Academic Adjustment of Freshmen in Cambodian Higher Education Institutions: A Systematic Literature Review

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Article Info	ABSTRACT
	First-year students face experiences in the primary adjustment stages with their transition to pre-university enrollment, and the experiences are typically highlighted as challenges that will be concentrated significantly in this systematic literature review. This systematic literature review critically synthesizes 20 published articles from 2014 to 2023 on the academic adjustment of first-year students in Cambodian higher education institutions. The qualitative study methods and exploratory design are used, and researchers compiled and evaluated relevant literature focusing on challenges faced by first-year students, factors influencing adjustment, strategies for academic adjustment, and outcomes of adjustment interventions. Data were gathered from reliable databases, and articles meeting predefined criteria were subjected to thematic analysis using Clark and Braunne's Thematic Analysis model. Findings highlight first-year students' challenges, such as academic performance, social identity issues, financial constraints, and language barriers. Factors influencing adjustment include social, personal-emotional, and institutional aspects, underlining the significance of social support and coping strategies. Strategies for academic adjustment focus on effective time management, utilizing support services, and maintaining a healthy work-life balance. Intervention outcomes aim to enhance first-year students' retention rates, mental health, and academic success. Qualitative research emerged as the predominant approach, enabling researchers to understand nuanced experiences and perspectives.

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1. INTRODUCTION

Most first-year students are confronted with the experiences of modifications and adjustments in academics while moving from high school to higher education. Academic adjustment refers to how a student finds the requirements of the educational processes of an academic program and environment. These modifications always overwhelm new and

inexperienced attendee students. For these changes, novice students' expectations do not always fit the purposes and characteristics of the education process in institutions that could not satisfy first-year students' motivations and socio-psychologies [1]. Moving abroad for academic purposes, Wu et al. [2] found that international students are primarily involved with academic challenges, social isolation, and cultural adjustment [3]. The assumption is also part of adjustment constraints; drop-out rates worldwide are typically high for a faculty (49.6%) for such kinds of learners of universities [4]. Although the rate (11%) of Asian country students is lower than in the USA (30%) and Europe (33%), this is noticeable for determining causes factors deal with academic adjusting [5], [6].

With this in mind, students who do not gather extensive information or do not yet have experiences in such a new educational environment in the transition processes could have inevitable difficulties caused by alternative risk factors [7]. The factors embedded problems that highlight socio-psychological issues and socio-demographic themes.

The socio-psychological issues

As a sequence of adjusting, first-year students face many challenges when starting university. The challenges mainly focus on the processes of learning constraints. They are related to the association of sure socio-psychological refusals of first-year students with the new sociocultural academic contexts. The research results from several studies will indicate the causes that primarily affect first-year students' modifications to their educational methods.

Emotional optimism is crucial for maintaining self-motivation in learning, yet first-year students often experience apprehensions related to transitioning from home to university accommodation [8]. Health concerns, such as dissatisfaction with healthcare facilities and mental health challenges like stress and depression, further impact students' academic performance [9], [10], [11]. Additionally, socio-cultural differences, discrimination, and loneliness affect students' social adjustment [12], [13]. Emotional support becomes essential during this transition period, particularly as students transition from adolescence to adulthood [14], [15]. Poor social networking and personal connections contribute to pessimism among first-year students, hindering their educational development [12]. Challenges in self-identity and adapting to new learning styles exacerbate these issues. Nutrition also emerges as a concern, with students struggling to adjust to campus food options and facing food insecurity [16]. Information and communication constraints further impact students' academic experience, with difficulties accessing resources and seeking help when needed [17], [18]. Instructional adjustment issues, particularly in adapting to new curricula and teaching methods, pose additional challenges [19], [20]. Topics such as unsafe living conditions and poor-quality food disrupt students' studies [21], [22], [23].

Overall, first-year students face various socio-psychological constraints that impact their educational performance, including emotional pessimism, social network adjustments, information and communication barriers, instructional adjustments, and challenges in accommodation and nutrition.

The Socio-demographic themes

The appearance of first-year students' issues indicates that the concerns in the socio-demographic portion are likely barriers to educational process disruption. First-year students explore depression negatively related to problem-solving and help-seeking and positively associated with self-blame and fantasizing, being female, coming from a rural area, being an only child, lack of subjective and social support, having low skill at problem-solving and help-seeking. Year-one first-year students face academic adjustment failure and drop out with such problems.

The complexity of family relationships plays a significant role in the adjustment of first-year college students. Parental involvement, as highlighted in the college impact model, can significantly influence students' experiences during their college years [24]. However, complex family dynamics and financial insecurity present challenges for many freshmen, particularly those with limited budgets [11]. Transitioning from home to college often leads to homesickness and emotional adjustment difficulties, underscoring the importance of maintaining a supportive relationship between first-year students and their families [25]. Financial concerns also impact student well-being and academic performance. Students from low-income families, especially in regions like South Africa, face heightened stress due to rising tuition fees and living expenses [26], [27]. Financial anxiety stemming from irregular support and unexpected expenses further compounds these challenges, significantly affecting students' ability to focus on their studies [28]. Social support is crucial in helping first-year students navigate the complexities of transitioning to college. Higher levels of social support, particularly among female students, are associated with lower stress levels and better academic adjustment [29]. However, students from disadvantaged backgrounds may face additional hurdles in accessing social and educational support, impacting their academic performance [11], [30]. Personal traits influence academic adjustment, such as extroversion facilitating socialization and feedback-seeking behaviors [13]. However, difficulties in time management and adapting to academic demands can hinder adjustment for some students [3].

Moreover, the perception of inadequate support in areas such as making friends, living conditions, and financing exacerbates academic challenges [31]. Academic challenges further complicate the transition to college, with students encountering difficulties adapting to new teaching methods, study programs, and communication styles [3], [32]. Language barriers and social adjustments pose additional hurdles for international and cross-border students [32].

In summary, the transition to college is fraught with various challenges, including familial, financial, social, personal, and academic factors. Addressing these challenges requires comprehensive support systems within higher education institutions to ensure first-year students' successful adjustment and academic success.

Research question

This systematic literature review provided insights into the independent variables associated with factors impacting the academic adjustment of first-year students. Meanwhile, this was part of the thesis "Factors that influence first-year students' academic

adjustment." The following question is utilized: what are the challenges and effective strategies for the academic adjustment of first-year students in Cambodian higher education institutions?

