



Teacher-Student Interaction, Non-Academic Staff Support, And Their Impact On Student Retention: The Mediating Role Of Institutional Factors In Foreign Degree-Awarding Institutions In Sri Lanka

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1. Introduction

Higher education plays a crucial role in any country. It is a valuable cultural and scientific asset that fosters personal development and drives economic, technological, and social progress (UNESCO, 2023). Sri Lanka's higher education system is considered one of the best in the world. However, recent years have revealed significant issues related to employability, as the skills of graduates often do not align with industry requirements. There are notable mismatches between the demand for high-skilled workers and the supply from higher education institutions (Dundar et al., 2014). The technical and vocational education and training (TVET) sector has struggled to produce a sufficient number of qualified workers to meet the evolving needs of the labor market (Ginting & Li, 2017). Furthermore, recent years have seen an increasing influence of market forces on higher education (Donnelly, 2004).

Sri Lanka has a diverse higher education landscape, with 17 universities (including 2 newly added in 2021/22), 2 campuses, and 20 postgraduate and other higher education institutions regulated by the University Grants Commission (UGC). Additionally, there are 6 universities or institutes established by Acts of Parliament and about 23 non-state higher education institutions recognized by the UGC and the Ministry of Higher Education (MoHE). Private institutions affiliated with foreign universities also contribute to higher education in the country (National Education Commission, 2022).

Sri Lankans value education highly, with free education provided from kindergarten through university (Wickramasinghe, 2018). In 2019, 15 state universities produced 24,890 undergraduates and 9,991 postgraduates, while private higher education institutions produced 6,074 undergraduates and 15,067 postgraduates during the same period (University Grants Commission, 2019). In the vocational training sector, TVET registered private sector training institutions recruited 21,094 individuals and completed training for 13,874 in 2021 (National Human Resources Development Council of Sri Lanka, 2022).

Foreign degree-awarding institutions also operate in Sri Lanka outside the Universities Act, functioning under the Board of Investment as business entities. There is currently no comprehensive list of these institutions or the degrees they offer. However, in 2007 World Bank study identified 19 foreign degree-awarding institutions in Sri Lanka (Verite Research, 2017). Despite these efforts, there is a growing trend of students leaving education without completing their degrees, which Rogers (1969) described as a failure.

The impact of student dropout extends beyond just the individuals affected; it also has significant repercussions for the country as a whole. The reasons for student dropouts differ from one region to another (Todaro, 1994). In South Asia, dropout rates are notably high in countries such as Pakistan, Bangladesh, India, and Sri Lanka (Choudhary AI, 2015). Despite the fact that many students leave their courses before completion, many institutions lack a clear understanding of the underlying reasons for these dropouts. Although these institutions have implemented various measures to retain students, the dropout rates remain substantial. Research indicates that academic performance is a major factor influencing university dropouts; students who struggle academically are more likely to withdraw from their studies (Li & Carroll, 2017). Furthermore, DeBerard (2004) demonstrates that dropout rates cannot solely be explained by how students handle stress or behaviors that may impact their health. Instead, these factors influence students' academic achievements. Robbins et al. (2004) identify several key factors affecting university dropout rates, including students' academic goals, self-evaluation abilities, and academic skills. Additional variables include institutional

commitment, social support, social involvement, financial support, and the selectivity of the institution. Jia and Maloney (2014) also highlight other factors influencing university dropout rates, such as ethnicity—where majority students are more likely to complete their studies compared to minority students—and gender, with women generally having higher completion rates (Paura & Arhipova, 2014). Additionally, the form of schooling affects dropout rates, as students in higher education programs tend to have higher completion rates compared to those in other types of education. Age also plays a role, with students who are 2 to 3 years older than the average enrollment age being more likely to drop out.

The researcher has chosen to focus on Teacher-Student Interaction and Non-Academic Staff Support for this study to examine how these factors influence student retention. Additionally, institutional factors are considered as a mediating variable, as some scholars argue that Teacher-Student Interaction and Non-Academic Staff Support are integral components of the institution itself. This study will assist the management of these institutions in examining how factors such as Teacher-Student Interaction and Non-Academic Staff Support influence student retention. By understanding these relationships, the institutions can identify strategies to enhance student retention effectively.

2. Research issue

Private higher education institutions in Sri Lanka that offer foreign degrees are primarily focused on maximizing profits. Finding students for their programs is a significant challenge due to intense competition. The cost of education is considerably high in Sri Lanka, exacerbating the issue as even enrolled students often drop out of these programs. Understanding the factors that influence student satisfaction can help these institutions improve their services (El-Hilali, Al-Jaber, Hussein, 2014). By enhancing student satisfaction, the management of these higher education institutions hopes to improve student retention rates. Student satisfaction varies from person to person, influenced by different factors for each individual. Numerous arguments exist regarding the reasons behind these variations. Research on student satisfaction and retention (Aitken, 1982; Hatcher, Kryter, Prus, & Fitzgerald, 1992) has been conducted by scholars, highlighting the complexity and nuance of this topic.

Previous research has extensively highlighted the importance of teacher-student interactions, non-academic staff support, and institutional factors in relation to student satisfaction. When student satisfaction improves, the likelihood of student dropouts decreases. In other words, higher student satisfaction leads to increased retention rates. According to a study by Niamatullah et al. (2015), factors such as the student-teacher relationship, the experiences provided to students, on-campus support services and facilities, and teacher preparedness all contribute significantly to student satisfaction in higher education.

Other studies have considered the impact of social factors on satisfaction, including peer relationships, student/faculty interactions, living arrangements, and students' self-evaluations (Bean & Bradley, 1986; Benjamin & Hollings, 1997; Endo & Harpel, 1982; Hearn, 1985; Pascarella, 1980; Pike, 1991). According to Ting (2000), building strong student-teacher relationships is crucial for creating positive academic experiences and enhancing satisfaction. However, a teacher alone cannot ensure student happiness if the institution lacks adequate infrastructure. In other words, class size and class level significantly affect student satisfaction (Feldman, 1977).

