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Understanding International Students' Academic Adaptation and Motivation to Pursue Higher Education in Turkey

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Abstract: The current study investigates the academic adaptation levels of international students and their motivations for pursuing higher education in Turkey. The study also aimed to compare the adaptation of international students in higher education in terms of various variables such as gender, age, duration in Turkey, education level, and university. A mixed-methods design was employed, incorporating both quantitative and qualitative methodologies. The study involved 222 international students from four universities in Konya who completed an online questionnaire. Data collection used the "international students' adaptation to higher education" scale. The quantitative data in this study were subjected to statistical analyses, using non-parametric tests such as the Mann-Whitney U test and the Kruskal-Wallis H test, while the qualitative data were analyzed using the content analysis technique. Because of the analysis, it was noted that international students demonstrated heightened levels of adaptation in the realms of academic processes, academic principles, and socio-cultural dimensions of university life. However, a moderate level of adaptation was identified in the domain of academic experiences, shedding light on some challenges encountered by students in this aspect. Additionally, the results showed no significant differences in academic adaptation levels among international students based on study variables. Concerning the motivations of international students to pursue higher education in Turkey, prominent factors encompass the quality and diversity of higher education opportunities, historical and cultural heritage, ease of living, affordability, and religious and ethnic ties. This underscores the importance of universities and policymakers in Turkey to recognize challenges and promote the strengths of the country as an international study destination.

Keywords: *Academic adaptation, higher education, international students, motivations.*

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Introduction

In recent decades, higher education internationalization has rapidly accelerated (Işık et al., 2023). This phenomenon encompasses various elements, such as intercultural aspects, research endeavors, an internationalized curriculum, and the inclusion of international students, aimed at enhancing education and research experiences (Amzat et al., 2023; Arief & Melati, 2017; Smith, 2020; Tran et al., 2023; Tsang & Yuan, 2022). While international students pursuing education abroad experience cultural understanding, personal and academic growth, and improved language skills, they also face challenges such as language barriers, academic difficulties, and cultural adjustment issues (Dou et al., 2023; Gokpinar-Shelton & Pike, 2022; Singh, 2018; Wenyan et al., 2023). Despite challenges, the number of international students globally has surged, reflecting trends in economic, social, and educational globalization (Giaccon, n.d.; Organisation for Economic Co-operation and Development [OECD], 2012; Wachyuni et al., 2023). Forbes-Mewett (2011) emphasize the importance of thorough preparation for prospective international students, highlighting the critical issue of adaptation to a new academic environment, culture, and social norms. The examination of the adaptation process among international students has garnered significant scholarly interest, as evidenced by numerous global studies dedicated to investigating this topic (Dou et al., 2023; Hussain & Shen, 2019; Tsang & Yuan, 2022; Xiaoying et al., 2023; Zhao et al., 2022).

The academic adaptation of international students is a multifaceted process that encompasses academic, socio-cultural, and psychological challenges. Academic adaptation involves how students navigate the demands of the academic environment and enhance their motivation to achieve academic success (Arslan & Polat, 2023; Sheng et al., 2022). It is

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considered crucial for ensuring the academic success and quality education of international students, as those who adapt well tend to achieve better academic outcomes (Alghamdi & Otte, 2016; Gokpinar-Shelton & Pike, 2022; Gönültaş et al., 2023). Turkey, being a popular destination for international students, offers excellent education, a multicultural life, and a friendly environment (Ercan, 2019; Eynullayeva et al., 2021; Karakaya-Özyer & Yildiz, 2020; Tekin & Orhan, 2023). The number of international students in Turkey has steadily increased over the years, driven by various factors, including geographical, cultural, historical, religious, and ethnic affinities, which play a significant role in international students' decisions about studying in Turkey (Aydın, 2021; Hosgorur & Aysel, 2022; Özoğlu et al., 2015). However, international students in Turkey also face challenges such as language barriers, personal factors related to transitioning to life abroad, living in a big city, and difficulties with educational institutions (Cura, 2015; Kurum & Erdemli, 2021; Yilmazel & Atay, 2022). These challenges highlight the importance of addressing various aspects of academic adaptation to ensure a positive and successful experience for international students in the Turkish higher education context.

In the context of the foregoing discussion, the academic assimilation of international students has emerged as a noteworthy asset with implications for both students and educational institutions. The ongoing expansion of research within the Turkish context serves to shed light on and contribute to the understanding of this subject. Moreover, although research has illuminated international students' adaptation, there are limited studies that have examined academic adaptation using both quantitative and qualitative research methodologies to obtain a comprehensive understanding of this topic. Therefore, the purpose of this study is to investigate the academic adaptation levels of international students in higher education and explore their motivations for pursuing higher education in Turkey through a mixed-methods approach. In pursuit of this overarching goal, the following research questions have been formulated:

1. What is the level of academic adaptation of international students in higher education in Turkey?
2. Does the academic adaptation of international students vary on the basis of demographic characteristics such as gender, age, native country, duration of stay, educational level, and university affiliation?
3. What are international students' motivations to pursue higher education in Turkey?

Literature Review

Higher Education in Turkey

In recent years, Turkey has emerged as a magnet for an increasing cohort of international students, particularly from the Middle East, Africa, and Central Asia (Arslan & Polat, 2023; Hosgorur & Aysel, 2022). The higher education system in Turkey is overseen by the Council of Higher Education (CoHE), an autonomous institution entrusted with the governance and administration of higher education throughout the country (Erk, 1989). The most recent data from the Council of Higher Education CoHE (2021) reveals that in 2020, 223,580 international students were enrolled in Turkish higher education institutions, constituting 6.5% of the entire student population. Numerous studies have investigated the enrollment of international students in Turkish higher education institutions. Some prior studies have shed light on sociocultural adaptation (e.g., Çelik, 2019; Kılıç, 2020; Reis & Gulsecen, 2014; Sheng et al., 2022). Others focus on the issues and challenges of international students' adaptation processes (e.g., Amzat et al., 2023; Park, 2016; Yiğit, 2022). Several additional studies have highlighted the challenges faced by international students in adapting to a new language (Oyar, 2021; Şeker, 2020). Moreover, challenges faced by students in Turkish higher education were also investigated, including adjusting to a new environment, making friends, understanding local customs and norms, communication, and discrimination (Aydın, 2021; Özoğlu et al., 2015; Tekin & Orhan, 2023; Yilmazel & Atay, 2022).

