	5	3	5	4	4	5	5	4	4	3	4
2	2	3	2	4	2	4	3	3	4	4	5	4	3	4
2	1	3	2	5	3	4	4	3	5	4	4	3	2	4
2	1	2	2	4	2	4	3	3	4	5	4	5	3	5
1	2	3	1	4	2	4	3	3	4	4	5	5	3	5
2	2	3	2	4	2	4	3	5	4	4	1	1	5	2
1	1	1	1	4	2	4	3	3	4	2	5	5	3	5
2	2	1	1	4	3	4	3	3	4	4	4	4	3	4
1	1	3	2	4	2	4	3	5	4	4	5	5	4	5
2	2	1	2	4	2	4	3	3	4	4	3	3	1	2
1	1	1	1	5	3	3	4	2	5	5	4	4	2	3
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Gender	Field of study	Region	Number of years of study	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
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Gender	Field of study	Region	Number of years of study	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
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Ye	Gender	Field of study	Region	Number of years of study	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
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1 1 1 1 2 4 2 4 3 3 4 4 5 5 4 5 2 2 3 2 4 2 4 3 3 4 4 3 3 1 2															
2 2 3 2 4 2 4 3 3 4 4 3 3 1 2			-												
	1	1	3	2	5	3	3	4	2	5	5	4	4	2	3

Gender	Field of study	Region	Number of years of study	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
1	1	1	2	4	2	4	3	3	4	4	5	5	4	5
2	2	3	2	4	2	4	3	3	4	4	3	3	1	2
1	1	1	2	5	3	3	5	2	5	5	4	4	2	3
1 2	2 2	3	1 2	5 4	3	4	4 3	3	4 5	5 4	4	4	3	5 4
2	2	2	2	3	2	4	2	3	4	2	1	3	2	3
1	1	3	2	4	2	5	3	3	4	4	4	3	2	3
2	2	3	2	3	1	3	4	2	4	4	4	5	5	5
2	2	1	2	5	3	4	4	3	4	5	3	4	3	4
1	1	3	2	4	2	4	2	3	3	5	4	4	5	4
1	1	1	2	4	2	4	4	3	4	2	4	4	3	4
$\frac{1}{2}$	1	3 2	2 2	4 5	2	3	4	3	4	5 5	4	5 5	3	4
3	2	2	1	5	2	4	4	3	5	5	5	3	3	3
2	2	1	2	3	1	4	4	4	4	2	4	5	3	4
2	1	2	1	5	2	4	2	3	3	5	5	5	3	4
2	1	1	1	5	2	4	4	3	4	3	4	5	4	4
2	1	2	1	5	2	5	5	3	4	5	4	5	3	5
2	2	1	2	5	3	4	4	2	5	4	4	5	4	4
$\frac{2}{2}$	1	1	2	5 3	2	5 4	4 2	3	4	5 5	3 2	3 5	3	3 4
2	2	1	2	5	2	4	3	5	4	3	4	4	3	4
2	2	3	2	4	2	4	3	3	5	4	4	5	2	5
1	1	1	2	5	3	3	3	4	4	4	4	5	1	4
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1	2	3	1	4	1	3	3	2	3	3	4	3	3	3
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1 2	1 2	3	2 2	3	1	3	3	3	3	3 4	3	3	3	3
1	1	1	1	3	1	3	2	2	3	3	2	3	2	3
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1	1	3	1	5 5	3	4 5	4	4	3 5	5 5	5	4	3	3 4
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1	2	2	2	1	3	1	2	2	3	4	4	4	3	4
1	1	1	1	4	3	4	3	3	5	5	4	3	3	4
2	2	2	2	5	3	5	4	4	5	5	4	4	3	4
2	1	1	2	3	3	4	2	3	5	4	4	4	3	4
<u>2</u> 1	$\frac{1}{2}$	2 2	1 2	5 4	2	4	3	3	4	4	4	4	5 3	4
2	2	1	2	5	3	4	4	3	5	5	4	4	3	4
1	1	2	2	4	2	4	3	3	4	4	5	5	4	5
2	1	1	2	5	2	4	4	3	4	5	5	5	4	5
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2	1	3	2	5	3	4	5	3	5	2	4	3	5	4
<u>2</u> 1	1 2	3	1 1	4	2	4	3	5 3	4	5 4	4 5	5 5	3	5 5
2	2	3	2	4	2	4	3	3	4	4	1	1	3	2
1	1	3	2	4	2	4	3	3	4	3	5	5	3	5
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2	2	1 9	1	4	2	4	3	3	4	4 5	3	3	1	2
1	2	3	2	5 5	3	3 4	4	3	5 4	5 5	4	4	3	3 5
2	2	3	2	4	3	4	3	3	5	4	4	4	3	4
2	2	2	2	3	2	4	2	5	4	4	1	3	2	3
1	1	1	2	4	2	5	5	3	4	4	4	3	2	3
2	2	3	1	3	1	3	4	2	4	3	4	5	3	5
2	2	3	2	5	3	4	4	3	4	5	3	4	3	4
1	1	1	2	4	2	4	2	3	3	5	4	4	3	4