2. METHODS
Research design
The researchers conduct in-depth desk research on existing data sources and compile and evaluate the most up-to-date literature on first-year students' academic adjustment to employ qualitative study methods using an exploratory design. A research process and procedure that entails identifying and thoroughly evaluating necessary research studies is what this systematic literature review is [33], [34], [35].

Participants
The research discovered the significance of the existing published articles in journals that could be used as meta-synthesis data. This study examines the articles on the trend in first-year students' academic adjustment in higher education.

Research strategy
The researchers gathered data used in the publication from reliable databases, including Crossref, PubMed, Google Scholar, and others. Keywords: "transition, higher education, academic adjustment, and Cambodian freshmen." [36]. The researchers used Publish or Perish Software to select the articles identified between 2014 and 2023 relevant to the academic adjustment of higher-education first-year students. Researchers used a PRISMA flow diagram to screen the data. To conduct an in-depth assessment of the topic, the chosen articles were processed from an extensive collection of literature. This enabled a robust analysis of recent research, developing patterns in first-year students' academic adjustment in higher education, and additionally, an examination of the strengths and weaknesses of current research studies.

Inclusion and exclusion criteria
The research questions are only addressed by papers that meet the predefined criteria. The following criteria are used in this selection process: First, the Open Access Publication system publications can be found in national and international journals. Second, the articles, particularly those published within the last ten years, mainly address the problem of first-year students's academic adjustment in higher education. Third, the articles related to challenges faced by first-year students, factors influencing them, strategies for academic adjustment, and outcomes of adjustment interventions in the field of academic adjustment of first-year students in higher education.

Type of materials
The basic materials for qualitative research are the researchers themselves [37]. The researchers utilized the Publish or Perish Software to identify relevant articles. This tool automatically extracts data from alternative Open Access Databases, including Google

Scholar, Semantic Scholar, Scopus, CrossRef, and OpenAlex. To evaluate the selected articles, the researchers employed a worksheet to identify strengths and weaknesses.

Data analysis

Researchers use the Thematic Analysis to employ the significant concepts extracted from the data into a comprehensive list of themes [38]. Thematic analysis, the model by Braun et al. [39] and Braun and Clarke. [40], is a qualitative research strategy used to analyze and identify common themes, patterns, and discrepancies related to the academic adjustment of first-year students? The synthesis considered vital factors, including factors influencing adjustment, challenges faced by first-year students, strategies for academic adjustment, and outcome of adjustment interventions.

Interpretation and discussion

The findings are analyzed in alignment with the research's objective. The data gathered underwent initial screening using the Publish or Perish software. The research paper selection process followed four stages outlined in the PRISMA Flow Diagram: Identification, Eligibility, Screening, and Inclusion. The first step of the articles screening process was through database search, which identified 100 articles from Crossref, 91 articles from PubMed, 171 from Google Scholar, and 25 from other sources.

In the identification step, the following studies were eliminated from the 1287 published initial research articles from 2014 to 2023. Eight duplicate records had been eliminated for the excluding processes, 1075 records were designated as ineligible by automated techniques, and 20 were removed for other reasons. During the screening phase, 184 articles were initially identified, with 40 subsequently excluded based on title and abstract review. In the eligibility assessment phase, 144 articles were scrutinized and excluded for various reasons. Specifically, eight articles were over in meeting inclusion criteria, 38 did not satisfy date limitations, 12 were not classified as authentic research articles, 58 did not address the specific topic under investigation, and eight were excluded for miscellaneous reasons. Consequently, the initial pool of collected articles encountered a significant reduction from a total of 1287 studies being excluded, ultimately resulting in the final selection of 20 studies for inclusion in this systematic literature review. The screening processes were briefly described in Figure 1, and twenty articles were described in Table 1.
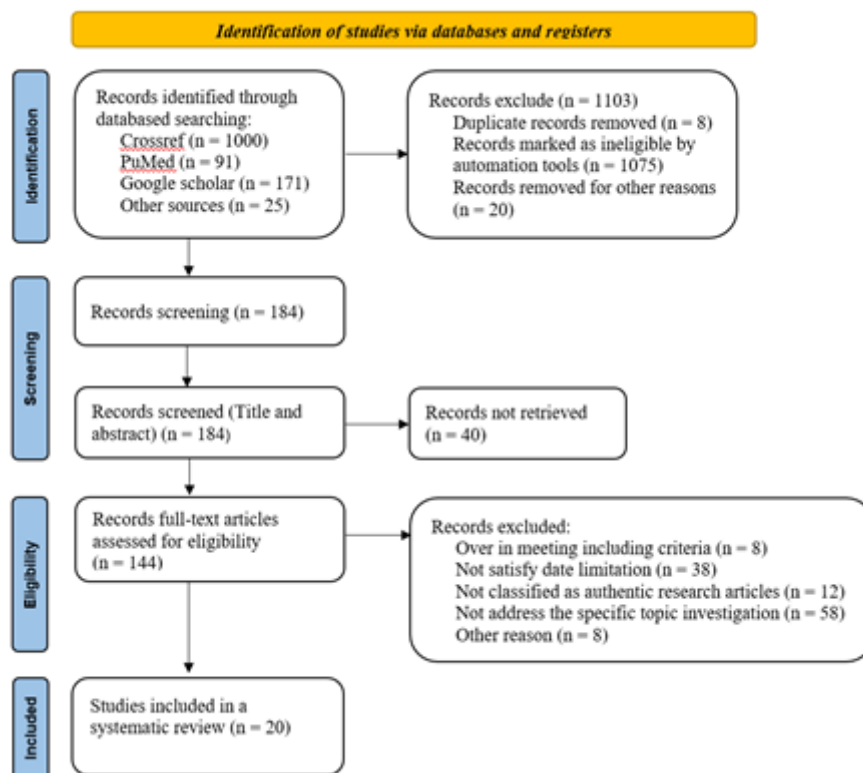
Figure 1. Search strategy using PRISMA

The current studies on academic adjustment of first-year students in higher education

This comprehensive study of research analyses and explores how first-year students adjust to their academic environment by closely examining 20 relevant papers that may need more in-depth examination. The study divided the article topic about academic adjustment of first-year students in higher education institutions into various categories, such as challenges faced by first-year students, determinants influencing adjustment, strategies for academic adaptation, and the outcomes of interventions.