Consequently, understanding international students' adjustment is essential for developing higher education and support strategies for these students. However, the existing literature on international students is largely grounded in interviews, which may not fully capture the complexity and dynamics of students' decision-making processes (Arief & Melati, 2017; Tekin & Orhan, 2023; Tutar, 2023). Moreover, there is a gap in the literature concerning mixed studies of international students who choose Turkey as their study destination. Analyzing the current state of higher education in Turkey provides a foundational understanding of how international students navigate the academic environment in this context.

Academic Adaptation

Academic adaptation is understood as the process and result of students' adaptation to the educational environment, which encompasses the system of interpersonal relationships, educational activities, and the educational space. This experience is characterized by a dynamic balance between the individual and the educational environment (Sun et al., 2023). Various factors influence academic adaptation, including academic expectations, language proficiency, learning environment, academic achievement, academic satisfaction, and academic stress (Campos et al., 2022; Tuan, 2020). For international students, who encounter additional challenges and opportunities in a foreign academic context (Park, 2016), successful academic adaptation goes beyond the customary complexities faced by domestic students. It involves nuanced considerations associated with cross-cultural dynamics, adapting to linguistic variances, assessment modes, academic writing, and teacher-student relations (Oyar, 2021; San & Guo, 2022; Singh, 2018; Snoubar, 2017). Tran's

(2011) findings underscore the pivotal role of readiness in academic adaptation, serving as a crucial factor for balancing challenges and achieving success.

Previous studies have extensively explored the academic adaptation of international students worldwide, encompassing various regions such as Asian countries (Arief & Melati, 2017; Jang, 2018; Wachyunni et al., 2023), China (Hussain & Shen, 2019; San & Guo, 2022; Sheng et al., 2022; Wenyan et al., 2023), African countries (Owusu-Agyeman & Mugume, 2023), European countries (Campos et al., 2022; Yildirim et al., 2021), Russia (Beregovaya & Kudashov, 2019), and the United States (Park, 2016; Tutar, 2023). The overarching goal of these global studies was to discern patterns and identify gaps in understanding the academic adaptation of international students across diverse countries. Concurrently, research on the academic adaptation of international students in Turkey aligns with current trends and developments. There is a burgeoning interest among researchers in studies related to the academic adaptation of international students in Turkey (e.g., Aydın-Kartal et al., 2018; Çelik, 2019; Cura, 2015; Karaköse, 2019; Karakuş & Akay, 2020; Karakuş, 2023). However, it is noteworthy that our understanding of the academic adaptation of international students in Turkey is predominantly derived from single-method research, such as phenomenological or qualitative studies, which may not fully capture the complexity and dynamics of students' adaptation processes. Consequently, there exists a notable gap in the literature regarding studies that use a mixed research methodology in this field.

International Student Motivations

The motivations of international students choosing to study in Turkey have become an increasingly important area of research, especially as the country establishes itself as a hub for higher education (Özoğlu et al., 2015; Radmard, 2017). The motivations of international students encompass the reasons and goals that drive them to pursue higher education abroad (Alghamdi & Otte, 2016; Dou et al., 2023). This importance is reflected in a large and growing body of literature that has investigated the motivations of international students in choosing host countries around the world (e.g., Komiyama & McMorris, 2017; Shkoler & Rabenu, 2023; Wenyan et al., 2023). One of the principal challenges in examining the motivations of international students lies in the diversity and complexity of the factors influencing their selection of destination and program. Mazzarol and Soutar (2002) proposed the push–pull model to elucidate and categorize these factors: push factors are the negative aspects of the home country that encourage students to leave, and pull factors are the positive aspects of the host country that attract students to come.

The literature review reveals that international students' motivations for pursuing higher education in Turkey are multifaceted. Salient determinants such as cultural proximity, geographical proximity, and historical, religious, and ethnic affinities significantly impact the decision-making process of international students when selecting Turkey as their preferred destination for academic pursuits (Aydın, 2021; Hosgorur & Aysel, 2022; Karakaya-Özyer & Yildiz, 2020; Özoğlu et al., 2015; Radmard, 2017). However, several antecedent investigations highlight that the motivations-prompting international students to choose Turkey as a study destination are subject to various challenges. These challenges include linguistic obstacles, difficulties in acclimatizing to the social milieu, economic constraints, and the transition to life abroad (Gönültaş et al., 2023; Oyar, 2021; Tekin & Orhan, 2023; Yiğit, 2022; Yilmazel & Atay, 2022). Hence, the apprehension of international students' perspectives and their use of global opportunities assumes paramount significance in evaluating their academic adaptation. This comprehension becomes imperative for devising effective strategies related to the recruitment, retention, and support of these students.

While the burgeoning body of literature on international students in Turkey offers valuable insights into their academic adaptation and motivations, it is imperative to acknowledge the limitations inherent in the current research landscape. A significant portion of these studies relies predominantly on qualitative methodologies, such as interviews and phenomenological analyses, which, while providing depth, may not capture the full spectrum of experiences due to their limited sample sizes and subjective nature. Additionally, there is a paucity of mixed-methods research that synergizes the strengths of both qualitative and quantitative approaches, thereby offering a more holistic and nuanced understanding of the complexities involved in the academic adaptation of international students. This study seeks to address these gaps by employing both quantitative and qualitative methodologies, providing a comprehensive understanding of international students' academic adaptation and motivations in Turkey.

Methodology

Research Model

In the present study, which aimed to determine the extent of international students' academic adaptation in higher education and to clarify our understanding of students' motivations for studying in Turkey, both quantitative and qualitative research methods were required. Consequently, a mixed technique with a convergent parallel design was used (Figure 1). This design is a research methodology that combines quantitative and qualitative data analysis to provide a comprehensive understanding of a research topic (Razali et al., 2019). In this study, international students' motivations, which represented qualitative data, and the results of the scales, which represented quantitative data, were collected simultaneously and using the same form.