Gender	Field of study	Region	Number of years of study	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
1	1	3	2	4	2	4	4	5	4	3	4	4	3	4
2	2	1	2	5	3	4	4	2	5	4	4	5	4	4
2	1	3	2	5	2	5	4	1	4	5	3	3	3	3
2	1	3	2	3	1	4	2	3	4	5	2	5	3	4
$\frac{2}{2}$	2	3	2 2	5 4	2	4	3	3	4 5	3	4	4 5	3 2	4 5
1	1	3	2	5	3	4 3	3	4	4	4	4	5	1	4
2	2	2	1	5	2	2	3	3	4	4	5	3	3	4
1	2	3	2	4	1	3	2	2	3	3	4	3	3	3
2	1	3	2	4	2	3	3	5	4	5	5	4	2	4
1	2	1	2	5	3	5	4	4	5	4	4	5	4	5
1	1	3	2	4	1	3	3	2	3	3	4	4	2	3
2	2	1	1	3	1	4	2	3	3	4	3	3	3	3
1	1	3	2	3 5	2	3	2 4	3	3 4	3 4	2 5	3 5	5 4	3 5
2	1	1	1	4	2	4	3	3	4	2	5	5	4	5
2	1	3	1	4	1	3	3	2	3	4	5	4	3	4
1	2	3	2	5	3	5	4	4	5	5	4	4	3	2
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2	2	3	2	5	3	5	4	4	5	5	4	4	3	4
1	2	3	2	5 5	3	4 5	4	3	3 5	5 5	2 5	2 4	3	3
2	2	1	2	5	3	5	4	4	5	5	5	4	3	4
1	1	1	2	4	2	4	3	3	4	4	5	5	3	5
1	2	2	2	1	4	1	2	2	3	4	4	4	3	4
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2	1	2	1	5	2	4	4	5	4	2	4	4	3	4
$\frac{1}{2}$	2	2	2	4 5	3	4	3	3	4 5	4 5	4	4	3	4
1	1	2	2	4	2	4	3	3	4	4	5	5	4	5
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1	2 2	1	1 2	4	2	4	3	2	4	4	5	5	3	5 2
<u>2</u> 1	1	3	1	4	2	4	3	3	4	4	5	5	3	5
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2	2	1	2	5	3	4	4	2	5	4	4	5	4	4
2	1	3	1	5	2	5	4	1	4	5 5	3	3 5	3	3
$\frac{3}{2}$	2	3	1 1	3 5	2	4	3	3	4	3	4	4	3	4
$\frac{2}{2}$	2	3	2	4	2	4	3	3	5	4	4	5	2	5
1	1	3	2	5	3	3	2	4	4	2	4	5	1	4
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2	1	3	2	4	2	3	3	2	4	5	5	4	2	4
1	2	3	2 2	5 4	3	5 3	4 3	4 2	5 3	4	4	5 4	4 2	5 3
2	1 2	3	1	3	1	4	2	3	3	3 4	3	3	3	3
1	1	1	2	3	1	3	2	2	3	3	2	3	2	3
1	1	3	1	5	2	4	4	3	4	4	5	5	4	5
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1	2	1	2	5	3	5	4	4	5	5	4	4	3	2
2	1	2	1	4	2	4	3	3	4	5	5	5	4	5
$\frac{2}{2}$	1 2	3	2 2	5 5	3	5 5	4	4	5 5	5 5	5 4	4	3	5 4
1	2	3	2	5	1	4	4	3	3	5	2	2	2	3
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2	2	2	2	5	3	5	4	4	5	2	4	4	3	4

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Gender	Field of study	Region	Number of years of study	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
2	1	1	2	3	3	4	2	3	5	4	4	4	3	4
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1	2	2	2	4	2	4	3	3	4	4	4	4	5	4
2	2	1	2	5	3	4	4	3	5	5	4	4	3	4
1	1	2	2	4	2	4	3	3	4	4	5	5	4	5
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2	1	2	2	5	3	5	4	4	5	5	4	4	3	4

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