These categories were identified through a comprehensive literature review. They were subsequently refined to better encapsulate the overarching themes in the academic adjustment of first-year students in higher education institutions over the past decade. Table 1 illustrates the systematic categorization and the corresponding articles utilized in this study.

Table 1. The Studies highlight the academic adjustment of first-year students in higher education from 2014 to 2024

Article	Year of publication	Author/s	Topic article	Type of test	Type of material	Main finding	Categories
1	2014	Heng Kreng (Cambodia)	Student achievement in the first year of the university in Cambodia	The modified concepts of student engagement and faculty behaviors as the guiding framework	Analysed using a three-level hierarchical linear model (HLM) from 923 first-year university students	The influence of student engagement factors and faculty behavior was identified as a significant factor positively influencing students' academic achievement	Outcome of adjustment intervention
2	2014	Lijuan Quan et al (China)	The Effects of Loneliness and Coping Style on Academic Adjustment Among College Freshmen	A quantitative correlational study	Questionnaire survey from 276 first-year college students from a university in China	The existing literature on the relationships among loneliness, coping styles, and academic adjustment, particularly within the context of Chinese first-year students transitioning to college life	Strategies for academic adjustment
3	2014	Seda Sevinç and Cem Ali Gizir (Turkey)	Factors negatively affecting university adjustment from the views of first-year university students: The case of Mersin University.	A qualitative study	Interviews were conducted with 25 first-year university students from various faculties at Mersin University, and 24 interview questions were used for data collection.	Factors that negatively affect the adjustment of first-year university students across academic, social, personal-emotional, and institutional domains	Factors influencing
4	2014	Mohd Mahzan Awang (Malaysia)	Perceived Social Support and Well-Being: First-Year Student Experience in University	Qualitative Research	Individual semi-structured interviews with 16 first-year undergraduate students aged between 19-20 (contacted 35 sts)	Academic adjustment, social adjustment, and emotional adjustment were identified as critical areas influenced by social support.	Factors influencing

Article	Year of publication	Author/s	Topic article	Type of test	Type of material	Main finding	Categories
5	2015	Holly Karel Millet (United States)	The Year of Change Challenges Faced by First-Year Students Based on Individual Identities	A mixed-methods research	A survey with 774 undergraduate students (ages 18-22), a focus group interview with 11 participants for the experiences and perceptions of students	Correlations between five social identities (gender, race/ethnicity, social class, sexual orientation, and religious affiliation) and challenges faced by first-year college students during their transition into college life	Challenges faced by freshmen
6	2016	Arjanggi & Kusumaningsih (Indonesia)	Correlation between social anxiety and academic adjustment among freshmen	Quantitative research	Questionnaires with 439 participants	The fear of negative evaluation and distress predicts student academic adjustment problems.	Factors influencing
7	2016	Eliana Gallardo-Echenique et al. (Peru)	Student Communication and Study Habits of First-year University Students in the Digital Era	A qualitative research study	The survey instrument employed a 78-item online questionnaire	Most students feel comfortable using digital technologies but use social media for connecting and interacting with friends rather than for academic communication	Outcome of adjustment intervention
8	2017	Lay Sovanak et al. (Cambodia)	The Challenges of Higher Education for Rural Students in Urban Universities in Cambodia	A qualitative collective case study	Interview with ten provincial students who are continuing their higher education in Phnom Penh	Challenges faced with poor academic performance, overcoming language barriers, financial constraints, adjusting to an urban lifestyle, difficulty in making friends, and living alone	Challenges faced by freshmen
9	2017	Abi Brooker et al. (Australia)	First-year students' perceptions of their difficulties	A longitudinal observational study	Surveys or questionnaires were administered to two cohorts of first-year students (109 in 2013	First-year students face multiple difficulties simultaneously during their transition to university, such as time management, workload, and others' expectations.	Challenges faced by freshmen

Article	Year of publication	Author/s	Topic article	Type of test	Type of material	Main finding	Categories
					and 98 in 2014		
10	2017	Moeurn Chantrea (Cambodia)	School-to-University Transition in Cambodia: A Case of Royal University of Phnom Penh	A qualitative approach	Data collected from 36 participants as focus group informants of first-year university students at the Royal University of Phnom Penh	Challenges faced with preparation, academic adaptation, counseling services, health services, and socialization during transition, knowledge, and skills, adjusting to urban living, and difficulty in selecting courses, coping strategies include support from parents, making friends, engaging in leisure activities, time management, language improvement.	Challenges faced by freshmen
11	2017	Houn Dina (Cambodia)	First-Year Experience of Students at Institute of Foreign Languages: Perceptions, Challenges, and Adjustments	Qualitative research	Data was collected through focus group interviews. Participants included eighteen students from various provinces in Cambodia who were studying different shifts in Semester I at IFL.	Challenging factors with excessive workload, time management issues, difficulties with the learning process, and competition	Challenges faced by freshmen
12	2017	Wyatt et al. (United States)	Mental Health and Academic Performance of First-Year College Students	A secondary data analysis	The American College Health Association-National College Health Assessment II dataset was obtained with regression analyses from responses from 66,159 U.S. undergraduate students.	First-year students reported higher rates of self-injury and seriously considering suicide compared to upper-level students.	Challenges faced by freshmen

Article	Year of publication	Author/s	Topic article	Type of test	Type of material	Main finding	Categories
13	2019	Eam et al. (Cambodia)	Correlates of STEM primary Choice: a quantitative look at Cambodian university freshmen	Quantitative research method	Primary data was collected from a survey conducted among 2,016 first-year students at 15 universities across Cambodia (binary logistic regression analysis)	Factors influencing Cambodian first-year university students's choice of STEM majors highlight the importance of early experiences and exposure to STEM education and career opportunities in shaping students' academic and career decisions.	Factors influencing
14	2019	Sovansophal & Shimizu (Cambodia)	Factors Affecting Students' Choice of Science and Engineering Majors in Higher Education in Cambodia	Quantitative, using logistic regression analysis to understand the factors influencing students' decisions	Self-rating questionnaire surveys were administered to 1281 first-year students across eight higher education institutions in Cambodia.	Individual factors (personal characteristics and attitudes) influence students' decisions, highlighting that individual factors and attitudes play significant roles in students' decision-making processes.	Factors influence
15	2020	Chang & Wang (United States)	The Complexity of Cultural Mismatch in Higher Education: Norms Affecting First-Generation College Students' Coping and Help-Seeking Behaviors	A mixed-methods study	Qualitative data with 11 individual-interviews and 8 group interviews, survey questionnaire for Quantitative data with 18000 students	Experience financial, academic, and personal challenges exacerbated by a cultural mismatch between independent university settings and interdependent family environments.	Factors influencing
16	2020	Pretorius & Blaauw (South Africa)	Financial Challenges and the Subjective Well‑being of	Quantitative study	Utilized a survey-based research approach to investigate the possible	Subjective well-being (SWB) among first-year students is influenced positively by factors (living arrangements, feeling at home,') and overall satisfaction	Challenges faced by freshmen