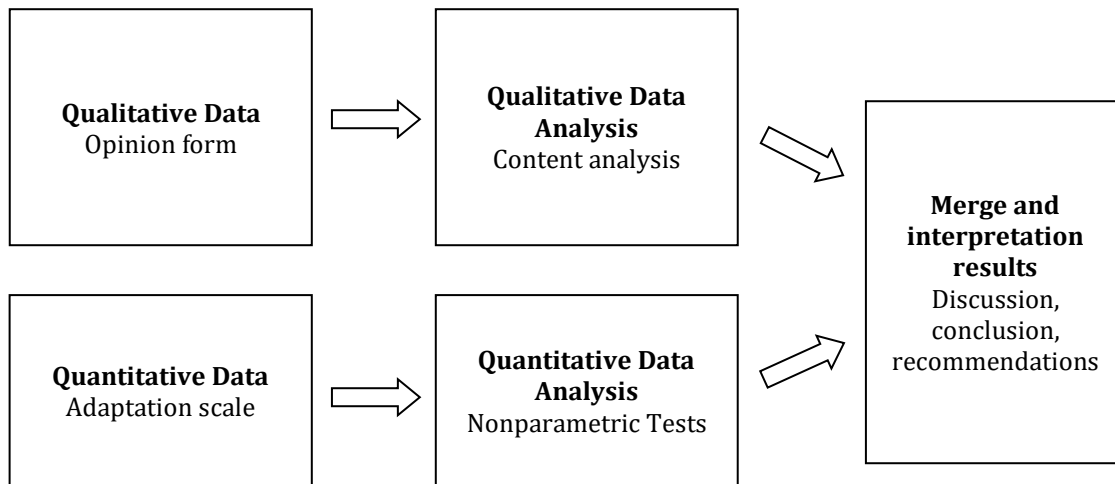


Figure 1. Research Model of the Study

Research Sample

The study group for this investigation comprised 222 international students from various disciplines studying at four different universities in Konya, Turkey. Data were collected between June and August 2023 using convenience sampling. Table 1 shows the demographic characteristics of the respondents.

Table 1. Demographic characteristics of the respondents.

Socio-Demographic Characteristics	Samples	
	N	Percentage
Gender		
Male	134	60%
Female	88	40%
Age		
20 years or less	41	18%
21-25 years	102	46%
26-30 years	50	23%
31 years or above	29	13%
Native Country		
Asia countries	146	66%
African countries	62	28%
European and American countries	14	6%
Duration of stay		
1 year	56	25%
2 years	38	17%
3 years	36	16%
4 years or above	92	42%
Educational Level		
Language Institute	50	22%
Bachelor's level	89	40%
Master's level	48	22%
Doctoral level	35	16%
University		
Necmettin Erbakan University	155	70%
Selçuk University	46	21%
KTO Karatay University	11	5%
Konya Teknik University	10	4%

Table 1 shows that 60% of the participants surveyed, who were international students, identified as male, while 44% identified as female. Furthermore, it is apparent that 46% of the international students surveyed were 20 years old or younger, 23% were between the ages of 26 and 30, 18% were between the ages of 21 and 25, and 13% were over the age of 31. The table further illustrates that a considerable majority of participants, specifically 66%, emanate from Asian countries, 44% are of African origin, and 6% hail from European and American countries. With regard to the duration of residency within Turkey, it is discernible that a quarter of the respondents, namely 25%, spent a mere year within its

borders, while 17% remained for two years. Furthermore, 16% of the participants stayed for three years, and an overwhelming 42% extended their stay for four years or beyond. Upon examination of the educational attainment of international students, 40% study in the bachelor's stage, 22% study in a language institute, 22% study in the master's stage, and 16% have a doctoral stage. Additionally, it is determined that 70% of them are studying at Necmettin Erbakan University, 21% at Selçuk University, 5% at KTO Karatay University, and 4% at Konya Teknik University.

Data Collection

To obtain relevant data for the objectives of this investigation, a mixed research design was employed, using a questionnaire with three sections to collect quantitative and qualitative data within the same form simultaneously. The first section focused on demographic attributes, including gender, age, university, and country. The second part consisted of a scale measuring the adaptation of international students to higher education, developed by Karakuş and Akay (2020) (see Appendix). This adapted scale comprised 21 items across four dimensions: academic course process (3 items), academic principles (rules and guidelines) (3 items), academic experiences (activities) (10 items), and socio-cultural life at the university (5 items). A 5-point Likert scale, ranging from 'completely disagree' to 'completely agree,' was employed to assess students' academic adaptation status. The final section of the questionnaire sought written opinions on students' motivations for pursuing higher education in Turkey. For qualitative data gathering, students were asked, "Why have you chosen to pursue your studies in Turkey? Please elaborate in three sentences".

The questionnaires were collected using Google Forms, and a continuous investigation of the students was organized over a voluntary two-month period. After concluding the survey process, responses from 226 questionnaires were entered into Excel spreadsheets. Upon incorporation and examination of the entire dataset, it became necessary to exclude 4 quantitative responses and 16 qualitative responses because of insufficient information provided in the responses. It is worth noting that the questionnaire was administered in Turkish, the official language of Turkey.

Questionnaire Validity and Reliability

The adaptation of international students in higher education is assessed using a scale developed by Karakuş and Akay (2020), previously employed with international students by Karakuş and Karakuş (2022). To confirm the validity and reliability of the scale and to ensure the internal reliability of the subscales, Cronbach's alpha and exploratory factor analyses were conducted. Table 2 presents the results of the validity and reliability examination of the scale.

Table 2. Result related to Explanatory Factor Analysis and Cronbach's Alpha.

Factor	Item	Cronbach's Alpha	Factor 1	Factor 2	Factor 3	Factor 4	r	
Academic Course Process	Item 1		-.843				.373	
	Item 2	.770	-.800				.395	
	Item 3		-.763				.484	
Academic Principles (Rules/Guidelines)	Item 4			.548			.241	
	Item 5	.685		.812			.177	
	Item 6			.859			.171	
	Item 7				.529		.581	
Academic Experiences (Activities)	Item 8				.777		.621	
	Item 9				.735		.659	
	Item 10				.755		.623	
	Item 11				.884		.571	
	Item 12	.895			.727		.591	
	Item 13				.659		.649	
	Item 14				.748		.654	
Sociocultural Life at the University	Item 15				-.373		.430	
	Item 16				.458		.617	
	Item 17					-.800	.638	
	Item 18					-.877	.567	
	Item 19	.856				-.805	.553	
	Item 20					-.749	.635	
	Item 21					-.544	.389	
		.896						
Kaiser-Meyer- Olkin test (KMO)						.884		
Bartlett's Test of Sphericity						X ² = 2347.404		
						<.001		
						14.096		
Total explained variance						%67.12		

The results of Cronbach's alpha test indicate a high level of reliability and reflect relatively high internal consistency. The first factor has a reliability coefficient of .770, the second factor .685, the third factor .895, and the last factor .856. The overall reliability coefficient of the scale is .896. According to Traub (1994), a reliability coefficient of 0.70 or higher is generally considered acceptable in social science research. On the other hand, it is evident from Table 2 that, because of exploratory factor analysis, the items of the scale were grouped into four factors with eigenvalues greater than 1, accounting for 70.47% of the content validity. The explanation of variance in the factor structures exceeding 30% is considered adequate (Tabachnick & Fidell, 2012). Consequently, the scale demonstrated both validity and reliability.