Students expect support from non-academic staff outside the classroom. For instance, the way a cashier treats students during payment transactions can impact their overall satisfaction. Students who are struggling academically often have higher expectations from non-academic staff, which can significantly affect their satisfaction and, ultimately, their retention. Gautschi III & Jones (1998) note that it is often challenging to identify which actions or behaviors are effective or problematic, making it difficult to provide adaptive support to students who do not thrive in their current environments.

Furthermore, previous studies have not explored the role of institutional factors as mediators between the independent variables of teacher-student interaction and non-academic staff support, and the dependent variable of student retention. Kwok (2000) examined student-teacher relationships concerning teachers' personal qualities, which can differ significantly from one teacher to another. Similarly, non-academic staff support can vary widely among staff members within an institution. This variation contributes to a knowledge gap. Additionally, the studies mentioned earlier focus on general student populations rather than specifically on students enrolled in foreign degree-awarding institutions.

3. Literature review

Recently, dropout rates in higher education courses have increased. Some students have cited reasons for their departure, while others have left without providing any explanation. In Sri Lanka, higher education institutions fall into two main categories: government and private sectors. Government-funded institutions are supported by public funds and do not prioritize profit, whereas private institutions are funded by private sources and aim to generate profit. Sri Lanka has its own quality credit framework for higher education. However, in recent years, the government has allowed the private sector to expand into the higher education industry through partnerships with foreign degree-awarding institutions. In this context, foreign degree-awarding institutions

in Sri Lanka refer to universities or educational institutions that offer degrees from international institutions, specifically targeting undergraduates enrolled in these programs.

Establishing a university with the necessary facilities is a significant challenge, primarily due to the scarcity of qualified human resources and the high cost of infrastructure. For the government, bearing such expenses is nearly impossible, especially given the current economic climate. One socio-economic advantage of private sector involvement in higher education is that it does not impose additional social costs on the government or society; rather, the financial burden falls on individual students, which can be justified. Additionally, private sector participation brings several socio-economic benefits, including increased access to higher education for more students, despite limitations on local university seats (Stephen, 2007). Private investors contribute funds for infrastructure and offer competitive salaries to attract skilled professionals, thus enhancing the overall quality and reach of higher education.

When administrators investigated the reasons behind student dropouts, they identified several factors, including insufficient teacher-student interaction, lack of support from non-academic staff, inadequate financial aid, limited facilities, lack of recognition, and insufficient support from program structures. However, the primary causes are not clearly defined and vary from one research study to another. In the absence of a definitive understanding of the leading causes, administrators have implemented strategic measures to improve student retention. They believe that the higher education sector could be significantly strengthened by establishing effective monitoring and auditing mechanisms and prioritizing the appointment of highly qualified academic professionals to the Ministry of Higher Education's Non-State Division (Sri Lanka Export Development Board, 2024).

Most research studies within this discipline have identified teacher-student interaction as a key factor influencing student retention. Teacher-student interaction encompasses the various ways in which teachers and students engage with each other, including communication, feedback, and their overall relationship. Some teachers are warmly welcomed by students, while others are not, often due to the impression they make on their students. Some lecturers are friendly and open to students' questions, fostering a welcoming atmosphere, while others are less approachable, resulting in lower student engagement. Effective communication is crucial; teachers should address students with kindness and provide positive recognition. Appreciating students' efforts and acknowledging their performance can significantly impact their engagement and retention. However, studies reveal that teacher-student interaction alone does not determine student retention, as other factors also play a role. Research by Emily et al. (2004) explored faculty academic experiences with student-teacher relations and campus services, while Fortin (2000-2003) conducted a multidimensional study that underscored the significant role of the student-teacher relationship in promoting student retention.

The academic process involves more than just teachers and students; non-academic staff play a crucial role as well. This includes clerical staff, registrars, and even minor staff who manage the logistics, such as opening lecture hall doors. Non-academic staff support refers to the assistance provided by personnel who are not directly involved in teaching, such as administrative staff, counselors, and other support staff. Their contributions are essential for the smooth operation of educational institutions. Research has shown that these non-academic support services are vital for enhancing students' educational experiences and supporting their overall success at the university (Aquino & Cabrera, 2020; Crabtree et al., 2021; Evangelista, 2021).

Non-academic staff support often lacks clear, standardized documentation. In the private sector, there is a strong emphasis on maximizing this support to attract and cater to more students. In contrast, the public sector tends to limit non-academic staff roles to their assigned tasks only. However, some countries have implemented national guidelines to regulate non-academic student support services. For example, Nigeria and the Philippines have established national standards for this purpose (Sison, 2019). Acknowledging the significance of these guidelines, administrators have started to focus on enhancing support systems. Research has identified various factors contributing to student dropouts (Yukselturk & Inan, 2006).

Student retention refers to the ability of higher education institutions to keep students enrolled in their programs until they complete their degrees. Several external factors can influence a student's decision to leave, such as financial difficulties. High tuition fees, especially for foreign degrees, can be a significant barrier, as institutions often charge not only tuition but also additional royalty fees. Despite the availability of flexible payment plans, students may still struggle to meet financial obligations. Additionally, the recognition of the degree and current conditions in the country can impact students' decisions to remain enrolled. This research study explores how interactions between teachers and students, as well as support from non-academic staff, influence student retention. Statistics show that a substantial number of students continue to leave higher education programs each year. Researchers have found that traditional problem-solving approaches may not be effective in addressing this issue (Beer & Lawson, 2017). Student retention is a complex and multifaceted issue (Burke, 2019), involving numerous interactions among students, academic staff, and administrators within the higher education system (Villano et al., 2018). Evidence suggests that there is a significant relationship between teacher-student interactions and the support provided by non-academic staff in influencing student retention. This research study explores the mediating role of institutional factors, investigating how elements such as policies, campus facilities, and the overall institutional environment influence or modify the relationship between teacher-student interactions, non-academic staff support, and

