



**Students' Staying and Supportive Intentions at Federal  
Higher Education Institutions in the United Arab Emirates**

**نية الطلبة في البقاء والنوايا الداعمة لها في مؤسسات التعليم العالي الفيدرالية في  
دولة الإمارات العربية المتحدة**

**by**

**AMAL ABDULLA ALHASSANI**

**A thesis submitted in fulfilment  
of the requirements for the degree of  
DOCTOR OF PHILOSOPHY IN BUSINESS MANAGEMENT  
at  
The British University in Dubai**

**June 2022**

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## **ABSTRACT**

In a highly competitive higher education environment where institutions aim to meet the student's needs and expectations, quality of service is a key stander for measuring the level of excellence in higher education among institutions. Furthermore, concepts such as student satisfaction, student retention, and the institution's reputation have become a strategic concern for private and public institutions as it has a strong impact on students and thus on the institution's performance and their ability to enhance the better services. The main literature gap of the thesis is to focus on university retention rates, as the majority of student dropouts happen in the first year of their study. The dropout rate in the United Arab Emirates (UAE) higher education sector is high and reached 14% in 2017 in the federal institutions, as compared to a global rate of below 10%.

The purpose of this research is to examine the factors influencing undergraduate students' retention from the university during their first year by studying two federal institutions in the UAE and how the institution can improve the retention procedures to keep the students till they complete their degree. Moreover, it aims to investigate the mediation impact of student satisfaction on the five antecedents of satisfaction: Perceived Service Quality of Teaching (QTS), Student Life and Support (SLS), Social Identification (SI), Organizational Identification (OI), and Institution Reputation (RE). Additionally, it aims to propose a new and clear conceptual framework to support higher education institutions (HEIs) by examining the literature and analyzing new data to find recommendations to help to increase the retention rate by identifying the factors that influence how students interact with and support their HEIs.

The thesis research employs a quantitative method, as data were collected using questionnaires from 444 undergraduate students who were in their first year in two UAE federal institutions. A

conceptual model was developed and tested by using SPSS and AMOS, which included an assessment of possible common method bias (CMB) and mediation analysis. To analyze the data, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were applied where they explored the associations between the eight constructs and, then, utilized the structural equation model (SEM) to test a theoretical model described by a set of basic hypotheses, with the aim of explaining the relationship between perceived quality of the educational services, student satisfaction, student retention, institution reputation and examining the possible effects of these relationships on students' support or intention to stay in the institution.

The findings showed that student satisfaction mostly fully mediates the relationships between the five antecedents' factors of satisfaction and both Intention to Stay and Supportive Intentions. The institution's reputation, organizational identification, and student life and support are the very strongest predictors of satisfaction among students. Organizational identification is a strong forecaster for student achievement, promise, and fulfillment levels in organizational settings. It is an effective organizational identification that is a strong forecaster of student commitment and gratification for substantiating student-level achievement. Learning is often tangled with social identification of academic level performance. Shared identity is approached as they perceive in-group members to have dissonance in university-level learning. The values in management programs are identified through satisfaction and self-esteem in broader terms. In addition, student life and support can also play a big change in the level of student satisfaction as most students are looking for the high-quality services that should be provided by institutions, especially in facilities like libraries, classrooms, laboratories, restaurants, clubs, accommodation, and so on, where they spend most of their time so the student is always looking for an enjoyable place that the university can provide parallel with an excellent education.

The originality of the study emerged from the limited studies that have examined the effect of institution reputation on student satisfaction so It made an important theoretical contribution in that the findings help to articulate that reputation of the institution has not been sufficiently examined in the literature related to higher education or to the marketing of international institutions and quality services. The thesis developed a new concept by paying attention to the role of the institution's reputation as one of the important factors for students. Furthermore, mediation analysis for the five antecedents of satisfaction on staying and supporting is a new contribution to the literature. On the other hand, the practical implications of the study provide the HEIs with insights and new information on how they can improve their strategies by rising the gap of low rate of retention and improving the level of both student satisfaction. These results will reflect positively on student education and will benefit both academics and practitioners in higher education. This study is one of the first to focus on first-year undergraduate students and how they settle into life in higher education. Furthermore, existing studies have only focused on two or three independent variables, while this study combines more independent variables, to assess how students judge a university's services and their overall experience in HEI.

Finally, retention of the students helps an institution gain a competitive advantage as it indicates the ability to make their students happy and satisfied. If the antecedents of satisfaction offered by the universities are meeting the expectations of the students, it will increase their level of satisfaction. These are steps that follow one after the other and are highly dependent on each other to operate properly. Hence, it can be said that factors such as reputation, quality, identification, and satisfaction are all interrelated and important for all higher education institutions.

## ملخص البحث

في بيئة التعليم العالي شديدة التنافسية حيث تهدف المؤسسات التعليمية إلى تلبية احتياجات الطلبة وتوقعاتهم، تعد جودة الخدمة المقدمة معياراً رئيسياً لقياس مستوى التميز في التعليم العالي بين المؤسسات التعليمية. علاوة على ذلك، أصبحت مفاهيم مثل رضا الطلبة والاحتفاظ بالطلبة وسمعة المؤسسة التعليمية مصدر قلق استراتيجي للمؤسسات التعليمية الخاصة والعامة لما لها من تأثير قوي على الطلبة وبالتالي على أداء المؤسسة التعليمية وقدرتها على تعزيز الخدمات الأفضل. تتمثل الفجوة الأدبية الرئيسية في الرسالة في التركيز على معدلات الاحتفاظ بالطلبة في الجامعة، حيث يحدث التسرب بين غالبية الطلبة خلال السنة الأولى من دراستهم. يعتبر معدل التسرب من التعليم العالي في دولة الإمارات العربية المتحدة مرتفعاً حيث بلغ 14٪ في عام 2017 في المؤسسات التعليمية الاتحادية، مقارنة بمعدل العالمي الذي يقل عن 10٪.

الغرض من هذا البحث هو دراسة العوامل التي تؤثر على تسرب طلبة البكالوريوس من الجامعة خلال عامهم الدراسي الأول في المؤسسات التعليمية الفيدرالية في دولة الإمارات العربية المتحدة وكيف يمكن للمؤسسة التعليمية تحسين إجراءاتها للاحتفاظ بالطلبة حتى يكملوا دراستهم. علاوة على ذلك، تهدف الدراسة إلى التحقق من قوة تأثير عامل الوساطة لرضا الطلبة على العوامل الخمسة للرضا وهي: جودة خدمة التدريس (QTS)، الحياة الطلابية والدعم (SLS)، والهوية الاجتماعية (SI)، والهوية التنظيمية (OI)، وسمعة المؤسسة (RE). بالإضافة إلى ذلك، تهدف الدراسة إلى اقتراح إطار عمل مفاهيمي جديد وواضح لدعم مؤسسات التعليم العالي من خلال فحص الأدبيات وتحليل البيانات الجديدة للعثور على توصيات للمساعدة في زيادة معدل الاحتفاظ بالطلبة وتحديد العوامل التي تؤثر على كيفية تفاعل الطلبة ودعمهم لمؤسساتهم التعليمية.