In consideration of the aforementioned aspects, the present study scrutinized the reliability of the coding procedure within the qualitative data framework. The coding was meticulously executed by the principal investigator, who revisited and recoded all the included studies after a four-week interval. The dependability coefficient was derived utilizing the formula proposed by Miles and Huberman (1994): formula, Reliability = Consensus / (Consensus + Disagreement) x 100. The computed reliability rate stood at 89%, signifying a high level of dependability in the coding process. Consequently, the methodological rigor and transparency of the coding procedure substantially contribute to the validity and reliability of the research outcomes.

Data Analysis and Interpretation

Before starting quantitative data analysis, the Kolmogorov– Smirnov Normality Test was administered to assess the normal distribution of the data. The outcomes indicated a deviation from the normal distribution, necessitating the use of non-parametric tests. Specifically, the Mann– Whitney U test was applied for paired comparisons, whereas for comparisons based on age, country, duration, education level, and the university where students study, the Kruskal– Wallis H test was employed. In addition, frequency (f) and percentage (%) values were calculated for personal information. Descriptive statistics, including means (\bar{X}) and standard deviation (SD) values, were used to describe the levels of academic adaptation among international students. Qualitative data in the research were analyzed using the content analysis method with the MAXQDA program. The data were digitized to ensure a comprehensive presentation of the results, and the findings were organized in tables, using percentages and frequencies. All perspectives were incorporated into the study without any frequency restrictions. In the current study, a significance level of 0.05 was set. The interpretation of adaptation level among international students was categorized into score intervals as follows: "1.00-1.79/very low", "1.80–2.59 low", "2.60–3.39 moderate", "3.40–4.19 high", and "4.20–5.00 very high".

Results

In this section, the research results obtained from the analysis of both quantitative and qualitative data are presented. This presentation is grounded in statistical procedures and is accompanied by a simultaneous discussion.

Results About the Level of Academic Adaptation of International Students in Higher Education in Turkey

The researchers analyzed international students' academic adaptation levels in higher education through questionnaires, and the results are presented in Table 3.

Table 3. Result Related to International Students' Academic Adaptation Levels.

Factor	Items	\bar{X}	SD	Factor \bar{X}	Factor SD
Academic Course Process	Item 1	3.88	0.78	3.87	.70
	Item 2	3.93	0.81		
	Item 3	3.81	0.95		
Academic Principles (Rules/Guidelines)	Item 4	4.20	0.75	4.03	.72
	Item 5	3.94	1.01		
	Item 6	3.96	0.99		
Academic Experiences (Activities)	Item 7	3.47	1.03	3.32	.76
	Item 8	3.38	1.01		
	Item 9	3.45	0.94		
	Item 10	3.62	1.06		
	Item 11	3.32	1.11		
	Item 12	3.05	1.17		
	Item 13	3.10	1.18		
	Item 14	3.01	1.15		
	Item 15	3.43	1.05		
	Item 16	3.45	0.95		

Table 3. Continued

Factor	Items	\bar{X}	SD	Factor \bar{X}	Factor SD
Sociocultural Life at the University	Item 17	3.68	1.04	3.75	.81
	Item 18	3.90	0.98		
	Item 19	3.40	1.18		
	Item 20	3.62	1.06		
	Item 21	4.19	0.78		
General Average		3.60	0.57		

Upon examination of the values presented in Table 3, it becomes apparent that international students exhibit a significant propensity to acclimate themselves to the pursuit of higher education in Turkey. Factor 1 (Items one through 3) of the questionnaire collected responses regarding the academic course processes experienced by students. International students rated their academic course experience as "high," with scores ranging from 3.81 to 3.88 out of 5. The average score for this dimension is 3.87, with a standard deviation of 0.70. On the basis of these results, it can be concluded that international students generally do not encounter significant issues with the course processes when pursuing higher education in Turkey. In lectures or seminars, students can achieve the goals and objectives set by the courses, effectively utilize course materials (such as textbooks, study guides, relevant videos, etc.), and actively participate in instructional activities during classes.

Moving on to Factor 2 (Items 4 through 6) of the questionnaire, which collected responses regarding academic principles (rules and guidelines), international students also rated this aspect as 'high.' Scores ranged from 3.96 to 4.20 out of 5, with an average score of 4.03 and a standard deviation of 0.72. These results suggest that international students generally do not encounter significant issues with university rules and guidelines. They demonstrate the ability to adhere to established rules and understand the university's examination and grading system, including the number of midterm and final exams and passing grades, among other aspects.

Factor 3 (Items 7 through 16) of the questionnaire collected responses about academic experiences (activities). International students evaluated that as 'moderate', with scores ranging between 3.01 and 3.62 out of 5. The average score for this dimension is 3.32, with a standard deviation of 0.76. The results indicate that international students face some challenges in their academic activities. While the students can acquire information about academic projects, actively participate in university orientation programs, attend academic events (congresses, scientific meetings, conferences, seminars) as an audience, and share problems with the teaching staff, they have some difficulties engaging in academic events (congresses, scientific meetings, conferences, seminars), benefiting from student communities at the university (chess club, cinema club, psychology club, etc.), and taking on roles in university committees (student council elections, student quality committee, social-cultural activities committee, etc.). In addition, the student may face the same difficulties when seeking psychological or social support from the relevant department.