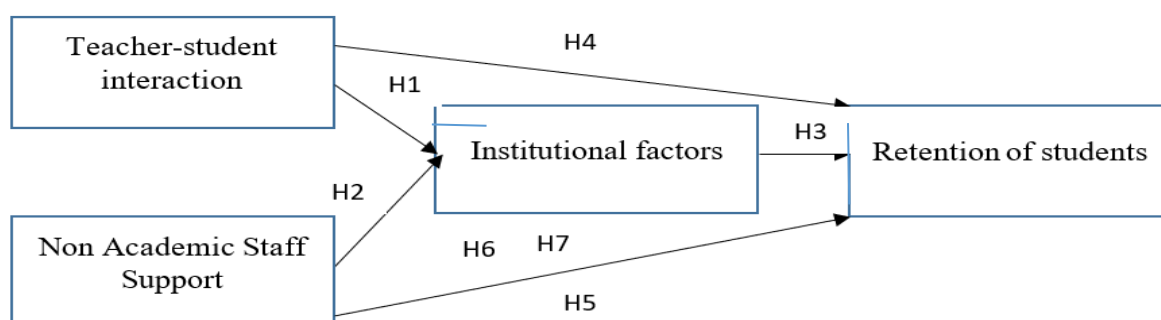
student retention. In a comprehensive review of forty years of student retention research, Aljohani (2016) identifies several factors linked to student attrition, including family background, family income, individual student characteristics, social influences, economic conditions, students' personal goals, and both institutional experiences and factors. Other research highlights that social and institutional support are key elements influencing students' decisions to remain enrolled (Nieuwoudt & Pedler, 2021).

Several theoretical frameworks address student retention in higher education. One prominent theory is Astin's Theory of Involvement (1984), which suggests that the extent of a student's participation in academic and extracurricular activities significantly influences their likelihood of staying enrolled. Higher levels of involvement generally lead to increased commitment and persistence. This theory emphasizes the role of student engagement and institutional support in shaping students' intentions to remain in their programs. According to the Student Attrition Model by Yorke and Longden (2004), multiple factors contribute to student dropout, including academic performance, social integration, and institutional policies. The model highlights the need to address these elements comprehensively to enhance retention rates. It underscores the importance of tackling academic challenges, fostering social connections, and improving institutional practices to support student persistence. Additionally, the Integrative Model of Student Retention by Krause and Coates (2008) examines various aspects of the student experience, including engagement, learning environments, and institutional culture, to assess their effects on retention. This model emphasizes the significance of student engagement, the quality of the learning environment, and the overall institutional culture in influencing students' decisions to stay enrolled.

4. Research methodology

The conceptual model for this study is built upon the core principles of Astin's Theory of Involvement (ATI), the Student Attrition Model (SAM), and the Integrative Model of Student Retention (IMSR). This model aims to explain learners' willingness to remain engaged continuously. It provides a robust framework for the research and has been significantly validated (Niamatullah et al., 2015).

In this study, there are two independent variables, one intervening variable, and one dependent variable. The independent variables are teacher-student interaction and support from non-academic staff. The intervening variable is institutional factors, while the dependent variable is student retention.



H1: Teacher-student interaction has positive and significant effects on Institutional Factors:

Research by Krane et al. (2017) found that students build positive relationships with their teachers when mutual respect is present. Hughes et al. (2008) also note that teachers' behaviors can influence students' actions, leading them to behave either positively or negatively. The learning environment within institutions plays a crucial role in student engagement (Porter, 2006). Kezar and Kinzie (2006) discovered that student engagement was greater in institutions that focused on delivering appropriate academic challenges, offering supportive teachers, providing learning support, and fostering active and collaborative learning.

H2: Non-Academic Staff Support has positive and significant effects on Institutional Factors:

The productive contributions of non-academic support staff significantly enhance the quality of services provided by higher education institutions (Gunawardena, 2017). High-quality service in higher education is crucial for offering students improved learning experiences and increasing their overall satisfaction (Pathmini et al., 2014). To attract students and boost performance, higher education institutions are focusing on improving service quality (Eshun et al., 2018).

H3: Institutional Factors has positive and significant effects on Student retention:

Angulo-Ruiz and Pergelova (2013) proposed that institutional factors influence student retention and may also affect other institutional commitments. In contrast, Braxton, Vesper, and Hossler (1995) identified students' social and academic expectations during enrollment, along with career development, as key factors in student retention.

H4: Teacher Student Interaction has positive and significant effects on Student retention:

Today, faculty are being asked to take on tasks that weren't usually part of their jobs before, to help keep students in school (Millea et al., 2018). At the same time, the differences between generations in colleges create challenges for keeping students engaged and enrolled. Many students' attitudes and behaviors don't always match what professors expect, leading some to criticize Millennials as feeling "entitled" and unprepared (Goldman and Martin, 2016; Howe and Strauss, 2000).

H5: Non Academic Staff Support have positive and significant effects on Student retention:

Students need to learn how to navigate a new campus, manage administrative tasks, and meet new expectations (Shields, 2002). Braxton et al. (2004) also point out that commuter students are particularly influenced by external factors such as work and family, which can significantly affect their ability to remain enrolled. Therefore, these students often require considerable support from non-academic staff at higher education institutions.

H6: Institutional Factors mediate the relationship between Teacher Student Interaction and Student retention:

Institutional factors such as interactions with faculty and administrative policies can either help or hinder student retention at different stages of their college experience (Terenzini & Pascarella, 1980). The culture within an institution and its departments can shape how professors approach their teaching. A culture that prioritizes teaching excellence and meaningful evaluation of faculty performance (Paulsen & Feldman, 1995) can encourage professors to adopt effective teaching practices (Spencer, White, Peterson, & Cameron, 1989).