استخدم في بحث الأطروحة الأسلوب الكمي، حيث تم جمع البيانات عن طريق الاستبيانات التي وزعت على 444 طالباً جامعياً في عامهم الدراسي الأول في مؤسستين فيدراليتين في دولة الإمارات العربية المتحدة. تم تطوير واختبار البيانات باستخدام البرامج الإحصائية SPSS و AMOS، والتي تضمنت تقييماً للتحيز المحتمل للطريقة الشائعة (CMB) وتحليل الوساطة. كما تم تحليل البيانات باستخدام تطبيق تحليل العامل الاستكشافي (EFA) وتحليل العامل المؤكد (CFA) لاستكشاف الارتباطات بين التراكيب والعوامل الثمانية في البحث، ثم تم استخدام نموذج المعادلة الهيكلية (SEM) لاختبار نموذج نظري موصوف بواسطة مجموعة من الفرضيات الأساسية بهدف شرح العلاقة بين جودة الخدمات التعليمية المقدمة، ورضا الطلبة، والاحتفاظ بالطلبة، وسمعة المؤسسة، ودراسة الآثار المحتملة لهذه العلاقات على دعم الطلبة أو نيتهم البقاء في المؤسسة التعليمية.



أظهرت النتائج أن رضا الطلبة يتوسط في الغالب بشكل كامل العلاقات بين عوامل الرضا الخمسة السابقة وكلاً من النية للبقاء والنوايا الداعمة لاستمرار الطلبة في الجامعة. تعد سمعة المؤسسة التعليمية، والهوية التنظيمية، والحياة الطلابية والدعم من أقوى العوامل التي تتنبأ برضا الطلبة وتؤثر عليها. يعد تحديد الهوية التنظيمية للمؤسسة التعليمية بمثابة مؤشر قوي على إنجازات الطلبة ومستويات الوعود والوفاء بالإعدادات التنظيمية للمؤسسة. تعد فعالية الهوية التنظيمية متنبأً قوياً في التزام الطلبة ورضاهم ويظهر من خلال الإنجازات على مستوى الطلبة. غالباً ما يكون التعلم متشابكاً مع الهوية الاجتماعية من ناحية أداء المستوى الأكاديمي. لذا يتم التعامل مع الهوية المشتركة عن طريق اكتشاف ما يراه أعضاء المجموعة لديهم من تنافر في التعلم على مستوى الجامعة. وبالتالي يتم تحديد القيم في برامج الإدارة من خلال الرضا وتقدير الذات بعبارات أوسع. بالإضافة إلى ذلك، يمكن أن يلعب عامل الحياة الطلابية والدعم تغييراً كبيراً في مستوى رضا الطلبة حيث يبحث معظم الطلبة عن الجودة العالية للخدمات التي يجب أن تقدمها المؤسسات التعليمية خاصة في المرافق الخدمية مثل المكتبات والفصول الدراسية والمختبرات والمطاعم والنوادي والسكن الجامعي وغيرها، لأنهم يقضون معظم وقتهم فيها، ولذلك يبحث الطلبة دائماً عن مكان ممتع يمكن للجامعة أن توفره بالتوازي مع تعليم ممتاز.

نشأت أصالة الدراسة من الدراسات المحدودة التي اختبرت تأثير سمعة المؤسسة التعليمية على رضا الطلبة، لذا فقد قدمت مساهمة نظرية مهمة في أن النتائج تساعد في توضيح أن سمعة المؤسسة التعليمية لم يتم التطرق لفحصها أو اختبارها بشكل كافٍ في الأدبيات السابقة المتعلقة بالتعليم العالي أو المتعلقة بتسويق المؤسسات التعليمية الدولية وخدمات الجودة فيها. طورت الأطروحة مفهوماً جديداً من خلال الانتباه إلى دور سمعة المؤسسة التعليمية كأحد العوامل المهمة المؤثرة على الطلبة. علاوة على ذلك، يعد تحليل الوساطة للعوامل الخمسة للرضا وتأثيرها على نية البقاء والدعم مساهمة جديدة في الأدبيات. من ناحية أخرى، تزود الآثار العملية للدراسة مؤسسات التعليم العالي برؤى ومعلومات جديدة حول كيفية تحسين استراتيجياتها من خلال تقليص الفجوة في معدل التسرب المرتفع للطلبة، وتحسين مستوى رضا الطلبة ومعدل الاحتفاظ بالطلبة. ستعكس هذه النتائج بشكل إيجابي على تعليم الطلبة وسيستفيد منها الأكاديميين والممارسين في التعليم العالي. هذه الدراسة هي واحدة من أولى الدراسات البحثية التي تركز على طلبة البكالوريوس في السنة الجامعية الأولى وكيف تستقر حياتهم في التعليم العالي. علاوة على ذلك، ركزت الدراسات الحالية الموجودة على متغيرين أو ثلاث متغيرات مستقلة فقط، بينما تجمع هذه الدراسة البحثية على متغيرات مستقلة أكثر لتقييم كيفية حكم الطلبة على الخدمات الجامعية وتجربتهم بشكل عام في التعليم العالي.

في النهاية، يساعد الاحتفاظ بالطلبة المؤسسة التعليمية على اكتساب ميزة تنافسية لأنها تشير إلى القدرة على جعل طلابهم سعداء وراضين. إذا كانت عوامل الرضا التي تقدمها الجامعات تلبي توقعات الطلبة، فسيؤدي ذلك إلى زيادة مستوى رضاهم. هذه خطوات تتبع واحدة تلو الأخرى وتعتمد بشكل كبير على بعضها البعض لتعمل بشكل صحيح. ومن ثم، يمكن القول إن عوامل مثل السمعة والجودة وتحديد الهوية والرضا كلها مترابطة ومهمة لجميع مؤسسات التعليم العالي.

## **DEDICATION**

I dedicate this thesis primarily to my family who made me believe that dreams can be achieved. I wish to highlight my appreciation to my supervisor for his continued support and patience during this journey. Moreover, I would like to thank the educational institutions that have agreed to participate in this research, and for everyone who was around me to encourage, support, and help me during my study till I reached the end of this happy journey.

Finally, this thesis is dedicated to everyone who is looking for supporting higher education by understudying the important factors that influence students and then establish the required plan/s to develop services to reach satisfaction.

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## **List of Glossary**

Higher Education Institutions	All institutions that are listed in the Ministry of Higher Education.
Postgraduate Student	Students who are studying graduate programs (Master's or Doctorate degrees).
Undergraduate Student	Students who are studying for a Bachelor's degree.