Article	Year of publication	Author/s	Topic article	Type of test	Type of material	Main finding	Categories
			First-year Students at a Comprehensive South African University		variables contributing to the subjective well-being, demographic data, and information	with the university experience; negative factors affecting SWB (concerns about finances and upcoming tests, living on campus or within walking distance of campus)	
17	2020	Tenkorang et al. (Gana)	Academic and Personal-Social Adjustment Challenges of University of Cape Coast Freshmen	Mixed methods research	Student Adaptation to College Questionnaire (SACQ) developed by Baker and Siryk (1999), Ways of Coping Questionnaire (WCQ) developed by Folkman and Lazarus (1988), qualitative data through semi-structured interviews	Encountered adjustment challenges during their first year, including difficulty handling academic pressure and lack of involvement in social activities, coping strategies (Planful Problem Solving, which involved planning, concentrating, and taking action to resolve issues)	Challenges faced by freshmen
18	2020	Ivashova et al. (Russia)	Actual Issues of Adaptation of Freshmen 2020: Challenges to Education	Qualitative methods	Discussing adaptation problems, socio-psychological characteristics of modern freshmen, and trends in student expectations and demands	Emphasizes the importance of ensuring successful adaptation of new incoming students, balancing socio-psychological and educational adaptation,	Challenges faced by freshmen
19	2020	Alipio (Philippines)	Adjustment to college and academic performance: Insights from Filipino first-year college students	Descriptive-correlational study	A survey questionnaire with 132 respondents was chosen through stratified random sampling and Slovin's formula.	Demographic and environmental factors may influence aspects of college adjustment and academic performance.	Factors influencing

Article	Year of publication	Author/s	Topic article	Type of test	Type of material	Main finding	Categories
			in an allied health science course				
20	2022	Ndaba (South Africa)	Exploring first-year male students` lived experiences of depressive symptoms at the North-West University.	A qualitative descriptive	Semi-structured interview with 100 participants	Factors contributing to depressive symptoms among participants include poor social support, loss of a loved one, academic challenges, financial constraints, challenges related to accommodation, the COVID-19 pandemic, and language barriers.	Factors influencing

As depicted in Table 1, the articles on the academic adjustment of first-year students in higher education were systematically examined to delineate thematic categories. Significantly, the researchers synthesized and categorized these articles into four overarching themes: challenges faced by first-year students, factors influencing, strategies for academic adjustment, and outcome of adjustment interventions.

Notation of trend in academic adjustment of first-year students in higher education institutions

The more rapidly explored the accelerated emergence of challenges first-year students face as they cruise their adjustment processes and transition into the higher education milieu. Numerous studies have examined factors influencing the adjustment of first-year students across several domains: challenges faced by first-year students, determinants influencing adjustment, strategies for academic adaptation, and the outcomes of adjustment interventions designed to facilitate adjustment.

Table 2. Article classification on the academic adjustment of first-year students in higher education

Categories	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Challenges faced by freshmen		1		5			3				9
Factors influencing	2		1			2	2		1		8
Strategies for academic adjustment	1										1
Outcome of adjustment interventions	1		1								2
Total	3	2	2	5		2	5		1		20

Table 2 shows that most researchers are interested in researching the difficulties of first-year students adjusting to university life. At least nine research articles have examined the problems affiliated with academic adjustment. The primary challenges to first-year students's transition were academic performance, social identity, financial difficulties, language barriers, workload from classwork and assignments, time management, family support, social psychological balancing, and faculty assistance. Hence, many researchers investigated academic adjustment challenges. Nonetheless, the researchers' second focus was on the elements that affect academic adjustment, with the topic's discovery dispersed equally across the last decade. In the meantime, the study exploring strategies and outcomes of adjustment interventions in academic adjustment is the least investigated in the previous decade.

The current research on challenges faced by first-year students, determinants influencing adjustment, strategies for academic adaptation, and the outcomes of adjustment interventions in academic adjustment of first-year students in higher education

To determine the originality of each research, researchers categorized the 20 articles into study aspects and categories based on the results of data analysis. Table 3 provides an overview of the last decade of publications, separated into several topic areas and study elements such as themes, research design, and research materials.

Table 3. Summary of current studies in the academic adjustment of first-year students in higher education

No	Aspects	Categories			
		Challenges faced by freshmen	**Factors influencing**	**Strategies for academic adjustment**	**Outcome of adjustment interventions**
1	Theme	1. Challenges Faced by First-Year Students Based on Individual Identities 2. The Challenges of Higher Education for Rural Students in Urban Universities 3. First-year students' perceptions of their difficulties 4. School-to-University Transition 5. First-Year Experience of Students at Institute of Foreign Languages: Perceptions, Challenges, and Adjustments 6. Mental Health and Academic Performance of First-Year College Students 7. Financial Challenges and the Subjective Well-being of First-year Students 8. Academic and Personal-Social Adjustment Challenges 9. Actual Issues of Adaptation of Freshmen 2020: Challenges to Education	1. Factors negatively affecting university adjustment from the views of first-year university students 2. Perceived Social Support and Well-Being: First-Year Student 3. Correlation between social anxiety and academic adjustment among freshmen 4. Correlates of STEM primary choice 5. Factors Affecting Students' Choice of Science and Engineering Majors 6. The Complexity of Cultural Mismatch in Higher Education 7. Adjustment to college and academic performance 8. Exploring first-year male students` lived experiences of depressive symptoms.	1. The Effects of Loneliness and Coping Style on Academic Adjustment Among College Freshmen	1. Student achievement in the first year of university 2. Student Communication and Study Habits of First-year University Students
2	Research Design	1. A mixed-methods research 2. A qualitative collective case study 3. A longitudinal observational study 4. A qualitative approach	1. A qualitative study 2. A quantitative research 3. Quantitative research method 4. Quantitative, using	1. A quantitative correlational study	1. A correlational approach and quantitative methodology 2. A qualitative