H7: Institutional Factors mediate the relationship between Non Academic Staff Support and Student Retention:

Elliott and Shin (2002) identified several factors that affect student satisfaction, including the quality of classroom interactions, relationships with faculty, positive feelings about their classroom and social experiences, and a sense of belonging to the campus culture. There is a strong connection between student satisfaction, retention, and achieving institutional goals (Schertzer & Schertzer, 2004). Institutional support and academic activities determine student satisfaction (Loveland & Bland, 2013). A significant relationship exists between student satisfaction, retention, and institutional goals (Schertzer & Schertzer, 2004).

5. Data Analysis

The analysis of the data was carried out in three distinct stages. First, an Exploratory Factor Analysis (EFA) was performed using SPSS software, applying Maximum Likelihood estimation and Varimax rotation to review the scale. The second stage involved validating the factor structure obtained from the EFA through Confirmatory Factor Analysis (CFA) using AMOS software. In the final stage, the hypotheses were tested by assessing the structural model, also with AMOS. The study utilized structural equation modeling (SEM) through a two-step process: initially evaluating the measurement model and then the structural model. The measurement model (refer to Figure 1) was constructed based on 22 items, reflecting the results from the final CFA. These items included: Teacher-student interaction (TSI) with 6 items, Non-Academic Staff Support (NASS) with 3 items, Institutional Factors (IF) with 8 items, and Retention of Students (ROS) with 5 items.

Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) was conducted using the Maximum Likelihood method along with Varimax rotation to investigate the factor structure and the interrelationships among the scale items. The results of the rotated factor matrix are presented in the following tables.

Table 1: KMO and Bartlett's Test
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.904
Approx. Chi-Square		5960.509
Bartlett's Test of Sphericity	df	231
	Sig.	.000

The KMO statistic is greater than 0.50, indicating that the sampling adequacy criteria are met. Furthermore, the Bartlett test of sphericity is statistically significant ($p < 0.05$), demonstrating that the correlation matrix significantly deviates from an identity matrix, which is the desired outcome.

Table 2: Rotated Factor Matrix^a
Rotated Factor Matrix^a

	Factor			
	1	2	3	4
TSI1		.607		
TSI2		.822		
TSI3		.741		
TSI4		.720		
TSI5		.836		
TSI6		.865		
NASS1				.710
NASS2				.744
NASS3				.658
IF1	.765			
IF2	.793		.302	
IF3	.850			
IF4	.867			
IF5	.833			
IF6	.736			
IF7	.677			
IF8	.727			
ROS1			.646	
ROS2			.812	
ROS3			.877	
ROS4			.707	
ROS5	.330		.711	

Extraction Method: Maximum Likelihood.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

The results of the exploratory factor analysis indicate a four-factor solution, as expected, with all items aligning with their respective factors, except for two items (IF2 and ROS5), which show cross-loadings. This four-factor model explains 64.83% of the total variance. These findings suggest a robust level of validity for the identified factors. To further validate these results, we conducted a confirmatory factor analysis (CFA), which will be detailed in the following section.

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was performed with AMOS version 23 (Arbuckle, 2009). The analysis assessed the model's reliability, convergent validity, and discriminant validity. The graphical representations of both the initial CFA model and the final adjusted model are provided below, along with the results detailed in Table 3.