### **List of abbreviations**

AMOS	Analysis of Moments Structures Software
CAA	Commission of Academic Accreditation
CFI	Comparative fit index
CLF	Common Laten Factor
CMB	Common method bias
CMIN/DF	Normed chi-square
HE	Higher Education
HEIs	Higher Education Institutions
IS	Intention to Stay
NYU	New York University
OI	Organizational Identification
QT	Quality of Teaching
RE	Reputation of the University
RFI	Relative Fit Index
RMSEA	Root mean square error of approximation
SEM	Structural Equation Modelling
SI	Social Identification
SLS	Student life and support
SP	Supportive intentions
SPSS	Statistical Package for Social Sciences software
SRMR	Standardised root mean residual
SS	Student Satisfaction
TLI	Tucker-Lewis Index
UAE	United Arab Emirates
UAEU	United Arab Emirate University
UGS	Undergraduate Student

# **Chapter 1: Introduction**

## **1.1 Research Context**

Higher Education plays a leading role in economic, social and cultural change due to its impact on individuals and wider society. The services offered by higher education institutions (HEIs) vary despite similar institutional goals that seek to provide the community with high quality services and advanced knowledge.

Recently, a new concept has begun to emerge in the field of higher education. It is the concept of “reputation”. The reputation of HEIs can be defined as a means to classify institutions on different levels according to their respective academic and scientific standards. This evaluation process is important in order to compare institutions and determine which are the best ones in terms of services offered to the student.

Most often students from a well-known HEI believe that the brand name of their HEI will help them to obtain better opportunities in the future. On the other hand, Zhang et al. (2014) suggested that the perception of students of the reputation of HEIs and how that reputation can be protected puts immense pressure on individuals. This pressure affects student behaviour and creates changes in their developmental processes. The differences in student behaviour and perceptions depends on different aspects of any HEI’s reputation and brand image. Such student perceptions and behaviours help to maintain the standard of HEIs performance even in a comparatively diverse economy.

Following on from above, it is clear that a high quality of service in terms of education and learning is a necessary requirement for any HEI. Athiyaman (1997) stated that the

quality of such services is a significant factor in measuring student satisfaction and success at an institution. Moreover, the level of student satisfaction creates either positive or negative outcomes and reflects back on the services provided and the learning opportunities offered.

HEIs provide students with several kinds of service in order to create a better learning environment. These services can affect whether or not students will join a program. According to Annamdevula and Bellamkonda (2016), the quality of academic factors such as teaching and careers advice impact on student satisfaction.

HEIs play a significant role by delivering good quality services to students. Many of these services will influence a student retention. According to Cardona and Bravo (2012), students recognize these important factors and have high expectations of academic life, teaching and the quality services factors that are available. In the same vein, Eberle et al. (2016) pointed out that there is a relationship between the quality of service in organizations and customer satisfaction.

University reputation may be a factor considered by students when evaluating and choosing an institution at which to study. A good reputation is all about quality, but it may also be enhanced through marketing. The quality can be integrated with status competition as the quality is tough to describe and evaluate. The international competition between the universities is a comparatively new phenomenon linked with the advancement of the knowledge economy. The international competition has been fuelled by the notion of a ‘world-class university’ assisted by international organizations. Comprehending the procedure of student decision-making for the

universities is not an easy task. A strong reputation is disparagingly important for the universities to attain a competitive advantage. A good reputation is the most significant factor influencing prospective decisions while selecting universities (Gupta, Agarwal & Anant, 2020).

In 1971, the United Arab Emirates (UAE) was formally established as a federation. Therefore, the UAE education system is quite new compared to other countries. However, the UAE realises the importance of education in order to develop the country, and education is one of the main sectors contributing to the nation's economic success. Over the last two decades, the number of institutions of higher education has increased greatly in both the public and private spheres. Furthermore, many foreign institutions with high world rankings are opening campus branches in the UAE. All of this has made the higher education sector more diverse and healthy (Wilkins, 2010).

Recently, the Ministry of Higher Education in the UAE became aware of internationalization, and the benefits of this for higher education. For example, this helps to improve students' knowledge and skills and prepare them for their future positions in the job market. The ministry sought to increase the number of HEIs in the UAE in order to raise standards and rankings. For instance, most HEIs have adopted mobile learning, rather than a more traditional educational structure, to meet global standards. Most HEIs have undertaken strategic plans to revise their programs and courses to improve knowledge and skills of faculty and staff, and develop campus facilities to meet student requirements.



Alsharari (2018) noted initiatives that promoted different authorities in order to enhance the current education system and develop better quality in higher education. At the same time, the UAE plays host to 70 licensed top higher education institutions from around the world. One such example is the University of Wollongong from Australia. Furthermore, the Ministry of Higher Education has established a Commission of Academic Accreditation (CAA) in order to be more competitive and to support research in education by implementing higher standards at institutions like UAE University (UAEU). All of this is a part of the UAE's Higher Education Strategic Plan 2020.

Alsharari (2018) evaluated higher education in the UAE by using a SWOT analysis tool, which summarized education in the UAE (Table 1).

	Helpful	Harmful
Internal	<b>Strength</b> <ul style="list-style-type: none"> <li>• Presence of international staff, students, and researchers.</li> <li>• Income generation and foreign exchange savings.</li> <li>• Elevated global ranking and reputation of university.</li> <li>• Facilitation of intercultural knowledge sharing.</li> <li>• Variety of academic programs.</li> <li>• Acquisition and/or improvement of English language skills.</li> <li>• Innovation-led growth.</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>• Inadequate budget for internationalization.</li> <li>• Bureaucratic procedures and decision-making processes.</li> <li>• Vague definition of internationalization strategy.</li> <li>• High cost of studying abroad.</li> <li>• Inadequate infrastructure.</li> <li>• Research inactivity of international staff.</li> <li>• Inability to challenge and motivate local academic community to compete.</li> </ul>
External	<b>Opportunities</b> <ul style="list-style-type: none"> <li>• Enduring international partnerships/collaboration.</li> <li>• Improving quality.</li> <li>• Elevating reputation.</li> <li>• Social engagement in a global, multicultural society.</li> <li>• Strategic geographic position.</li> <li>• Technological development.</li> <li>• International networking.</li> <li>• Raising cultural/racial/ ethnic diversity of staff.</li> <li>• Competition with other institutions.</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• Defined corporate identity and organizational culture.</li> <li>• High tuition and other costs deterring international enrollments of international students.</li> <li>• Economic recession/crisis.</li> <li>• Brain drain – loss of prominent academics abroad.</li> <li>• Public funding shortfalls.</li> <li>• Expanding international education market.</li> </ul>

Table 1: SWOT of Higher Education in the UAE  
(Alsharari 2018)

Both Chapman et al. (2014) and Wilkins (2010) explored the higher education system in the UAE and identified three different categories (Table 2). This table is based on a typology of Higher Education Institutions formulated by Lane and Kinder (2011).