No	Aspects	Categories			
		Challenges faced by freshmen	**Factors influencing**	**Strategies for academic adjustment**	**Outcome of adjustment interventions**
		5. Qualitative research 6. A secondary data analysis 7. Quantitative study 8. Mixed methods research 9. Qualitative methods	logistic regression analysis 5. A mixed-methods study 6. Descriptive-correlational study 7. A qualitative descriptive 8. Qualitative research		research study
3	Research Materials	1. A survey with 774 undergraduate students (ages 18-22) and a focus group interview with 11 participants 2. Interview with ten provincial students 3. Surveys and questionnaires with two cohorts of first-year students (109 in 2013 and 98 in 2014) 4. Data was collected from 36 participants through focus group discussions and one-on-one interviews. 5. Focus group interviews with 18 Participants 6. Regression analyses from responses from 66,159 U.S. undergraduate students 7. A survey-based research approach with sample sizes for each year of 529 within 1 817 students in total over three years 8. A sample of 355 first-year students in UCC (235 males and 120 females) used the Student Adaptation to College Questionnaire (SACQ) and Ways of Coping Questionnaire (WCQ) 9. Use the survey of 659 first-year students to discuss the adaptation problem	1. Interviews conducted with 25 first-year university students 2. Individual semi-structured interviews with 16 first-year undergraduate students aged between 19-20 (contacted 35 sts) 3. Questionnaires with 439 participants 4. A survey was conducted among 2,016 first-year students at 15 universities across Cambodia (binary logistic regression analysis) 5. Questionnaire surveys with 1281 freshmen 6. Qualitative data with 11 individual-interviews and 8 group interviews, survey questionnaire for Quantitative data with 18000 students 7. A survey questionnaire with 132 respondents was chosen through stratified random sampling and Slovin's formula. 8. Semi-structured interview with 100 participants	1. Questionnaire survey from 276 first-year college students from a university	1. Analyzed using a three-level hierarchical linear model (HLM) from 923 participants 2. The survey instrument employed a 78-item online questionnaire.

Table 3 indicates that the trend of challenges faced by first-year students has become the most exciting topic for most researchers. However, nine studies found that challenges faced by first-year students of academic adjustment showed a different scope of the study. There is much perspective for investigation because there are numerous aspects

to the challenges faced by first-year students, and the scope of the research seems to appear with intention. Continuing, factors influencing freshmen adjustment from the views of first-year university students, perceived social support, and well-being. Separately, the effects of loneliness and coping style on academic adjustment among first-year college students, student achievement in the first year of university, student communication, and study habits of first-year university students became less attractive to researchers.

Theme 1: Challenges faced by first-year students in academic adjustment of higher education institutions

It is crucial to define that first-year university students face many challenges, particularly in socio-psychological issues and socio-demographic themes. These challenges are based on the adjustment process as they transition to university life, focusing primarily on the constraints of learning associated with socio-psychological factors. Research from various studies highlights the significant impact of these challenges on first-year students's adaptation to their educational journey.

Sovanak et al. [41] found that challenges faced with poor academic performance, overcoming language barriers, financial constraints, adjusting to an urban lifestyle, difficulty making friends, and living alone from his research the challenges of higher education for rural students in urban universities in Cambodia using a qualitative collective case study. The study utilized semi-structured interviews to explore the viewpoints of rural students regarding their experiences at provincial versus urban schools and the difficulties encountered at urban universities. The interview questions centered on expectations, personal growth, factors influencing the transition to urban universities, and similar themes. Ten provincial students in Phnom Penh were interviewed in both English and Khmer to accommodate language differences.

Moeurn [42] highlights students' challenges in acclimating to university life's diverse expectations and demands, especially those from rural regions. A common oversight among students is underestimating the level of autonomy and self-reliance necessary in a university setting, leading to struggles in academic adaptation, social integration, and accessing essential support services. Notably, first-year students frequently identify three primary stressors during this transition: managing academic assignments, achieving proficiency in English, and grappling with financial constraints. He used a qualitative approach to collect data from 36 first-year students as a focus group. Data were gathered through a combination of focus group discussions and individual interviews. Six focus group discussions were held, each comprising six first-year university students representing various departments from the Faculty of Sciences and Social Sciences and Humanities at the Royal University of Phnom Penh. Non-random sampling was employed, utilizing convenient sampling to gather all pertinent information.

To find out the challenging factors of excessive workload, time management issues, difficulties with the learning process, and competition [43]. The study aimed to comprehend foundation-year students' perceptions, challenges, and adjustments through qualitative means, allowing for extensive participant expression. Carried out at the Institute

of Foreign Languages (IFL) within the Royal University of Phnom Penh (RUPP), the research involved 18 participants from diverse backgrounds and study schedules, carefully selected to suit the research goals. Data gathering utilized focus-group discussions supported by voice recording, note-taking, and an interview protocol, all geared toward obtaining profound insights into students' experiences. The questions were organized into five categories to ensure alignment with the research objectives and existing literature.

Using qualitative methods to study actual issues of adaptation of first-year students, Ivashova et al. [44] found the importance of ensuring the successful adaptation of new incoming students, balancing socio-psychological and educational adaptation. Through an online Google form survey, the study examined how first-year students at Stavropol State Agrarian University adapted to university life. Its objective was to gauge the first-year students's level of adjustment to their academic environment. Six hundred fifty-nine individuals, comprising 80.6% of full-time, undergraduate, and specialty first-year students, participated in the survey. Adaptation was conceptualized as the integration process into student life. The research offers insights into first-year students' educational and socio-psychological adaptation from various faculties. It provides a socio-demographic overview of first-year students and their demands for further professional training.