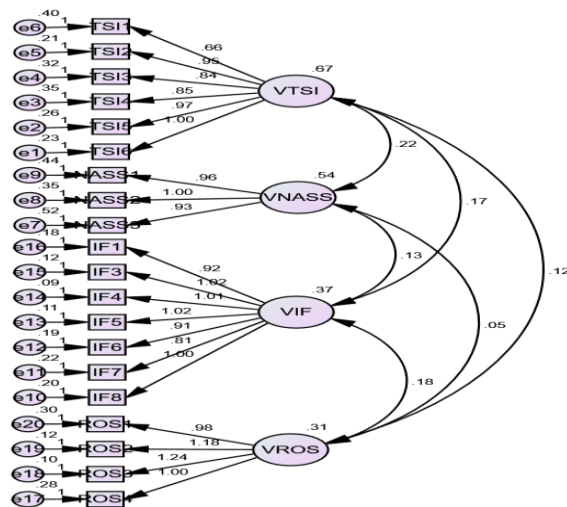


Figure 1: The initial measurement model
 Source: Researcher's original work

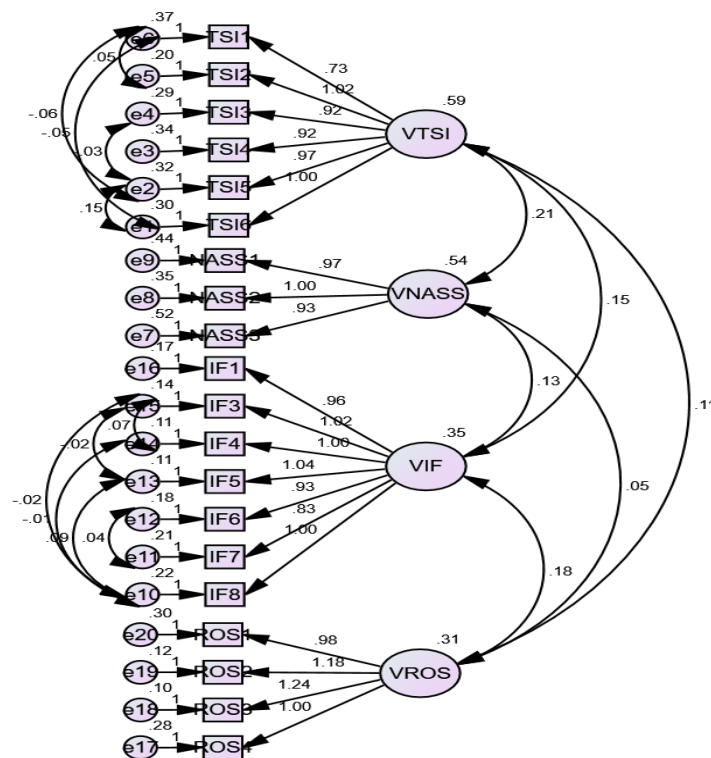


Figure 2: The revised measurement model

Source: Researcher's original work

Table 3: Reliability and Convergent Validity

Variables/ Constructs	Items	Standardized Factor Loadings	Cronbach Alpha	Composite Reliability	Average Variance Extracted	Maximum Variance	Shared
TSI	TSI1	.607	.910	0.909	0.625	0.138	
	TSI2	.823					
	TSI3	.742					
	TSI4	.720					
	TSI5	.836					
	TSI6	.866					
NASS	NASS1	.713	.775	0.777	0.538	0.138	
	NASS2	.743					
	NASS3	.660					
IF	IF1	.749	.937	0.934	0.669	0.303	
	IF3	.822					
	IF4	.845					
	IF5	.867					
	IF6	.753					
	IF7	.689					
	IF8	.769					
ROS	ROS1	.641	.878	0.884	0.659	0.303	
	ROS2	.829					
	ROS3	.875					
	ROS4	.672					

Initial Model Fitness: $\chi^2=569.552$, $df=164$, $\chi^2/df= 3.473$, $RMSEA=.083$, $RMR=.029$, $GFI=.861$, $CFI=.919$

Revised Model Fitness: $\chi^2=216.340$, $df=153$, $\chi^2/df= 1.414$, $RMSEA=.034$, $RMR=.025$, $GFI=.944$, $CFI=.987$

The CFA results reveal that the model achieved excellent fit statistics: $\chi^2/df = 1.414$, RMSEA = 0.034, RMR = 0.025, and CFI = 0.987. These values meet or exceed the recommended thresholds set by Hu and Bentler (1999) and Browne and Cudeck (1992) (RMSEA < 0.08, RMR < 0.05, CFI > 0.90). Standardized factor loadings for all items were above 0.60, and the Average Variance Extracted (AVE) exceeded 0.50, indicating strong convergent validity (Hair, Sarstedt, Ringle, & Gudergan, 2017). Further evidence of convergent validity is shown by the Maximum Shared Variance being lower than the AVE for each variable. Additionally, Cronbach's alpha and composite reliability scores for all variables were above 0.70, confirming strong reliability.

Table 4: Discriminant Validity

	VIF	VTSI	VNASS	VROS
VIF	0.818			
VTSI	0.336	0.790		
VNASS	0.293	0.372	0.734	
VROS	0.550	0.267	0.131	0.812

To establish discriminant validity, followed the criteria outlined by Fornell and Larcker (1981). In the table, the diagonal values in bold represent the square root of the Average Variance Extracted (AVE), while the off-diagonal values show the correlations between variables. The criterion for discriminant validity is that the bold diagonal values should be greater than the inter-variable correlations in their corresponding rows and columns. This requirement is met, as indicated in the table, confirming that the variables display strong discriminant validity.

Hypotheses Testing (Structural Model)

To explore the relationships between Teacher-Student Interaction, Non-Academic Staff Support, Institutional Factors, and Student Retention, structural equation modeling was conducted using AMOS path analysis. Factor scores derived from the CFA were used as inputs for this analysis in AMOS. In the process of hypothesis testing, Institutional Factors were examined as a potential mediator. The graphical representation of the structural model, along with the corresponding results, is provided below.

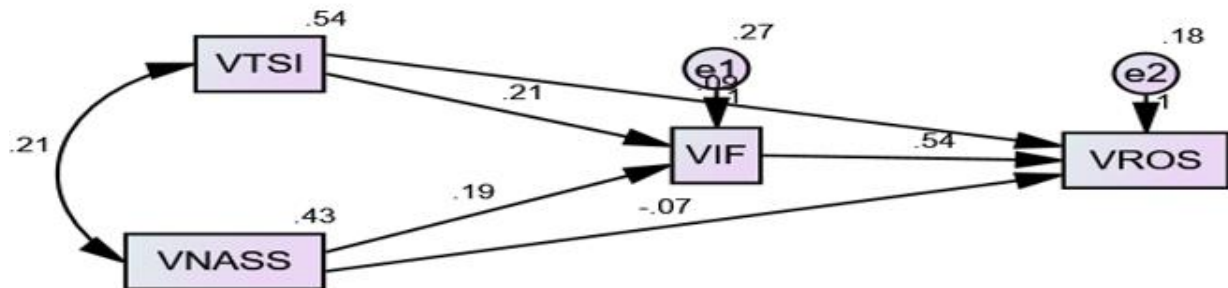


Figure 3: The graphical representation of structural model

Source: Researcher's original work

Table 5: Regression Weights

H. No.	Paths	Estimate	S.E.	C.R.	P	Remarks
H1	Teacher-student interaction>Institutional factors	.208	.041	5.037	***	H1 Supported
H2	Non-Academic Staff Support>Institutional factors	.193	.046	4.160	***	H2 Supported
H3	Institutional factors>Retention of students	.539	.043	12.457	***	H3 Supported
H4	Teacher-student interaction>Retention of students	.087	.035	2.488	.013	H4 Supported
H5	Non-Academic Staff Support>Retention of students	-.074	.039	-1.890	.059	H5 Not supported
Model Fitness: $X^2=.000$, $df=0$, $X^2/df= -$, RMSEA=.371, RMR=.000, GFI=1.000, CFI=1.000						

***<.05, **<.01, *<.001

The model demonstrated a strong fit, with an RMR of 0.000, a GFI of 1.000, and a CFI of 1.000. However, the RMSEA did not meet the desired criterion, as it should be below 0.08 to indicate a satisfactory model fit.