- 1) **Federal HEIs:** Those HEIs that are owned and funded by the UAE Federal Government to support Emirati students with free tuition. These are public HEIs and students must apply through the Ministry of Higher Education. There are three main HEIs:

- **Institution A:** The first university in the country. It was established by Sheikh Zayed bin Sultan Al Nahayan (may his soul rest in peace) in 1977 and is located in the city of Al-Ain. It caters to both genders and international students.
- **Institution B:** Established for technical education in 1988 and are currently located in many different emirates with around 16 campuses for Emirati students only. Both genders may apply.
- **Institution C:** Established in 1998 and is currently located in two innovative and modern campuses in Abu Dhabi and Dubai. It is also only for Emirati students.

- 2) **Semi-Public HEIs:** These HEIs are owned by private individuals, or shareholders, and offer fee-paying programs for Emirati and international students. For example, this includes the American University in Dubai, Khalifa University in Abu Dhabi and the American University of Sharjah.

- 3) **The International Branch Campuses:** These HEIs have signed an agreement with the UAE Government to open a branch campus in the UAE of international universities with high world rankings. This is to support higher education in the country. These institutions offer different levels of fee-paying programs to both Emirati and international students (e.g., New York University – NYU – in Abu Dhabi).

	<i>Federal (public)</i>	<i>State (semi-public)</i>	<i>International branch campuses</i>
Mission	Serves a clear 'public' mission as determined the state	Mission is both public and private, as defined by institution and local government	Mission is mainly to respond to student demand
Ownership	Publicly controlled: can be altered or even closed by state	Joint control by public and institution	Non-profit/for profit, primarily controlled by institution/ partner
Investment	All public investment	Mix of public and institutional investment	All institutional investment or mix of institutional and private partner investment
Revenue	All taxpayer, or public, revenue	Mostly tuition, but some public assistance to students	Mostly tuition, but some public assistance to students
Regulation	Highly state regulated by agency or ministry	Subject to regulation, with balance of power in the local government	Subject to regulation, with balance of power in the institutions

Table 2: Typology of Higher Education Institutions in the UAE  
(Chapman et al. 2014)

Furthermore, Chapman et al. (2014) found that the Ministry of Higher Education sought to choose the best possible candidates to work in these institutions, in order to enhance education and produce a healthy learning environment. These staff members, instructors and faculty are carefully evaluated on an international standard before being hired.

Overall, creating a conducive ambience at these HEIs supports student growth. Therefore, students often believe that these well-known HEIs can provide them with world-class educational facilities. Equally, the amenities and facilities provided by the HEIs help the students to study effectively. The following sections of this research

study will focus on the environment of HEIs and highlight the conundrum of decreasing retention rate despite the high-quality services offered by these institutions and how to solve it by knowing the factors of retention.

The UAE higher education sector has expanded greatly in the last 20 years. It has contributed to improving skills in the labour market and aided the Emiratisation strategy aimed at getting UAE nationals into the workforce. However, His Excellency Dr Ahmad Belhoul Al Falasi (Minister of State for Higher Education and Advanced Skills), announced in 2017 that federal HEIs still have relatively high dropout rates of 14% on average when compared to the international average of 4-10% in 2017 (Nasir, 2017).

Thus, this research is concerned with identifying the factors that influence student retention and factors that influence how students interact with and support their higher education institution (HEI).

## **1.2 Purpose of Research**

This study aims to explore the impact of five different factors (Perceived Service Quality of Teaching, Student Life and Support, Social Identification, Organizational Identification, and Institution Reputation) that can influence a student's intention to stay at an HEI. Furthermore, the study will investigate the impact of student satisfaction as a mediating variable that can influence student attitudes and intended behaviours. Moreover, the purpose of this study is to propose a new, clear conceptual framework to support HEIs by examining the literature to find recommendations to help to rise the retention rate.

The main focus of this research study is university retention rates. The majority of student dropout happens in the first year. This is clear from university records at the researcher's institution. This study is one of the first to focus on first-year students and how they settle into life in higher education. Furthermore, existing studies have only focused on two or three independent variables, while this study will combine more independent variables (five factors) so that students can judge a university's services and their overall experience at university. Similarly, the research will examine the role of an institution's reputation in influencing student's perceptions of their services. There have, so far, been only limited studies on the impact of reputation on student perceptions.

As above, the dropout rate in the UAE is high, reaching 14% in 2017, as compared to a global rate of below 10% (Nasir, 2017). This thesis study will examine the causes and consequences of the decreasing rate of student retention in higher education by studying the two federal institutions in the UAE in order to explore the reasons behind the low retention rate.

Table 3 is presenting statistical data about the graduation rate, continuing rate, and dropping rate for undergraduate students at UAEU from 3 cohorts (2013-2014, 2014-2015, and 2015-2016) and they were from different colleges. The statistics given below are new and it is from the academic year 2021- 2022 provided by UAEU as secondary data to support this thesis study (Appendix 1).

Undergraduate Students (Bachelor Degree)				
Category	2013-2014 (Cohort size =2791)	2014-2015 (Cohort size =3196)	2015-2016 (Cohort size =2645)	Average of the 3 Cohort
Graduation	72.4%	74.5%	72%	72.96%
Continuing	3.8%	3.5%	5.4%	4.23%
Dropped	23.8%	21.9%	22.6%	22.76%
Within 1.5 nominal duration of degree (Equals to 6-7 years of study depending on the college degree).				

Table 3: Graduation Rate, Continuing Rate and Dropping Rate at UAEU  
(UAEU, 2021)

The following summary is based on the table above:

- The graduation average rate for the three cohorts was around 73%.
- The retention average rate for the three cohorts was around 4%.
- The dropout average rate for the three cohorts was around 23%.

### **1.3 Research Questions**

This study has two central research questions and ten sub-questions:

#### **Central Questions:**

1. What are the factors that influence student retention from degree programs?
2. What are the factors that influence students becoming supportive of the HEI and getting involved in HEI activities?

#### **Sub Questions:**

##### **Q3:**

- 3.a: To what extent does perceived service quality of teaching influence student satisfaction?
- 3.b: To what extent do student life and support influence student satisfaction?
- 3.c: To what extent does social identification influence student satisfaction?
- 3.d: To what extent does organization identification influence student satisfaction?
- 3.e: To what extent does institution reputation influence student satisfaction?

##### **Q4:**

- 4.a: Does student satisfaction mediate the relationship between perceived service quality and students' intended behaviours?
- 4.b: Does student satisfaction mediate the relationship between student life & support and students' intended behaviours?
- 4.c: Does student satisfaction mediate the relationship between social identification and students' intended behaviours?
- 4.d: Does student satisfaction mediate the relationship between organization identification and students' intended behaviours?

4.e: Does student satisfaction mediate the relationship between institution reputation and students' intended behaviours?