Brooker et al. [45] explored significant challenges first-year psychology undergraduates face, including time management, workload, and external expectations. These findings align with broader research, indicating everyday stressors among students. Additionally, it emphasizes the diverse experiences of first-year students, highlighting the need for tailored support from educators and researchers. By examining multiple challenges, the study underscores the complexity of the first-year journey and emphasizes the importance of addressing individual student needs. Addressing time management, workload, and external expectations is crucial for supporting first-year university students' well-being and academic success. While doing qualitative research, Abi Brooker conducted Surveys and questionnaires administered to two cohorts of first-year students (109 in 2013 and 98 in 2014). The study employed the Pathways through Education computer-assisted interview, developed by Brooker et al. [45], to collect data regarding the educational challenges encountered by young individuals. This interviewing method accessed extensive piloting with Australian-born, immigrant, and refugee students, revealing distinctive patterns of difficulties within these demographics. The selection of the computer-assisted interview stemmed from its appropriateness in discussing sensitive topics and its alignment with evidence-based curriculum design principles, particularly in effectively monitoring students' needs. Subsequently, participants expanded on their primary challenge and its impact on their university experience through open-ended questions, providing qualitative data for analysis.

Meanwhile, Pretorius & Blaauw [46] found a primary obstacle confronting the higher education sector in South Africa: financial constraints. Financial issues among university students emerged as a notable detriment to students' subjective well-being (SWB) in 2015, exemplified by the #FeesMustFall movement, which is directly associated with this persistent challenge. The researcher used quantitative research to study. This study adopted a survey-based research methodology, following the precedent set by

existing literature, to explore the factors influencing the subjective well-being of first-year economics students amid the contextual pressures faced by students in South Africa. A survey instrument explicitly adapted for this purpose was developed. The survey engaged in a trial run with a sample group of students, allowing for iterative adjustments based on feedback. Ambiguous questions and other issues within the survey instrument were identified and rectified through this iterative process.

Separately, Millet [47] used mixed-methods research to explore challenges first year students face based on individual identities. This research project at Happy Mood University engaged 774 undergraduates who responded to a survey and 11 first-year honors students who joined a focus group. The survey sample was primarily female (79.5%) and white (89%), with varied representation in class, sexual orientation, and religion. The focus group predominantly consisted of white heterosexual students, mirroring the university's demographics. The study examined connections between demographic variables and first-year students' college transition experiences, employing quantitative (survey) and qualitative (focus group) data collection methods. Participation was voluntary, confidential, and incentivized. The result showed the correlations between five social identities (gender, race/ethnicity, social class, sexual orientation, and religious affiliation) and first-year college students' challenges during college transition.

Similarly, Tenkorang [48] encountered adjustment challenges during their first year, including difficulty handling academic pressure and lack of involvement in social activities and coping strategies (Planful Problem Solving, which involved planning, concentrating, and resolving issues). The researchers use both quantitative and qualitative approaches. Researchers employed quantitative methods, utilizing the Student Adaptation to College Questionnaire (SACQ) and the Ways of Coping Questionnaire (WCQ) to gather numerical data. The SACQ, initially comprising 67 self-assessment statements across four dimensions, was adapted to focus on Academic and Personal-Social aspects. Responses were rated on a scale from 1 to 3.

Similarly, the WCQ, initially containing 50 items assessing coping mechanisms, was condensed to 15 items covering Seeking Social Support, Escape-Avoidance, and Planful problem-solving strategies, rated on a scale from 0 to 3. Qualitative data was collected through a meticulously designed semi-structured interview guide, exploring academic and personal-social challenges first-year students face and their coping strategies, with additional questions tailored to participant responses. The reliability and validity of the measurement tools were ensured through expert review. Reliability, assessed using Cronbach's alpha coefficient, yielded a value of 0.7 for both the SACQ and WCQ. Furthermore, inter-rater reliability for the interview guide was evaluated, with two raters achieving a 90% agreement on content assessment.

Another noticeable study conducted by using secondary data analysis by Wyatt et al. [49] explored first-year students who reported higher rates of self-injury and seriously considering suicide compared to upper-level students. The researchers conducted the study involving over 105,000 students surveyed in the Spring 2011 ACHA-NCHA II across U.S. campuses, focusing on first-year undergraduates aged 18-24. The sample was refined to about 66,000 undergraduates from diverse backgrounds, excluding graduate students and

those outside this age range. Most participants were female and white, with relatively even representation across academic years. Data analysis concentrated on mental health and educational impact, with responses recoded for clarity. Demographic variables such as gender, academic year, race/ethnicity, enrollment status, and recent transfers were examined.

Theme 2: Factors influencing the academic adjustment of higher education institutions

This section outlined the factors influencing the academic adjustment of first-year students in higher education. Numerous studies have investigated the determinants impacting first-year students' higher education journeys.

Various factors influence first-year students's academic adjustment in higher education. Social support from peers, faculty, and staff is crucial for alleviating feelings of isolation and uncertainty. Developing effective time management and study skills, alongside access to campus resources like tutoring and counseling services, is essential. Meanwhile, numerous negative factors can impede first-year students's academic adjustment in higher education. These include limited social support networks, inadequate academic preparedness leading to challenges with time management and study skills, and insufficient access to campus resources like tutoring and counseling services. Difficulties in acclimating to college life, feelings of detachment, psychological distress, and financial concerns further hinder academic adjustment. Addressing these issues is essential to support first-year students' successful college academic transition.

Servinc et al. [50] found factors that negatively affect the adjustment of first-year university students across academic, social, personal-emotional, and institutional domains. Researchers used a qualitative study. This qualitative study investigated the adjustment of first-year university students in Turkey, an area with limited prior research. With a case study design, 25 participants aged 18 to 24 from Mersin University, experiencing adjustment difficulties, were interviewed using a semi-structured script of 24 open-ended questions. The interviews, lasting around 50 minutes each, were recorded and transcribed verbatim. The transcribed data undertook inductive content analysis, identifying academic, social, personal-emotional, and institutional adjustment themes.

Awang et al. [51] used qualitative research to study perceived social support and well-being. A longitudinal study was utilized to observe the evolution of students' adjustment during their transition. Qualitative methods, particularly semi-structured interviews, were employed to delve into the support experiences of students. By capturing the narratives of first-year students, the study aimed to illuminate the role of close social support in adaptation and well-being. Conducted at a prominent public research university in Malaysia, the research involved 16 undergraduates, selected purposively to represent diverse social identities. Data collection occurred through interviews conducted during the first and second semesters, each lasting 60-90 minutes. Thematic analysis was utilized to interpret the gathered data. The study found that academic adjustment, social adjustment, and emotional adjustment were critical areas influenced by social support.