The path analysis results show the following outcomes for the hypotheses: Teacher-Student Interaction has a positive and significant effect on Institutional Factors ($\beta = 0.208$, $p < 0.05$). Non-Academic Staff Support also has a positive and significant effect on Institutional Factors ($\beta = 0.193$, $p < 0.05$). Additionally, Institutional Factors have a positive and significant impact on Student Retention ($\beta = 0.539$, $p < 0.05$). Teacher-Student Interaction is positively and significantly related to Student Retention ($\beta = 0.087$, $p < 0.05$). In contrast, Non-Academic Staff Support has a negative and insignificant effect on Student Retention ($\beta = -0.074$, $p > 0.05$). As a result, hypotheses H1, H2, H3, and H4 are supported, while hypothesis H5 is rejected due to its insignificant p-value and the negative relationship observed, which contradicts the hypothesized direction.

Mediation Testing

The mediation analysis was conducted by setting Teacher-Student Interaction and Non-Academic Staff Support as independent variables, Student Retention as the dependent variable, and Institutional Factors as the mediator. This analysis followed the classical method described by Baron and Kenny (1986), examining both direct and indirect effects. Bootstrap procedures with 500 samples and a bias-corrected bootstrap confidence interval of 90% were employed for this analysis. The results are summarized in the table provided below.

Table 6: Mediation Analysis

H. No.	Path	Total Effects	Direct Effects	Indirect Effects	Remarks
H6	TSI>IF>ROS	.199**	.087**	.112**	Hypothesis supported since indirect effects are statistically significant
H7	NASS>IF>ROS	.031	-.074	.105**	Hypothesis supported since indirect effects are statistically significant

* $< .05$, ** $< .01$, *** $< .001$

The results demonstrate that Institutional Factors partially mediate the relationship between Teacher-Student Interaction and Student Retention, with a statistically significant indirect effect ($\beta = 0.112$, $p < 0.05$). Likewise, Institutional Factors partially mediate the relationship between Non-Academic Staff Support and Student Retention, with a significant indirect effect ($\beta = 0.105$, $p < 0.05$). Consequently, hypotheses H6 and H7 are supported by these findings.

Table 7: Summary of Hypotheses

H.No.	Statement	Status
H1	Teacher-student interaction>Institutional factors	Supported
H2	Non-Academic Staff Support>Institutional factors	Supported
H3	Institutional factors>Retention of students	Supported
H4	Teacher-student interaction>Retention of students	Supported
H5	Non-Academic Staff Support>Retention of students	Not Supported
H6	Institutional factors mediate the relationship between Teacher-student interaction and Retain of students	Supported
H7	Institutional factors mediate the relationship between Non-academic Staff support and Retain of students	Supported

6. Conclusion

Descriptive statistics were used to summarize the data. This was followed by an Exploratory Factor Analysis (EFA) employing Maximum Likelihood estimation and Varimax rotation in SPSS to examine the initial structure of the scales. To confirm the factor structure identified in the EFA, a Confirmatory Factor Analysis (CFA) was conducted using AMOS. Hypotheses were subsequently tested by evaluating the structural model in AMOS.

The descriptive analysis of the demographic profile revealed that most respondents were between the ages of 18 and 20 and were enrolled in diploma programs. The majority of participants were unmarried females, comprising 70.5% of the sample.

According to previous research, factors such as Teacher-Student Interaction, Non-Academic Staff Support, and Institutional Factors are critical in enhancing student retention. Many studies have investigated how these factors influence students' decisions to persist in higher education. Building on this existing research, the current study offers a model that integrates and refines these factors. This model aims to clarify how Teacher-Student Interaction, Non-Academic Staff Support, and Institutional Factors collectively impact student retention in Sri Lankan higher education institutions offering foreign degrees. By addressing these aspects, the research not only extends previous findings but also provides new insights into the dynamics of higher

education persistence, contributing valuable knowledge to academic literature and offering practical implications for the management of higher education institutions.