## **1.4 Research Objectives**

This research study has the following objectives:

- To highlight the main factors that influence university student retention rates during the first year of study.
- To identify factors that affect students in terms of supporting their HEI.
- To identify the main factors that persuade students to participate in HEIs activities.
- To create a new conceptual model for higher education institutions that identifies influences on a student's intention to stay at an HEI.
- To provide higher education institutions with guidelines and recommendations to avoid student dropout and increase the retention rate and supportive intentions among students.

## **1.5 Research Strategy**

This research study will adopt quantitative methodology and use a questionnaire with undergraduate students in their first year of study. The data will be collected from the two federal HEIs in the UAE. This study will evaluate student satisfaction with their choice of HEI.

The data will be collected by surveying undergraduate students in their first year, who are attending any of the two federal HEIs in the UAE for the Academic year 2019-



2020 (Fall, 2019 and Spring, 2020). The target sample size is about 200 from each HEI in order to obtain 400 participants in total.

This should allow for a 95% level of confidence and a 5% margin of error. The questionnaire has 47 questions measuring constructs suggested during the literature review. Each question will consist of several items related to the constructs gleaned from the conceptual model and will incorporate a seven-point Likert-type scale ranging from 1 (= strongly disagree) to 7 (= strongly agree). The questionnaire will be distributed to students in hard copy during the last 15 minutes of classes by faculty and staff who agree to take part.

The analysis will rely upon the Statistical Package for Social Sciences (SPSS). The statistical test plan is to first utilise descriptive statistics, then reliability, multiple linear regression and exploratory factor analysis. The research will also use Analysis of Moments Structures (AMOS), Structural Equation Modelling (SEM) and other important statistical instruments to test hypotheses and compare them to the conceptual model.

The expected outcome is to be able to identify possible solutions and recommendations for higher education institutions seeking to increase their number of retentions. This research also provides a conceptual framework that other higher education researchers may wish to use for future studies on the quality of services, student identification, student satisfaction, student retention, and student involvement/ support.

## **Chapter 2: Literature Review**

The following section provides details and a discussion on certain key concepts that inform this study.

### **2.1 Customer Retention in Business Organizations**

#### **2.1.1 Retention of the Customers in Business Organizations**

Customer retention refers to a collection of activities that businesses use to keep returning clients in the long term. It aims to increase the profitability of every existing customer and encourage other clients to join. NastasoIU and Vandenbosch (2019) believe that customer retention is a process of executing a strategy to encourage customers to stay with their firm or corporation. It includes engagement with existing customers who will continue to buy services or products from any given company. According to Ambarwati (2014), customer retention is the ability of an organisation, or product, to retain its customer base for a long duration. In most instances, customer retention refers to customers who stick with a certain brand. Customer retention also looks at the actions of management designed to persuade customers to keep using their services. There is a need to bring new customers into a business organisation, but also to keep existing clients.

Customer retention is, therefore, the process of persuading existing clients to continue to purchase services or products from the same organisation. It is not the same as acquiring new customers. Chen (2017) highlighted the need to acquire new customers,

Nwankwo (2013) and, Shah and Shah (2015) have stated that customer retention is not just cost-effective, but is also a great branding exercise, especially when customers become brand ambassadors. Moreover, Das, Mishra and Mohanty (2018) stated that client retention starts with the initial contact the corporation has with the client and continues throughout their lifetime. Holding on to a customer is vital as it allows organisations to extract extra value from their existing customer base. Thus, they attempt to create customer loyalty schemes that value the customer, rather than concentrating on maximizing shareholder value and organisational profits.

It is important to note that an increase in customers usually increases profits. Hence, potential clients can see which organisations have repeat business, and so trust the organisation all the more. Nwankwo (2013) thought it evident that customer retention increases the number of customers, increases revenue, and helps the organization to attract more workers as well. Therefore, retention of workers not only generates revenue, but allows for that revenue to be redirected at further acquisitions. In other words, there is a strong relationship between employees and customers in that retention of employees can help to retain customers. Some customers prefer to deal with staff who have the skills, knowledge and experience necessary for good customer service. Additionally, retention can help managers to improve marketing and attract new clients. Therefore, retention of customers improves the marketing processes within an organization. Shah and Shah (2015) were of the view that customer retention is important in business as it improves the process of getting others on board. Such retention strategies allow business leaders to consider ways to ensure that customers are happy with the outcomes or products that they purchase.

Most companies spend a lot of money annually creating new products, building solid brand names, and marketing new products. None of these activities matter if clients do not purchase a service or product that the company is marketing (Das, Mishra & Mohanty 2018). By keeping a satisfied customer base, a company adds more value to its business operations. Ambarwati (2014), posits that customer satisfaction should concentrate on ensuring that every customer need is satisfied. Customer satisfaction also implies that problems are addressed and handled in such a manner that the client is happy with the experience, products or services. It is also persuading the customer to return after their initial purchase on a regular basis. These activities go hand in hand with the company's normal operations (Das, Mishra & Mohanty, 2018). Such practices also ensure that customers are happy and pleased with their experience with the company.

Helm and Tolsdorf (2013) have suggested that establishing a good reputation might assist a new firm to establish itself. Najat (2017) also proposed that retention of customers can lead to an excellent corporate reputation and help in creating a suitable corporate image. Indeed, it is generally accepted that corporate image and reputation are all part of the external perception of an organisation. Every business tends to concentrate on meeting the needs of its clients in order to compete and survive in a dynamic business environment (Chen, 2017). In the current climate retention of workers tends to improve standards of customer service.

It is apparent that employee retention has an important impact on the reputation of a corporation. Obviously, poor customer retention can hurt sales (Shah & Shah, 2015). Thus, retention of consumers affects the operations of businesses in a myriad of ways.

Poor staff retention has a negative effect on the company brand. Such negative effects often lead to a poor reputation being established. For example, Helm and Tolsdorf (2013) mentioned that an angry customer in most cases takes their grievance onto different social and online platforms and warns other customers to stay away from the company. Comments on different social media platforms can be positive but are often not so.

On the other hand, retaining poor employees can make it difficult for the company to attract new customers. This harms the reputation of the company (Nwankwo, 2013). Damage resulting from negative messages from employees posted in public spaces such as the Internet can reduce the number of clients interested in using the company. This could even lead to closure.

### **2.1.2 Attitudes and Behaviors of the Customer in Business Organizations**

Loyalty is the desire of a customer to continue their involvement with a specific organisation. Customer loyalty, according to NastasoIU and Vandebosch (2019), refers to voluntary use by the customer of goods and services for an extended period of time. It can create a relationship between the client and the business organisation. Loyalty is significant because customers that are loyal to business operations will purchase different goods or services produced by that organisation regularly. Trini and Salim (2018) noted that customer loyalty is the desire, readiness or willingness to be a regular client for an extended period, buying as well as utilizing, products from select corporations and promoting them to their friends and colleagues. Bruneau, Swaen and Zidda (2018) believed that such devotion can be multi-dimensional and covers

behavioural and positional elements. These positional elements reflect the feelings that the customer has toward a particular business. However, the behavioural dimension of loyalty manifests itself in frequent shopping across a range of products. Customer loyalty, according to NastasoIU and Vandenbosch (2019) is an essential contemporary approach to ensure not only the success of the business, but it also supplies benefits to customers. Thus, customer loyalty ensures an enduring relationship between customers and businesses to the benefit of both.