Finally, Factor 4 (Items 17 through 21) of the questionnaire collected responses about socio-cultural life at the university. International students evaluated this aspect as 'high,' with scores ranging between 3.40 and 4.19 out of 5. The average score for this dimension was 3.75, with a standard deviation of 0.81. On the basis of these results, it can be concluded that international students do not encounter significant issues with socio-cultural life at universities. The findings suggest that international students in higher education can effectively collaborate and establish friendships with Turkish peers and individuals from other nationalities in the university environment. In addition, they actively engage in sharing problems and participating in various activities, including social, sports, artistic, and cultural pursuits.

From these results, it is clear that international students in Turkey exhibit a largely positive adaptation to the academic environment, with high ratings in course processes and principles, indicating effective integration and understanding of university systems. However, moderate scores in academic experiences suggest challenges in active participation in events and student communities, highlighting areas for potential improvement. The strong adaptation to socio-cultural life suggests successful social integration, forming a comprehensive picture of international students' overall experience in Turkish higher education.

Results on the Effect of Demographic Characteristics on the Academic Adaptation of International Students

The researchers examined the differences in international students' academic adaptation levels according to their gender, age, country of residence, duration of stay, educational level, and university in higher education through questionnaires. The results are presented in Table 4.

Table 4. Result Related to Mann –Whitney U and Kruskal– Wallis tests

Descriptive statistics						
Sub-Dimension	Mann-Whitney U Test					
	N	Mean Rank	Rank Sum	U	p	Difference
Gender						
Male	134	113.14	15160.50	5676.50	.639	None
Female	88	109.01	9592.50			
Sub-Dimension	Kruskal-Wallis Test					
	N	Mean Rank	df	k	p	Difference
Age						
20 years or less	41	108.40				
21-25 years	102	118.03	3	2.788	.425	None
26-30 years	50	99.93				
31 years or above	29	112.86				
Native Country						
Asia countries	146	114.57				
African countries	62	103.38	2	1.379	.502	None
European and American countries	14	115.43				
Duration of stay						
1 year	56	105.87				
2 years	38	92.54	3	7.266	.064	None
3 years	36	108.54				
4 years or above	92	123.92				
Education Level						
Language Institute	50	103.95				
Bachelor's level	89	120.51	3	3.006	.391	None
Master's level	48	105.29				
Doctoral level	35	107.89				
University						
Necmettin Erbakan University	155	111.92				
Selçuk University	46	119.68	3	3.45	.228	None
KTO Karatay University	11	75.09				
Konya Teknik University	10	107.45				

To address the second research question, the Mann–Whitney U test was used to examine differences in international students' academic adaptation levels based on gender, while the Kruskal–Wallis test was employed to explore variations related to age, country's state, duration of stay, educational level, and university. As indicated in Table 4, no significant difference was found in academic adaptation levels between males and females ($p > 0.05$), suggesting that gender does not play a significant role in international students' higher education experience in Turkey. Additionally, the results of the Kruskal–Wallis test revealed no significant differences for age ($U = 2.788$; $p > 0.05$), country's state ($U = 1.379$; $p > 0.05$), duration of stay ($U = 7.266$; $p > 0.05$), educational level ($U = 3.006$; $p > 0.05$), and university ($U = 3.45$; $p > 0.05$). Consequently, it can be inferred that international students' academic adaptation levels in higher education in Turkey do not significantly vary based on these variables.

Results About International Students' Motivations to Pursue Higher Education in Turkey

The students were asked to articulate the reasons behind their decision to pursue higher education in Turkey, with the aim of investigating their motivations. Specifically, they were asked to elaborate in three sentences. The outcomes of these responses are summarized and presented in Table 5, which provides an overview of the frequency and percentage distribution of various subthemes derived from the opinions expressed by international students.

Table 5. Students' Motivations to Pursue Higher Education in Turkey

Sub-Theme	Frequency	Percentage
Country Domain		
Historical and cultural heritage.	44	8.40
Easy living conditions and affordability	41	7.82
Quality of life	31	5.92
Multicultural life.	21	4.01
Appealing nature and tourist attractions.	19	3.63
Religious ties.	34	6.49
Welcoming Turkish people.	25	4.77
Turkey's location.	10	1.91
Ethnic ties.	5	0.95
Academic Domain		
Quality higher education opportunities.	76	14.50
Diversity in university and academic programs.	47	8.97
Modern technological campuses.	10	1.91
The aim is to acquire the Turkish language.	27	5.15
Personal plans to earn a foreign degree.	24	4.58
Personal and Financial Domains		
Reasonable amount of scholarship.	36	6.87
Complex conditions in the home country (poor law, order situation, economic, employment conditions, war).	9	1.72
Domicile someone from family or friends in Turkey.	16	3.05
Study abroad experience and meet people of different nationalities.	13	2.48
The Turkish value system matches personal beliefs.	8	1.53
Other Motives		
The aim of work in Turkey	16	3.05
Image and prestige of Turkish certificates in their home country and abroad.	10	1.91
The intention is to settle in Turkey and not want to go back.	2	0.38
		100.00

To investigate the overall perspectives of international students regarding their motivations for pursuing higher education in Turkey, the main themes and categories were identified based on the responses provided in the qualitative question of the questionnaire. The primary themes can be categorized into four domains: country domain, academic domain, personal and financial domain, and other motivating reasons. Based on the responses from international students in the country domain, it is evident that historical and cultural heritage holds significant importance, as noted by 8.40% of respondents. Additionally, 7.82% of students highlighted the crucial influence of ease of living and affordability on their decision to pursue studies in Turkey. Moreover, a noteworthy 5.92% of students emphasized the overall quality of life in Turkey as a motivating factor for choosing it as their study destination. Contributing to these motivations are additional factors, with multicultural life accounting for 4.01%, appealing nature and tourist attractions for 3.63%, religious ties for 6.49%, welcoming Turkish people for 4.77%, Turkey's location for 1.91%, and ethnic ties for 0.95%. Each of these factors plays a role to varying extents in shaping students' choice to study in Turkey.

When the obtained data were examined, a significant portion of the respondents, constituting 14.50%, cited the quality of higher education opportunities as a primary motivation for choosing Turkey as their study destination. Additionally, 8.97% expressed their motivation based on the diversity found in both universities and academic programs, indicating that the variety of educational offerings played a significant role in attracting these international students. A smaller percentage, 1.91%, cited the appeal of modern technological campuses as a motivating factor. Approximately 5.15% of the respondents expressed the goal of acquiring proficiency in the Turkish language as a reason for choosing to pursue their studies in Turkey. Notably, 4.58% indicated that personal plans and the desire to earn a foreign degree were motivating factors, suggesting that these students view studying in Turkey as an opportunity to fulfill personal aspirations and gain an international academic qualification.