References

1. Aitken, Norman D. (1982). College student performance, satisfaction and retention: Specification and estimation of a structural model. *The Journal of Higher Education*, 32-50.
2. Aljohani, O. (2016). A review of the contemporary international literature on student retention in higher education. *International Journal of Education & Literacy Studies*, 4(1), 40-52. <http://dx.doi.org/10.7575/aiac.ijels.v.4n.1p.40>
3. Angulo-Ruiz, Fernando & Pergelova, Alben. (2013). The Student Retention Puzzle Revisited: The Role of Institutional Image. *Journal of Nonprofit & Public Sector Marketing*. 25. 334. 10.1080/10495142.2013.830545.
4. Aquino, J. L. R., & Cabrera, F. R. (2020). Student's perception in the student services program. *The Journal of Social and Allied Health Sciences*, 1(1), 1–16.
5. Arbuckle, J.L. (2009) Amos 18 User's Guide, 635.
6. Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of college student personnel*, 25(4), 297- 308.
7. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
8. Bean, John P, & Bradley, Russell K. (1986). Untangling the satisfaction-performance relationship for college students. *The Journal of Higher Education*, 393-412.
9. Beer, C., & Lawson, C. (2017). The problem of student attrition in higher education: An alternative perspective. *Journal of Further and Higher Education*, 41(6), 773-784. <https://doi.org/10.1080/0309877X.2016.1177171>.
10. Benjamin, Michael, & Hollings, Ann. (1997). Student Satisfaction: Test of an Ecological Model. *Journal of College Student Development*, 38(3), 213-228.
11. Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). *Understanding and reducing college student departure: ASHE-ERIC higher education report, volume 30, number 3*. San Francisco, CA: Jossey-Bass.
12. Braxton, J.M., Vesper, N. & Hossler, D. Expectations for college and student persistence. *Res High Educ* 36, 595–611 (1995). <https://doi.org/10.1007/BF02208833>.
13. Burke, A. (2019). Student retention models in higher education: A literature review. *College and University*, 94(2), 12-21. <https://www.aacrao.org/research-publications/quarterly-journals/college-university-journal>.
14. Choudhary AI, L. A. (2015). Economic Effects of Student Dropouts: A Comparative Study. *Journal of Global Economics*, 03(02). <https://doi.org/10.4172/2375-4389.1000137>.
15. Crabtree, R. M., Briggs, P., & Woratschek, H. (2021). Student engagement and barriers to implementation: the view of professional and academic staff. *Perspectives: Policy and Practice in Higher Education*, 25(4), 144– 150. <https://doi.org/10.1080/13603108.2021.1946446>.
16. Cudeck, R., & Browne, M. W. (1992). Constructing a covariance matrix that yields a specified minimizer and a specified minimum discrepancy function value. *Psychometrika*, 57, 357-369.
17. Dai, Pinyu. (2024). The Influence of Teacher-Student Relationship on Students' Learning. *Lecture Notes in Education Psychology and Public Media*. 40. 240-246. 10.54254/2753-7048/40/20240764.
18. DeBerard, M. S., Spielmans, G., & Julka, D. (2004). Predictors of academic achievement and retention among college freshmen: A longitudinal study. *College Student Journal*, 38(1), 66-80.
19. Donnelly, R. (2004), "Critical evaluation of the impact of global educational reform: An Irish perspective", *The International Journal of Educational Management*, Vol. 18 No. 6 pp. 351–359.
20. Dundar, H., B. Millot, Y. Savchenko, H. Aturupane, and T. Piyasiri. 2014. *Building the Skills for Economic Growth and Competitiveness in Sri Lanka*. Washington, DC: World Bank.
21. El-Hilali, N., S. Al-Jaber and L. Hussein. 2014. "Students' Satisfaction and Achievement and Absorption Capacity in Higher Education." *Procedia - Social and Behavioral Sciences* 177: 420-427. García-Aracil A. 2009. "European Graduates' Level of Satisfaction with Higher Education." *Higher Education* 57:1-21.
22. Elliot, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197-209. <https://doi.org/10.1080/1360080022000013518>.
23. Endo, Jean J, & Harpel, Richard L. (1982). The effect of student-faculty interaction on students' educational outcomes. *Research in Higher Education*, 16(2), 115-138.
24. Eshun, E. F., Badu, A. K., & Korwu, P. (2018). Impact of service quality on students' satisfaction in a Ghanaian public tertiary institution. *International Journal of Learning and Development*, 8(3), 97–112. <https://doi.org/10.5296/ijld.v8i3.13447>
25. Evangelista, L. D. (2021). Importance, engagement and satisfaction in academic, Co-curricular experiences and other student services of selected college students. *Interdisciplinary Journal of Applied and Basic Subjects*, 1(August), 20–26.

26. Feldman, Kenneth A. (1977). Consistency and variability among college students in rating their teachers and courses: A review and analysis. *Research in Higher Education*, 6(3), 223-274.
27. Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18, 382-388. <http://dx.doi.org/10.2307/3150980>.
28. Fortin, L., Royer, É., Potvin, P., Marcotte, D. & Yergeau, É. (2004). La prédiction du risque de décrochage scolaire au secondaire : facteurs personnels, familiaux et scolaire. *Revue canadienne des sciences du comportement*. 36(3) : 219-231.
29. Gautschi III, Frederick H, & Jones, Thomas M. (1998). Enhancing the ability of business students to recognize ethical issues: An empirical assessment of the effectiveness of a course in business ethics. *Journal of Business Ethics*, 17(2), 205-216.
30. Ginting, E., & Li, D. (2017b). SRI LANKA Fostering Workforce Skills through Education Employment Diagnostic Study. <http://dx.doi.org/10.22617/TCS179120-2>.
31. Goldman, Z., & Martin, M. (2016). Millennial students in the college classroom: Adjusting to academic entitlement. *Communication Education*, 65 (3), 365-367.
32. Gunawardena, C. (2017), Improving the quality of university education in Sri Lanka: An analysis of Quality Assurance Agency Council's reviews, *Sri Lanka Journal of Social Sciences*, Vol. 40, No. 1, pp. 3-15. <http://doi.org/10.4038/sljss.v40i1.7497>.
33. Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017) A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). 2nd Edition, Sage Publications Inc., Thousand Oaks, CA.
34. Hatcher, Larry, Kryter, Kimberly, Prus, Joseph S, & Fitzgerald, Vicki. (1992). Predicting college student satisfaction, commitment, and attrition from investment model constructs. *Journal of Applied Social Psychology*, 22(16), 1273-1296.
35. Hearn, James C. (1985). Determinants of college students' overall evaluations of their academic programs. *Research in Higher Education*, 23(4), 413-437.
36. *How Sri Lanka could thrive as an ideal higher education destination* (2024) *Sri Lanka Export Development Board - Sri Lanka Business Portal*. Available at: <https://www.srilankabusiness.com/news/how-sri-lanka-could-thrive-as-an-ideal-higher-education-destination.html> (Accessed: 09 August 2024).
37. Howe, N., & W. Strauss. (2000). Millennials rising: The next great generation. New York, NY: Vintage.
38. Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
39. Hughes J. N., Luo, W., Kwok, O., & Loyd, L. (2008). Teacher-student support, effortful engagement, and achievement: A three-year longitudinal study. *Journal of Educational Psychology*, 100(1), 1-14.
40. Jia, P., & Maloney, T. (2015). Using predictive modelling to identify students at risk of poor university outcomes. *Higher Education*, 70(1), 127-149.
41. Kezar, A.J., & Kinzie, J. (2006). Examining the ways institutions create student engagement: The role of mission. *Journal of College Student Development*, 47(2), 149-172.
42. Kranea, V., Nessa, O., Holter-Sorensena, N, Karlssona, B., & Binderb, P. (2017). You notice that there is something positive about going to school: How teachers' kindness can promote positive teacher- student relationships in upper secondary school. *International Journal of Adolescence and Youth*, 22(4), 377-389.
43. Li, I. W., & Carroll, D. (2017). Factors Influencing University Student Satisfaction, Dropout and Academic Performance: An Australian Higher Education Equity Perspective. *National Centre for Student Equity in Higher Education (NCSEHE)*, Perth: Curtin University.
44. Millea, M., Wills, R., Elder, A., & Molina, D. (2018). What matters in college student success? Determinants of college retention and graduation rates. *Education*, 138(4), 309-322.
45. National Education Commission. (2022). National Education Policy Framework (2020-2030). In https://nec.gov.lk/wp-content/uploads/2022/10/NATIONAL-EDUCATION-POLICY-FRAMEWORK-2020-2030_Full-Text.pdf (No. 978-955-9448-56-3). National Education Commission. Retrieved August 5, 2024, from <https://nec.gov.lk>.
46. National Human Resources Development Council of Sri Lanka (2022) *Statistical bulletin on education - 2022*. Available at: https://nhrdc.gov.lk/nhrdc/media/attachments/2023/05/09/stat-bulletine-on-edu-2022-for-web_compressed.pdf (Accessed: 08 August 2024).
47. Niamatullah, L. S., Xu, J. G. D., & Shafi, K. (2015). Factors leading to students' satisfaction in the higher learning institutions. *Journal of Education and Practice*, 6(31), 114-118. <http://files.eric.ed.gov/fulltext/EJ1083362.pdf>.
48. Nieuwoudt, J. E. & Pedler, M. L. (2021). Student Retention in Higher Education: Why Students Choose to Remain at University. *Journal of College Student Retention: Research, Theory & Practice*. <https://doi.org/10.1177/1521025120985228>.
49. Pascarella, Ernest T. (1980). Student-faculty informal contact and college outcomes. Review of educational research, 50(4), 545-595.