Attitudinal loyalty and habit may manifest themselves in similar purchasing behaviours. Each of these aspects contributes to a brand's persistence in the marketplace and facing unfavourable factors such as a premium price (Liu-Thompkins & Tam, 2013). When competitors of an organisation attempt to persuade customers to purchase their product, both attitudinally loyal and habitual buyers can be extremely resistant. Despite these apparent correlations, attitude loyalty and habit work on distinct levels, with the former driven by favourable brand behaviours and the latter by the existence of stable signals in the purchasing sense. Attitudinal loyalty differs based on their point of trigger in consumers. The two individual attitudes that can build consumer loyalty in business organisations include persistence and brand loyalty. Brand loyalty refers to a favourable attitude toward a brand and a commitment to buy the same good or service regularly, regardless of flaws, competitor behaviour, or environmental improvements. Additionally, it can be illustrated by additional behaviours such as constructive word-of-mouth activism.

Consumer loyalty is found to be necessary for the continuity of business growth and sustainable revenue generation. Several authors have argued that the competitive

advantage of a business depends upon the level of consumer loyalty and goodwill of the company in the market. (Curasi & Kennedy, 2002). The patronage of consumers is found to be imperative to ensure that the products and services of a company are consumed by consumers without which businesses would have to struggle to survive. In order for businesses to fulfil the interests of consumers, it is important that businesses devise ways to please and gain their attention. Some of the strategies that could be adopted by businesses in this aspect include aggressive pricing, high-quality services, convenience, and promotions on repeat purchases. This commitment of business can be viewed as a “firm’s concerted attempt to inspire, empower, and quantify a customer’s voluntary contribution to its marketing functions, beyond a central, economic transaction (Lekhuleni, 2019). Loyalty programs are marketing tools aimed at capturing customers information, improving retention, promoting repeat sales, and strengthening loyalty to the organisation. Thus, it can be stated that with the growing interest in consumer loyalty several attitudes and behaviours have to be developed by business firms to retain consumers.

Behavioural loyalty can be defined as an ongoing push to buy the brand of an organisation. Such behaviour is considered to be essential for a business as it indicates that consumers are purchasing the products or services of the organisation in a consistent manner. However, as explained by Harmeling et al. (2017), behavioural loyalty cannot be used as a measure of the loyalty of a consumer towards a brand. In certain situations, consumers may purchase the products of the company repeatedly due to laziness. Thus, the behaviour of such individuals in such situations is one example of consumer loyalty in businesses. Habit is another factor that affects individual behaviour in developing consumer loyalty. Habits of consumers are

representatives of automated processes that are affected by the consistent marketing of products. To retain habit-driven repeat purchases, businesses should maintain consistency in the contextual prompts and variables that enable automatic habit execution. Thus, consumer habits are another example of an individual's behaviour that can be used to build consumer loyalty in organisations.

Customer retention in marketing is a process through which the organisation engages its existing customers so that they continue to buy services or products from the company. Customer retention is different from customer acquisition or lead generation since the organisation has already converted the customers at least once (Eid, 2015). The best strategy for customer retention helps the company to form a long-lasting relationship with its customers who will ultimately become loyal to the brand. In addition to this, the customers can also spread a word amongst their family and friends which can make them brand ambassadors.

Customer retention states the organisation's ability to achieve a repeated business from the purchaser. A high level of consumer retention means that the customers can keep on purchasing the product or service of the brand rather than selecting the competitor. If engaged customers have not purchased from the competitor yet that means that their faithfulness is still in danger. On the other hand, the loyal customers purchase the service or product of the organisation again and again as well as advocate on its behalf (Curasi & Kennedy, 2002). The loyalty of customers goes beyond any financial transaction. In the context of business, loyalty means growth, whereas retention means fighting decline. The loyalty of customers is an intangible but very valuable asset of the organisation. The ability to effectively model and measure loyalty is a very



important element in order to achieve the goal to retain customers as well as expand the connection with customers. The key concept of customer loyalty is to strengthen the relationship with customers and the main idea of customer retention is to prevent the decline of customers (Magatef & Tomalieh, 2015). Customer loyalty is measured by the performance of individual customers and measurement of customer retention is done by the percentage of customer population at a given time period.

Sometimes customers purchase products from the organisation but do not stay loyal to them. This is because not all of the repeat purchasers are loyal to the brand and they are not even created equal. These types of customers can be determined by both the optimistic reaction towards the brand and they can also be automatically triggered by the non – brand related habits. The customers display loyalty in their behaviour when they frequently support a commercial, often to the segregation of some challenging offers (Tam & Liu-Thompkins, 2013). Though these types of repeat purchasers are required from a financial perspective of an organization that will help the company to increase their sales, it is not best to take behavioural loyalty into consideration too much since the customers repeated purchase might be determined by diverse reasons such as switching barriers, promising attitude or sunk cost. By classifying the drivers of behavioural loyalty among the consumers, the organization will be able to allocate the resources properly in their marketing strategies and will also be able to create a customized marketing program so that maximum effectiveness can be reached. This will help the organization to attract their customers and make them prospects.

According to a study by Trini and Salim (2018), customer loyalty is something that different customer may exhibit to different brands, stores, services, products and

business activities. Therefore, it is worth noting that client loyalty is an individual feature, rather than inherent in the brands themselves. Therefore, client loyalty is a behavioural notion that demonstrates the process of repeatedly purchasing services or products.

In a variety of markets, customer loyalty is a key indicator of how satisfied customers are with their purchase and/or use of services produced by a company. Customer loyalty is important enough for suppliers to attempt to gain and retain loyal clients in order to drive profitability. For many, customer loyalty remains a key measure of their achievement in building an enduring relationship with clients. Czarniewski (2014) argues that the consumer rarely meets all the criteria desired by business operators. However, companies must adapt to the situation and try and find the best fit between their standards and the needs of the customer. Such market place allegiances are logical as well as emotional. Companies often offer loyalty plans, prizes, vouchers and gifts to encourage customers to purchase their products (Czarniewski, 2014). However, customer loyalty is made up of different stages. One stage is identifying individuals who might buy products or services from the organisation.