In Table 5, the analysis of responses revealed diverse factors influencing students' decisions, categorized under the personal and financial domains. A notable percentage of respondents (6.87%) cited the availability of a reasonable amount of scholarship as a driving force. In addition, a smaller percentage (1.72%) attributed their decision to complex conditions in their home country, encompassing issues such as poor law and order situations, economic challenges, employment conditions, and war. Another group of respondents (3.05%) mentioned having a domicile with family or friends in Turkey as a motivating factor. Furthermore, a subset of participants (2.48%) expressed their desire for study abroad experience and the opportunity to interact with people from diverse nationalities as influential in their decision-making process. Finally, a minority (1.53%) highlighted that the Turkish value system resonated with their personal

beliefs. These results provide valuable insights into the multifaceted motivations of international students choosing Turkey as their higher education destination.

The results indicate various motivations that drive international students to pursue academic studies in Turkey. Notably, a significant proportion (3.05%) of respondents cited the prospect of employment in Turkey as a key motivator for their academic pursuits. Furthermore, 1.91% of participants highlighted the perceived image and prestige associated with Turkish certificates, both within their home country and internationally, as compelling reasons for choosing Turkey as their study destination. A smaller percentage (0.38%) expressed the intention to permanently settle in Turkey, indicating a reluctance to return to their home country. Qualitative analyses delve deeper into these motivations, providing a nuanced understanding of the factors influencing international students' choices. Beyond academic opportunities, considerations such as career prospects, the reputation of Turkish qualifications, and potential plans for settlement play crucial roles in shaping their decisions.

Discussion

With the growing number of international students in Turkey from different parts of the world, the current study aims to gain an understanding of the academic adaptation of international students in higher education and to determine their motivations for studying in Turkey. To achieve this goal, the following section systematically explores each research question in association with relevant literature in the field of education.

The primary research question investigated was: *What is the level of academic adaptation among international students in higher education in Turkey?* In response, the authors conducted a comprehensive examination of academic adaptation levels, involving the computation of the mean and standard deviation for each scale factor and the entire questionnaire. Preliminary results suggest that international students exhibit a substantial propensity for adaptation. Some studies, including those by Arslan and Polat (2023), Aydın-Kartal et al. (2018), Karakuş and Akay (2020), Karakuş and Karakuş (2022), have reported results consistent with this study. The results also indicate that international students generally do not encounter significant issues with university rules and guidelines. They demonstrate the ability to adhere to established rules and comprehend the university's examination and grading system, including the number of midterm and final exams and the passing grade. Notably, these results diverge from Yilmazel and Atay's (2022) results, which reported various challenges such as communication, discrimination, exams, homework, registration, and rules. However, aligning with the Guidelines for Quality Provision in Higher Education, which focus on ensuring that students receive quality education, fostering higher education growth, and attracting international students by understanding their behavior, sentiments, and needs (Amzat et al., 2023; Campos et al., 2022; Khalid, 2015), the current study results underscore the importance of following rules and guidelines. Adhering to rules and guidelines ensures international students a successful and enjoyable academic journey, preventing potential issues or penalties, and promoting a positive overall educational experience (Gokpinar-Shelton & Pike, 2022; Singh, 2018; Smith, 2020).

The other important result from the study is that international students' adaptation to academic experiences was less than other factors, suggesting potential obstacles in their higher education journey. On the one hand, the analysis indicates that students can acquire information about university projects, actively participate in university orientation programs, actively participate in activities (social, sports, artistic, cultural) with faculty members, and share concerns with teaching staff. This result aligns with existing literature (Alghamdi & Otte, 2016; Tekin & Orhan, 2023; Tsang & Yuan, 2022), highlighting the significance of active engagement in academic events for the development of home and global competencies. On the other hand, the students had some difficulties engaging in academic events (conferences, scientific meetings, conferences, seminars), benefiting from student communities at the university, and taking on roles in university committees. Moreover, the students also encountered challenges in seeking psychological or social support from the relevant department, which might affect their academic performance and well-being. Similarly, Karakuş and Karakuş (2022) also stated that there is a moderate degree of academic adjustment among international students in higher education. Moreover, international students often face difficulties engaging in academic events due to various challenges. These challenges include language barriers, cultural differences, discrimination, and financial stress (Park, 2016; Şeker, 2020; Tuan, 2020; Wenyan et al., 2023). Furthermore, many researchers (e.g., Beregovaya & Kudashov, 2019; Kurum & Erdemli, 2021; Radmard, 2017; San & Guo, 2022; Smith, 2020; Wachyuni et al., 2023; Xiaoying et al., 2023) have highlighted the formidable challenges associated with acclimating to an unfamiliar cultural and academic environment, especially when the language of instruction is not one's native tongue. In such instances, international students may struggle to assimilate into the university community and access support services. To address these challenges, higher education institutions can implement proactive measures such as mentoring programs, mentorship initiatives, and cultural events. These strategies strengthen connections and facilitate the seamless integration of international students into the university community (Aydın, 2020; Giacomini, n.d.). In conclusion, when international students face challenges, the establishment of university committees and support frameworks becomes crucial. These strategic initiatives not only help overcome difficulties but also ensure the acknowledgment of students' voices and fulfillment of their needs.

When we look at the results of the questionnaire analysis, on a positive note, the factor of socio-cultural life at the university underscores the high satisfaction of international students with the socio-cultural life at Turkish universities. The results of this study are consistent with those of previous studies that have explored the academic adaptation of international students in different contexts. For example, Hussain and Shen (2019) found that three types of challenges,

including academic challenges, socio-cultural challenges, and language incompetency, were the main factors affecting the academic adaptation of international students. This dimension reflects successful integration, collaboration, and the formation of friendships with both Turkish peers and students from other nationalities (Kılıç, 2020). Other researchers have indicated that (Eynullayeva et al., 2021; Gönültaş et al., 2023; Işık et al., 2023; Takkaç-Tulgar, 2020; Tsang & Yuan, 2022; Yiğit, 2022) international students may encounter distinct expectations and norms related to friendship, communication, and collaboration when interacting with their Turkish peers and students from other cultures. Therefore, fostering cross-cultural communication and social integration is essential to support the successful adjustment of international students to the Turkish context (Aydın, 2020; Reis & Gulsecen, 2014; Snoubar, 2017).