50. Pathmini, M. G. S., Wijewardana, W. P., Gamage, C. T., & Gamini, L. P. S. (2014). Impact of service quality on student's satisfaction in newly established public sector universities in Sri Lanka: Study based on the faculty of management studies. *Journal of Management Matters*, 1(1), 51–64. <http://repository.rjt.ac.lk:8080/xmlui/handle/123456789/893>.
51. Paura, L., & Arhipova, I. (2014). Cause Analysis of Students' Dropout Rate in Higher Education Study Program. *Procedia - Social and Behavioral Sciences*, 109, 1282-1286.
52. Pike, Gary R. (1991). The effects of background, coursework, and involvement on students' grades and satisfaction. *Research in Higher Education*, 32(1), 15-30.
53. Porter, S.R. (2006). Institutional structures and student engagement. *Research in Higher Education*, 47(5), 521-558.
54. Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130(2), 261-288.
55. Rogers, C. R. (1969). *Freedom to learn: A view of what education might become*. Columbus, OH: Charles E. Merrill Publishing Co.
56. Schertzer, C. B., & Schertzer, S. M. B. (2004). Student satisfaction and retention: A conceptual model. *Journal of Marketing for Higher Education*, 14(1), 79-91. https://doi.org/10.1300/J050v14n01_o.
57. Shields, N. (2002). Anticipatory socialization, adjustment to university life, and perceived stress: Generational and sibling effects. *Social Psychology of Education*, 5(4), 365–392.
58. Sison, M. (2019). Evaluation of Student Affairs and Services Programs: A Tool for Quality Improvement. *International Journal of Education and Research*, 7(10), 97–112. Retrieved from www.ijern.com.
59. Spencer, M. G., White, T. W., Peterson, M. W., & Cameron, K. S. (1989). *Faculty satisfaction and motivation: How faculty perceive themselves in the institutional environment*. Paper presented at the Annual Meeting of the Association for the Study of Higher Education.
60. Stephen, M. (2007). Relevance of foreign degrees, offered locally and their contribution to the Socio-Economic development of Sri Lanka. In *Marketing & Research Services*. Funded by the World Bank under the Education Sector Development Project (ESDP). Retrieved August 9, 2024, from https://nec.gov.lk/wp-content/uploads/2014/04/Relevance_of_foreign_degrees.pdf.
61. Terenzini, P. T. and Pascarella, E. T. (1980). Student/faculty relationships and freshman year educational outcomes: A further investigation. *Journal of College Student Personnel* 21, 6, 521-528.
62. Thomas, Emily H, & Galambos, Nora. (2004). what satisfies students? Mining student-opinion data with regression and decision tree analysis. *Research in Higher Education*, 45(3), 251-269.
63. Ting, Kwok-fai. (2000). A multilevel perspective on student ratings of instruction: Lessons from the Chinese experience. *Research in Higher Education*, 41(5), 637-661.
64. Todaro, P. M. (1994). *Economic development, 5th Edition*. New York: Longman publishers.
65. UGC (2019) *University Grants Commission - Sri Lanka, Detailed Undergraduates Enrolment of Higher Educational Institutions 2019*. Available at: <https://www.ugc.ac.lk/> (Accessed: 07 August 2024).
66. UNESCO. (2023, April 20). *What you need to know about higher education | UNESCO*. [www.unesco.org. https://www.unesco.org/en/higher-education/need-know](http://www.unesco.org/en/higher-education/need-know)
67. Verite Research (2017) *Private Sector Participation in Sri Lanka's Tertiary Education, Private Sector Participation in Sri Lanka's Tertiary Education A review of information and data*. Available at: <https://www.veriteresearch.org/wp-content/uploads/2019/12/Private-Sector-Participation-in-Sri-Lankas-Tertiary-Education.pdf> (Accessed: 07 August 2024).
68. Wickramasinghe, V. (2018). Higher education in state universities in Sri Lanka – review of higher education since colonial past through international funding for development. *International Journal of Educational Management*, 32(3), 463-478, <https://doi.org/10.1108/IJEM-01-2017-0028>.
69. Yukselturk, E., & Inan, F. A. (2006), Examining the Factors Affecting Student Dropout in an Online Certificate Program. *Turkish Online Journal of Distance Education-TOJDE*, 7(3), Article: 6.