Another stage refers to potential users, suspended potential user, customers, advocates and customers that support the operations of a company. Jere (2014) and Lee, Lee and Lee (2015) proposed loyalty schemes that aim to reward customers for their loyalty, and that recognise the customers' specific interests and characteristics. Customer loyalty schemes must incorporate customer-oriented strategies that lead to greater customer loyalty. As such, in modern competitive markets, each individual organisation aspires to create more loyal clients to guarantee their own success.

### **2.1.3 Relationship between Retention, Attitudes and Behaviors on Customers**

Customer loyalty and retention is significant for many business organizations. Two aspects of this can boost business growth in a competitive business setting. For instance, workers who work in person with clients are in a position to determine the client's level of satisfaction. Such workers, according to NastasoIU and Vandenbosch (2019), have the responsibility of keeping the client content with the organisation and in meeting the individual's desires. Therefore, instead of the management of an organisation ignoring the impact their workers can have upon overall satisfaction levels within the client base, they should focus on the need to establish a loyal customer base. Such workers should be allowed to make the most of their position to advance customer satisfaction.

Retention and the loyalty of clients is essential for the reputation of business organizations. Ambarwati (2014) argues that retention and customer loyalty help to ensure that every company concentrates on customer satisfaction. Companies should, therefore, ensure that each worker feels that they can modify operational practice to achieve customer satisfaction. Helm and Tolsdorf (2013) stated that retention and the loyalty of customers, also improves the relationship between the workers in any particular organization. Organisations should utilise appropriate methods to attract customers and keep them coming back.

Additionally, such practices help to create an ideal business environment. NastasoIU and Vandenbosch (2019) and Ambarwati (2014), felt that customers were influenced by the environment created in the workplace. While management may wish to shape the workplace, it is clear that the workers are the ones that truly set the scene. To

achieve these goals companies must also improve the way they represent their products in the market. Every employee should represent the services and products that they sell in an efficient manner, and management should consider different approaches to training employees in the presentation of their products (Nastasoiu & Vandenbosch, 2019). Educating workers to do so is essential if it is wished that the employees present products and services in an informed and engaging manner.

Although several investigations have been conducted into customer loyalty as a dependent variable, there are still many avenues that invite exploration of this construct. However, research by Gul (2014) found that there is a strong relationship between the reputations of businesses and the satisfaction of customers. This study suggested that organisations need to build up enduring and beneficial associations with their target customers in order to remain successful in a competitive business environment (Sunaryo & Bahari, 2014). How reputation relates to customer satisfaction is related to how individuals or larger operations are commonly viewed. Wong, Hsiang and Tong (2017) believed that reputation and customer satisfaction go hand in hand and should inform company objectives.

Therefore, it is apparent that organisations should work towards meeting the diverse needs and desires of their target audience in order to be competitive and profitable. To achieve this, management may well turn to diverse policies or tactics to achieve worker satisfaction. For instance, according to Leninkumar (2017) management should focus on penetrating new markets and meeting the needs of different. Management can also focus on developing new products with attractive features and durability.

Gul (2014) stated that the reputation of a business organization at finding new channels for distributing their products is vital as it improves customer satisfaction if they can get the product at their leisure. Therefore, regardless of nature of an organisation, their effectiveness will be greater if they meet the needs of customers when supplying products and services. Santouridis and Veraki (2017) believe that customer satisfaction is an essential element in improving the reputation of an organisation. Customer satisfaction measures how different products or services offered by an organisation meet, or exceed, the expectations of customers. The outcome of such an examination provides marketing personnel with important reference points as to how they can improve business operations (Wong, Hsiang & Tong, 2017). Hence, customer satisfaction remains a vital indicator when predicting whether the client intends to purchase products and whether they will display customer loyalty.

The relationship between the reputation of a business and customer retention and loyalty can also help to gather data that can help in streamlining marketing activities (Sunaryo & Bahari, 2014). The relationship between these three variables is of great importance. These three variables (organizational reputation, customer loyalty and the retention of customers) have mutual casual influences within an organisation. The reciprocal connection is obvious in terms of repeat purchases. Du and Tang (2014) suggested that the casual relationship between organizational reputation, customer loyalty and retention is stronger for mono-loyal clients that repeatedly buy from the same organisation. However, the relationship becomes weaker if different customers are purchasing from different organisations, and with lesser frequency.

According to Tweneboah-Koduah and Yuty (2015), organizational reputation is related to customer retention and loyalty by forming a best practice network that satisfies customer needs. A good reputation helps to develop enduring relations with customers who wish to purchase these products and services. However, Du and Tang (2014) have stated that the reputation of a company does not necessarily relate to them having satisfied and loyal customers. They have to be extremely satisfied customers for the relationship to be noticeable. Furthermore, the firm's status may influence the attitude of customers towards a company. A good reputation is essential if the buying and selling of goods and services is to improve and customers are to be retained (Sunaryo, & Bahari, 2014). Nevertheless, when an organization has a good reputation with customers, who are content with the quality of services offered, it ultimately will lead to customer loyalty.

Every top corporation focuses on the demands of its customers in order to survive and compete in a dynamic modern business setting. Customer retention and loyalty are vital aspects of the overall evaluation of an organisation's reputation. According Hofman-Kohlmeyer (2016), customer loyalty and retention are extremely important. This importance arises because the strength of an organizational reputation lies in the perception of customers. In an emerging business environment, customer loyalty and retention perform a critical role in helping an organisation to be competitive.

Moreover, de Leaniz and del Bosque (2016) mention the need for different businesses to maximize profitability by offering reliable products and services and thus establish a good reputation. The willingness of customers to maintain relations with a specific firm or service makes it necessary for management to focus ways to improve their

operations (Sunaryo & Bahari, 2014). Therefore, customer loyalty drives organisations to improve their operations in relation to production, distribution and sales of their goods and services.

Whether an individual chose to believe it or not, retention and loyalty has a serious impact on the reputation of an organisation. In short, these two aspects can also have a negative effect on sales if the company is not well perceived. A lack of successful customer loyalty and retention can harm a brand and its reputation. For instance, if an organization deals with online business, a poor client service experience can lead to severe damage to the reputation of the organisation. Stock and Zacharias (2013) report that angry clients often take to their keyboards and vent their frustrations on different online platforms.

Indeed, in most cases, it is loyal customers who are more likely to leave a review after the negative experience than after a positive one (Trini & Salim, 2018). Such operations damage the reputation of organisations. In most cases, damage caused by a poor review mean that companies are less likely to attract a large or loyal client base.

## **2.2 Students Retention in Higher Education**

### **2.2.1 Retention of Students in Higher Education**

Student retention is a crucial issue for institutions of higher education as withdrawals before the completion of a degree have reached 30% in Organisation for Economic Cooperation and Development (OECD) member countries. Most of those students withdraw during their first year at an institution. Moreover, teachers often find that

newly enrolled students have not prepared for college level learning and lack some important skills such as time management and independent study skills (Mah, 2016). Thus, improving the quality of higher education services could help to solve the dropout problem.