Ndaba [52] used a qualitative descriptive in exploring first-year male students` lived experiences of depressive symptoms at North-West University. Employing a

qualitative descriptive design, the research allowed participants to express their experiences authentically. Due to the pandemic, data collection took place online via Zoom calls. The sample consisted of first-year black male students chosen for their vulnerability during the university transition. Selection criteria included gender, year of study, race, and depressive symptom experience. Recruitment occurred through the NWU Facebook page, with the Beck Depression Inventory-II (BDI II) used for screening, focusing on scores between 20 and 29 to determine eligibility. The result defined factors contributing to depressive symptoms among participants include poor social support, loss of a loved one, academic challenges, financial constraints, challenges related to accommodation, the COVID-19 pandemic, and language barriers.

In finding the fear of negative evaluation and distress as predictors of students' academic adjustment problems, Arjanggi et al. [53] used a quantitative method to study. This study involved 25 first-year university students in Turkey experiencing adjustment difficulties. Participants were aged 18 to 24 and came from various faculties at Mersin University. Data collection employed semi-structured interviews with a refined script, lasting approximately 50 minutes each, recorded and transcribed verbatim. Inductive content analysis revealed academic, social, personal-emotional, and institutional adjustment themes.

Using quantitative research methods, Eam et al. [54] researched correlates of STEM primary choice. Using a cross-sectional approach, the study employed a survey questionnaire to collect primary data. Divided into five sections, the questionnaire covered general information, high school experiences, intended majors, career prospects, and family backgrounds. Piloted, adjusted, and distributed across 15 universities in Cambodia during the 2016/17 academic year, the study surveyed 2,016 first-year students. Ensuring representation from STEM and non-STEM disciplines, the selection of universities aimed to facilitate comparisons of significant choices. By including various regions, such as Phnom Penh city and five provinces, the study sought to account for regional disparities, thereby enhancing the applicability of its findings.

To investigate factors affecting students' choice of science and engineering majors in higher education in Cambodia, Sovansophal and Shimizu [55] used a quantitative method. A field survey gathered data from 1,281 first-year students across eight HEIs in Cambodia. The selection of these institutions was based on two factors: their offering of majors within the study's scope, regardless of public or private status, and their random selection from high, medium, and low enrollment categories. The sampling procedure involved randomly choosing eight HEIs supervised by the MoEYS, selecting one class from each major of interest, and surveying all students within these chosen classes. This study explored individual factors (personal characteristics and attitudes) influencing students' decisions, highlighting that individual factors and attitudes play significant roles in students' decision-making processes.

Chang et al. [56] conducted a research study using a mixed-method approach to explore the complexity of cultural mismatches in higher education. Qualitative data were gathered through individual and group interviews in the Pilot Study, while survey data were collected across both studies. Group interviews were chosen to facilitate direct

qualitative comparisons, aiming to understand how relational concerns and cultural mismatch affect coping and help-seeking behaviors among FGCS. Grounded theory techniques were employed for thematic analysis in both studies, allowing for in-depth exploration of relational concerns and cultural mismatch, which are relatively unexplored in FGCS literature. Survey data were analyzed to provide background information on interviewees and enhance the context for interpreting qualitative findings. Before conducting the interview, interested students completed an online prescreening to confirm eligibility. The researchers determined they experienced financial, academic, and personal challenges exacerbated by a cultural mismatch.

In a study to find out how Filipino first-year college students adjust to college and academic performance, Alipio [57] utilized a descriptive-correlational study. The study used a survey approach to explore how first-year radiologic technology students adapt to college life and perform academically in a Philippine university—employing a nonexperimental survey method to generalize findings to a broader population efficiently. Additionally, a correlational research model was used to examine relationships among variables. First-year students were selected through stratified random sampling based on course sections. Data collection included demographic surveys and the Student Adaptation to College Questionnaire (SACQ), measuring adaptation across various dimensions. The SACQ's reliability was confirmed through statistical analyses. Secondary data, like students' Weighted Point Average (WPA), was obtained from the Registrar's office. The researcher explored demographic and environmental factors influencing college adjustment and academic performance.

Themes 3: Strategies for academic adjustment in academic adjustment of higher education institutions

Strategies for academic adjustment encompass a range of approaches aimed at helping students adapt to the demands of college or university. These include effective time management, utilizing academic support services like tutoring and counseling, active engagement in classes, developing strong study habits, building a support network with peers and mentors, setting realistic goals, seeking feedback, maintaining a healthy work-life balance, cultivating resilience, and leveraging educational technology tools.

Quan et al. [58] state that a quantitative correlational study was used to determine the effect of loneliness strategies and coping styles on academic adjustment among first-year college students. The study involved 284 first-year college students from Wuhu, Anhui Province, China, yielding 276 effective survey responses, with 95 male and 181 female participants averaging 18.83 years old. The research randomly selected four first-year classes and administered surveys. Loneliness was assessed using the Emotional and Social Loneliness Scale, coping style with the Trait Coping Style Questionnaire, and academic adjustment with the Academic Adjustment Scale for College Students. These scales demonstrated acceptable reliability and fit in confirmatory factor analysis, providing insights into first-year college students' emotional, coping, and academic adjustment dimensions in China. The finding examines the correlation between loneliness, coping styles, and academic adjustment, particularly concerning Chinese first-year students transitioning to college life.

Themes 4: Outcome of adjustment interventions in academic adjustment of higher education institutions

Successful outcomes may include increased retention rates, higher grades, improved mental health, greater engagement in campus activities, and stronger connections with peers and faculty. It typically involves improvements in various aspects of student adaptation to college life. These interventions aim to enhance students' academic performance, social integration, emotional well-being, and overall satisfaction with the college experience.

Gallardo et al. [59] conducted a qualitative study. The researcher utilized an interpretive methodology to search through the values, beliefs, and meanings underlying social phenomena, aiming to provide a causal explanation of their trajectory and effects. Conducted at the Faculty of Educational Sciences and Psychology of Rovira i Virgili University (URV) in Catalonia, Spain. The study focused on understanding student communication and study habits among first-year university students in the digital era. The survey instrument, a 78-item online questionnaire adapted from the Survey of Student Communication & Study Habits, was translated into Spanish by experts from the Open University of Catalonia (UOC). Reliability analysis, assessed using Cronbach's alpha coefficient, revealed a high level of agreement among participants, with an alpha value of 0.924. The study explored that most students feel comfortable using digital technologies but use social media for connecting and interacting with friends rather than for academic communication, prefer face-to-face communication for both academic/ school and social interactions and prefer face-to-face communication for both academic /school and social interactions.