The second study question posed was: *Does the academic adaptation of international students vary based on demographic characteristics such as gender, age, native country, duration of stay, educational level, and university affiliation?* In addressing this inquiry, the authors conducted Mann–Whitney U and Kruskal–Wallis tests to examine the variations among the demographic characteristic variables in relation to international students' adaptation. The results of the current study revealed that international students' academic adaptation levels in higher education in Turkey were not significantly influenced by their gender, age, country's state, duration of stay, educational level, or university. In other words, international students have similar experiences and expectations regardless of their demographic and academic characteristics, and the Turkish higher education system provides them with a relatively inclusive environment. However, it is noteworthy that the duration of stay emerged as a noteworthy factor, suggesting that the length of time spent in Turkey may play a more discernible role in shaping international students' academic adaptation. Thus, the longer the students stay, the greater their academic adjustment. This is consistent with what many previous studies have indicated (e.g., Owusu-Agyeman & Mugume, 2023; Yiğit, 2022). However, this may not be true for all students, as some may face challenges or disruptions that affect their academic adjustment, such as the COVID-19 pandemic (Jang, 2018; Zhao et al., 2022). However, it is essential to note that although our study did not identify significant differences in intermediate variables, there may still be individual variations and nuanced experiences that future research could explore.

The third study question posed was: *What are the motivations of international students to pursue higher education in Turkey?* In response to this query, the authors conducted a content analysis using the MAXQDA program to examine the motivations guiding students who choose higher education in Turkey. The results of the present investigation elucidate the multifaceted motivations underpinning the decision of international students to engage in higher education within the Turkish context. In accordance with the outcomes, the motivations of international students to pursue advanced academic endeavors in Turkey were shaped by a multitude of factors, which can be delineated into four overarching domains: country, academic, personal and financial, and other motives. These miscellaneous observations reflect the push and pull model of student mobility, which suggests that students are pushed by the conditions in their home country and pulled by the attractions in the host country (Karakaya-Özyer & Yildiz, 2020; Mazzarol & Soutar, 2002). The most prominent factors that pulled international students to Turkey were the quality and diversity of higher education opportunities, the historical and cultural heritage, the ease of living and affordability, and the religious and ethnic ties. These results agree with previous studies that have identified similar factors as the main drivers of international students' choice of Turkey as a study destination (Aydın, 2021; Dziwornu et al., 2016; Ercan, 2019; Gündüz, 2023; Tekin & Orhan, 2023). Notably, the current study revealed additional motivations, including a desire to pursue employment opportunities in Turkey, the allure of the image and prestige associated with Turkish certificates, and a small percentage aiming to permanently settle in the country. Considering the above discussion, the current comprehensive analysis underscores the interplay of cultural, academic, personal, and financial factors that contribute to Turkey's appeal as an international higher education destination.

From these results, it is evident that international students in Turkey exhibit a largely positive adaptation to the academic environment, as reflected by high ratings in course processes and principles on a five-point Likert scale. This indicates effective integration and comprehension of university systems. However, moderate scores in academic experiences reveal challenges in active participation in events and student communities, underscoring areas for potential enhancement. The study highlights the significance of proactive measures—such as mentoring programs, cultural events, and support frameworks, which have been shown in [relevant literature] to address challenges in academic experiences effectively—to bolster overall adaptation. Comprehending the motivations that drive international students to Turkey enables institutions to tailor their strategies, thereby attracting and supporting this diverse student population and fostering a positive and enriching educational journey with long-term benefits such as enhanced cultural diversity and improved academic outcomes.

Conclusion

The current study contributed to the literature on the academic adaptation and motivation of international students in Turkey. The analysis of the results showed that international students had high levels of academic adaptation and motivation in Turkey, except some challenges in their academic experiences. For example, students face the same difficulties in participating in academic events, benefiting from student communities, and taking on roles in university committees; thus, there is a need for targeted support mechanisms to enhance students' involvement in academic life. The study also examines the differences according to gender, age, country of residence, duration of stay, educational level, and university. The results showed that there was no significant difference in the academic adaptation levels among

international students based on these variables, indicating that they have a similar level of adjustment to the Turkish higher education context. In addition to academic adaptation, the study explored the motivations driving international students to pursue higher education in Turkey. The results showed that international students' motivations were influenced by various factors, which were categorized into four domains: country, academic, personal and financial, and other motives. These factors reflect the push-pull model of student mobility and demonstrate the complexity and diversity of international students' choice of a host country as a study destination. Thus, this emphasizes the need for universities and policymakers in Turkey to recognize and leverage these motivations to enhance the country's overall appeal as a preferred destination for international students. The implications of these results extend beyond the national context, emphasizing the importance for global universities and policymakers to recognize and leverage these diverse motivations.

Recommendations

Building upon the aforementioned analysis, the results of the present study provide comprehensive insights into the academic adaptation levels of international students and their motivations for pursuing higher education in Turkey, a nation that has emerged as a prominent destination for higher education worldwide (Arslan & Polat, 2023; Işık et al., 2023; Özoğlu et al., 2015; Yiğit, 2022). The results of the present investigation indicate that international students pursuing higher education in Turkey demonstrate comparatively elevated levels of academic adjustment and that these levels are not significantly affected by diverse study variables. This aligns with prior research exploring international students' academic adaptation in different contexts (e.g., Aydın, 2020; Aydın-Kartal et al., 2018; Dziwornu et al., 2016; Ercan, 2019; Karakuş & Akay, 2020; Reis & Gulsecen, 2014; Tekin & Orhan, 2023). However, it is worth noting that some challenges in academic experiences were identified, indicating exceptions to the overall positive trend. As a consequence of the results obtained from this investigation, the following recommendations can be made:

1. **Policy Makers:** It is advised that policymakers undertake the development and implementation of effective policies aimed at bolstering internationalization efforts. Additionally, there is a need to advocate for enhancing academic quality, diversity, and global competitiveness within Turkish universities.
2. **University Administrators:** Resource allocation for international students should encompass the provision of essential services, including, but not limited to, orientation programs and counseling initiatives. Furthermore, the facilitation of personalized academic support tailored to address distinct challenges and aspirations is recommended. Universities are encouraged to foster the establishment and operation of student associations and clubs specifically tailored to the interests and needs of international students, thereby supporting their active involvement in decision-making processes and leadership roles within the university.
3. **Communication Channels:** To ensure efficient information dissemination and issue resolution, the augmentation of communication channels between international students and university staff is imperative. Concurrently, the establishment of dedicated support services to assist international students in navigating the intricate academic and administrative facets of their education is paramount.
4. **Faculty Members:** Faculty members are urged to adopt pedagogical approaches that are inclusive and responsive to diverse learning styles. This entails the use of interactive teaching methods, integration of multicultural curriculum, and implementation of robust feedback mechanisms.
5. **Engagement Opportunities:** Institutions are encouraged to provide guidance and avenues for international students to actively participate in academic events, student communities, and university committees. Concurrently, the organization of workshops, seminars, and conferences relevant to international students is deemed beneficial.
6. **Support Services:** The augmentation of support services for international students, including language courses, academic counseling, and cultural orientation, is advocated. Furthermore, the promotion of an appreciation for international students by showcasing their achievements, contributions, and diverse backgrounds is essential to cultivating a positive and inclusive academic environment.
7. **Future Research:** Future research endeavors should focus on examining the long-term outcomes of international students' academic adaptation and motivations, encompassing aspects such as academic achievement, career development, and intercultural competence. In addition, there is a need to explore other dimensions of international students' experiences, including social integration, mental health, and employment prospects.

Limitations

The present study employed both quantitative and qualitative research methodologies to explore the current topic. However, it is crucial to acknowledge certain constraints within the scope of this study. One limitation is related to the sample composition, which consisted of 222 international students from various academic disciplines enrolled in four specific universities in Konya, Turkey. Generalizing the results to other samples of international students in Turkey or elsewhere should be approached with caution, as the experiences and characteristics of students in different contexts may differ. Another limitation is the lack of exploration into potential variables, such as academic performance, satisfaction, well-being, and future plans, which might influence the academic adaptation and motivation of international

students. Including these variables could provide a more comprehensive understanding of the outcomes and overall experiences of international students. Recognizing these limitations is essential for accurately interpreting the study findings and guiding future research efforts in this field.

Authorship Contribution Statement

Alnajjar: Literature review, methodology, concept and design, data acquisition, drafting manuscript. Alacapinar: Critical revision of manuscript, statistical analysis, supervision.

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Appendix

International Students' Adaptation to Higher Education Scale in Turkish (Developed by Karakuş and Akay, 2020)

Uluslararası Öğrencilerin Yükseköğretime Uyum Yeterlik Ölçeği

ÜNİVERSİTEDE AKADEMİK YAŞAM	<i>Hiç Uygun Değil</i>	<i>Uygun Değil</i>	<i>Kısmen Uygun</i>	<i>Uygun</i>	<i>Tamamen Uygun</i>
Akademik Ders Süreci					
1. Öğrenim gördüğüm derslerin vermek istediği hedeflere/amaçlara ulaşabilirim.					
2. Ders içeriklerinden (ders kitabı, çalışma yaprağı, konuyla ilgili videolar vb.) yararlanabilirim.					
3. Derslerde yapılan öğretim etkinliklerine aktif olarak katılabilirim.					
Akademik Prensipler (Kurallar/Yönergeler)	<i>Hiç Uygun Değil</i>	<i>Uygun Değil</i>	<i>Kısmen Uygun</i>	<i>Uygun</i>	<i>Tamamen Uygun</i>
4. Ders sürecinde belirlenen kurallara uyarım.					
5. Üniversitenin sınav sistemini (kaç vize/final sınavı yapılacağı vb.) anlayabilirim.					
6. Üniversitenin not sistemini (geçme puanı, vize/final sınavlarının ağırlıkları vb.) anlayabilirim.					
Akademik Yaşantılar (Deneyimler)	<i>Hiç Uygun Değil</i>	<i>Uygun Değil</i>	<i>Kısmen Uygun</i>	<i>Uygun</i>	<i>Tamamen Uygun</i>
7. Üniversitenin akademik alanda yürüttüğü projeler hakkında bilgi edinebilirim.					
8. Üniversitenin akademik alanda yürüttüğü projelere aktif olarak katılabilirim.					
9. Üniversitenin oryantasyon (uyum) çalışmalarına aktif olarak katılabilirim.					
10. Üniversitede düzenlenen akademik etkinliklere (kongre, bilimsel toplantılar, konferans, seminer) dinleyici olarak katılabilirim.					
11. Üniversitede düzenlenen akademik etkinliklerde (kongre, bilimsel toplantılar, konferans, seminer) aktif olarak çalışabilirim.					
12. İhtiyaç duyduğumda psikolojik/sosyal destek almak için ilgili birime başvurabilirim.					
13. Üniversitede bulunan öğrenci topluluklarından (satranç, sinema, psikoloji vb.) yararlanabilirim.					
14. Üniversitede yer alan kurullarda (öğrenci konsey seçimi, öğrenci kalite komisyonu, sosyal kültürel aktiviteler komisyonu vb.) görev alabilirim.					
15. Yaşadığım bir problemi öğretim elemanlarıyla paylaşabilirim.					
16. Öğretim elemanlarıyla etkinliklere (sosyal, sportif, sanatsal, kültürel) aktif olarak katılabilirim.					
ÜNİVERSİTEDE SOSYO-KÜLTÜREL YAŞAM	<i>Hiç Uygun Değil</i>	<i>Uygun Değil</i>	<i>Kısmen Uygun</i>	<i>Uygun</i>	<i>Tamamen Uygun</i>
17. Derslerle ilgili çalışmalarında Türk arkadaşlarımla iş birliği kurabilirim.					
18. Türk öğrencilerle arkadaşlık kurabilirim.					
19. Yaşadığım bir problemi Türk arkadaşlarımla paylaşabilirim.					
20. Etkinliklere (sosyal, sportif, sanatsal, kültürel) Türk arkadaşlarımla birlikte aktif olarak katılabilirim.					
21. Uluslararası öğrencilerle (kendi uyruğu ile Türk uyruğundan olmayan öğrenciler) arkadaşlık kurabilirim.					