In another section of this review, Kreng [60] studied the topic of student achievement in the first year of a university in Cambodia. He used the modified concepts of student engagement and faculty behaviors as the guiding framework. This study, utilizing a correlational approach and quantitative methodology, sought to investigate the factors influencing academic success among first-year university students within Cambodia's higher education system, specifically focusing on an English language curriculum. The research examined student involvement in educational pursuits and faculty practices through a combination of questionnaire surveys and interviews, particularly their impact on student performance. They were conducted across ten universities, both public and private. Sampling techniques included random and cluster sampling to select classes and students, totaling 923 participants for analysis. Interviews with students and educators provided additional insights into teaching and learning dynamics. The study highlights the necessity for empirical studies to assess the quality of teaching and learning and its influence on student success within the English program, given its significance in Cambodia's higher education environment.

The academic adjustment of first-year students in Cambodian higher education institutions context

In the context of higher education in Cambodia, researchers concentrated on defining the challenges and adverse factors impacting the academic adjustment of

Cambodian first-year students. To illuminate these factors, researchers systematically categorized six research articles among 20 studied with Cambodian first-year students based on the respective analyses. Table 4 offers a comprehensive synthesis of recent studies that primarily focus on the obstacles faced by Cambodian freshmen and the determinants influencing the academic adaptation of Cambodian first-year students.

Table 4. Summary of factors negatively affecting Cambodian first-year students in first-year academic adjustment

Factors	Descriptions
Overcoming language barriers	language barriers, hindering academic performance, and social integration [42]
Financial constraints	financial difficulties, ability impact, and living expenses [42]
Adjusting to the urban lifestyle	challenges in adapting, transportation issues, cultural differences [42], [43]
Difficulty in Making Friends	friendship connection, new environment socializing, well-being affecting, sense of belonging [42], [43]
University preparation challenges	adapting to academic rigor, acquiring necessary skills, and adjusting to new learning methods [43]
Excessive workload coping affect	school assignment workload, academic competition, overall academic performance, and well-being affecting [44]
Courses selecting difficulty and impacting	selecting courses, majors, academic journey, and future career prospects [43]

Overcoming language barriers

Rural students transitioning to urban universities often struggle with language barriers, which impede their academic performance and integration into the social fabric of the university [42].

Financial constraints

Many Cambodian first-year students experience significant financial difficulties, affecting their ability to afford tuition and cover living expenses. These constraints can hinder their access to resources necessary for academic success [42].

Adjusting to an urban lifestyle

Transitioning from rural to urban areas presents challenges in adapting to a different lifestyle, including navigating transportation systems, adjusting to cultural differences, and coping with the faster pace of urban life [42], [43].

Difficulty in making friends

First-year students often find making friends and establishing social connections in a new environment challenging. This difficulty can impact their emotional well-being and sense of belonging within the university community [42], [43].

University preparation challenges

Students encounter difficulties in adequately preparing for the academic rigors of university education. This includes acquiring the necessary skills, such as effective study habits, and adjusting to the higher expectations of university-level coursework [43].

Excessive workload coping effect.

The academic workload and competitive environment at university can be overwhelming for first-year students, leading to stress and anxiety. Effective coping mechanisms are essential for maintaining academic performance and well-being [44].

Course selection difficulty and impacting

First-year students struggle to navigate the process of selecting courses and deciding on a major. This decision-making challenge can influence their academic and career prospects [43].

3. DISCUSSION

We investigated the inclusive analysis, which revealed that challenges and factors influencing first-year students' academic adjustment processes. First-year students face a multitude of challenges, including poor academic performance, which aligns with Krisher and Shechtman [61] on learning disabilities, language barriers aligned with foreign language speaking anxiety revealed by Batiha and Mustaffa [62], financial constraints aligned with Garwe and Maganga [63] on the effect of student financial constraints, university non-completion rates, urban lifestyle adjustments align with Liang et al. [64], social integration and independent living align with [11], [13] and [17]. Meanwhile, various factors, including social support, academic preparedness, and access to resources, influence first-year students' adjustment to university life, aligning with the findings [12]. Fear of negative evaluation, cultural mismatch, and depressive symptoms are highlighted as significant factors impacting adjustment under the complex interplay of social, academic, and personal-emotional dynamics in the transition to higher education [65]. Furthermore, challenges and factors influencing Cambodian first-year students' academic adjustment are significantly examined on overcoming language barriers, financial constraints, adjusting to urban lifestyle, difficulty making friends, university preparation challenges, Excessive workload coping effect, and Course selection difficulty and impact. In the meantime, Studies by Quan [58] and Kreng [60] explored the effectiveness of interventions through qualitative and quantitative methodologies, focusing on factors influencing student communication, study habits, and academic success within the higher education context. In light of these findings, institutions should prioritize qualitative research methods to understand the nuanced experiences of first-year students in academic adjustment. More importantly, customized support programs should be developed to address the multifaceted challenges faced by first-year students, focusing on enhancing social support networks, promoting effective coping strategies, and fostering resilience

among students. Evaluation and improvement of intervention programs are essential to ensure positive outcomes for first-year students as they transition to university life.

4. CONCLUSION

Based on the review, researchers identified that results are varied and impactful, encompassing socio-psychological factors such as poor academic performance, language barriers, financial constraints, urban lifestyle adjustments, difficulty making friends, and managing academic workload. Factors influencing academic adjustment span various domains, including social, personal-emotional, and institutional aspects. These emphasize the importance of social support, well-being, and coping strategies in facilitating first-year students's adjustment to university life. Strategies for academic adjustment involve a range of approaches aimed at helping students adapt effectively to college demands. These strategies, as highlighted, are effective time management, utilizing academic support services, active class engagement, building strong study habits, and maintaining a healthy work-life balance. Finally, adjustment interventions foster successful outcomes such as increased retention rates, higher grades, improved mental health, and greater engagement in campus activities. The findings from the review are utilized to develop further research to evaluate the factors that influence first-year students' academic adjustment.

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