According to Aljohani (2016) several factors can lead to withdrawal from college. These include academic difficulties, where the student feels the level of education is higher than expected. In this case, most of the students prefer to transfer to lower-level courses in other institutions. On the other hand, studies on student retention found that students always seek to be in a higher-level institution if possible.

Aulck et al. (2016) worried that the number of students in higher education is less than desired and so, as a result, students need to be retained so that they can complete their education. In the United States, most federal institutions face a big challenge in terms of student retention with a rising dropout rate of approximately 40% of students who do not complete their first year in higher education. Retention, according to Bonet and Walters (2016), is the ability of an educational institutions to ensure that students do not dropout because of a lack of knowledge and skills.

The globalized world order has drastically changed many aspects of education. Education has become more competitive than ever. Students have a lot of choices with regard to what they want to learn, and in the face of so many options, it can be seen that many are overwhelmed and choose to drop out of institution. According to Syed Zamberi Ahmad (2015) there are several advantages of student retention. The first, is an increase in cultural diversity within the classroom, as students come from all walks



of life. In this regard, tolerance increases inside and outside the classroom. Students at higher levels of education are able to rationalize and will hopefully choose actions that are beneficial to wider society.

According to Yusoff et. al (2015), it is the ultimate objective of any institution or college to ensure that the students enrolled are satisfied. In this respect, they aim to provide the knowledge and skills expected at all levels of education. The issue of retention is key in the field of education. Elsharnouby (2015) believes that a student will be more satisfied when teachers and the administrators take the initiative in terms of retention even if they have failed some courses.

Retention and satisfaction can be achieved in many ways. Syed Zamberi Ahmad (2015) mentions the help provided by supervisors, who assist with a more in-depth understanding of topic areas. Students are encouraged to acknowledge their weaknesses and to put in additional effort to improve upon them.

According to Elsharnouby (2015) the second key area influencing satisfaction is with regard to the creation of a suitable, relaxed environment on campus. Although the primary goal of educational institutions is to provide knowledge and education for students, they also should cater to the aesthetic senses of their learners. Yusoff et. al (2015) see this as being provided via student life and support, such as games and sporting activities. This, in turn, promotes student retention. Thus, Elsharnouby (2015) reminds us of the strong and positive relationship between student retention and student satisfaction.

### **2.2.2 Attitudes and Behaviors of Students in Higher Education**

Student attraction and retention will assist managers at postsecondary institutions in making more informed decisions on the distribution of scarce resources. Thus, research into student engagement and satisfaction should be the primary considerations when assessing the most effective strategic management to ensure the long-term viability of both public and private institutions. According to Kunanusorn and Puttawong (2015), student satisfaction is a predictor of student loyalty, and the two are positively correlated. When students were pleased with their university experience, their satisfaction level will be increased and they would continue their studies at the university. The loyalty of students is a primary goal of many institutions due to several factors including revenue generation through tuition fees. Most private institutions are highly dependent on student enrolments as means of a predictable financial base for the planned activities of the college.

Individual behaviors that can help develop student loyalty in higher education can be explained through two examples that include switching costs and the level of satisfaction of consumers. Switching costs are incurred when consumers change from one product to another due to which certain costs are incurred. The costs of switching may be monetary and psychological (Lai, Pham & Le, 2019). In the case of students, the psychological costs of switching universities are found to be higher. For international higher education students, such costs occur when students have experienced a longer period of study. Secondly, the level of satisfaction gained by the students based on their experience in a university would have an impact on their behavior. Thus, these two elements would affect student loyalty towards their institute or university.

Moreover, when colleges increase their marketing efforts, prospective students face a dynamic consumer choice when choosing a university to attend, and branding becomes a way of simplifying their selection process. According to a study conducted by Casidy (2013), the image of the institution is the most influential element influencing prospective students' decision to attend a university. Students' attitudinal choices are influenced by two factors: prestige and academics, which are the two most relevant screening criteria when selecting a university. Quintal et. al (2012), have cited that "good prestige" is a critical competency for educational institutions seeking to succeed effectively in the global market. A university's reputation in a dynamic global market is critical because it impacts the marketability of its programs, as well as student recruitment, retention, and funding opportunities. Thus, it can be concluded that the brand image and the prestige value of a university are two essential factors that impact the attitudes of consumer loyalty.

According to Hillman, Tandberg and Fryar (2015), student loyalty can be defined as the positive attitude of students towards the education system they are enrolled in. Students should realise the importance of education and the knowledge they gain from it. Syed Zamberi Ahmad (2015) highlighted such aspects as the critical thinking ability that the students can develop. The students are also prompted to self-reflect and formulate their own opinions regarding wider society.

Kunanusorn and Puttawong (2015) see a favourable disposition towards higher education as a necessity. Students should appreciate the value of their education as the compulsion to study, enforced by family members and teachers, will no longer be sufficient. Student loyalty and satisfaction is a reflection of an institution and its

services and facilities. In this way, according to Vianden and Barlow (2015), students who remain loyal to their higher education, choose to remain in the system until they have completed the process of knowledge acquisition.

The benefits of student loyalty in higher education can be quantified. For example, Ali et al. (2016) believes that if a satisfied student pursues his or her education, they should be able to assimilate all the knowledge and information imparted to them. Such knowledge is not only important from an educational point of view, but is important in allowing people the ability to solve the problems they face in their personal lives. Kunanusorn and Puttawong (2015) see the benefits accruing from student loyalty as being the knowledge gained that can play a significant role in their lives.

According to Kunanusorn and Puttawong (2015) student loyalty has several advantages. The first advantage is that the students acquire more knowledge. Loyal students are often eager to learn more and this benefits immeasurably as they become more educated and enlightened. However, Vianden and Barlow (2015) see some disadvantages of student loyalty, as there is added pressure on the institute to come up with new programs and measures for the growth and development of the students. Student loyalty can only be guaranteed as a combined result of all of these activities, and it further depends on the ability of educational institutions to provide such activities. This can depend on their economic status. As a result, Kunanusorn and Puttawong (2015) see a serious challenge in terms of generating student loyalty.

Higher education institutions should also provide opportunities to develop a long-term relationship between former and current students. Vianden and Barlow (2015) also

remind us that generating student loyalty means that the college considers the needs of the students and provides the appropriate facilities. Hemsley-Brown et al. (2016) sees the provision of student life and support programs as helping to increase student satisfaction with their institutions. Thus, as stated in Vianden and Barlow (2015) it can be concluded that there is a positive relationship between student loyalty and satisfaction.

Trini and Salim (2018) noted that knowing how to manage customer experience is very important and has a direct impact on the organization in terms of winning loyalty. This can be applied to higher education by knowing the needs of students by providing them with a better-quality service.

According to Thomas (2011), the impact of student loyalty can measure in short-term and long-term. For example, loyalty can be observed in the short-term by the institution services such as teaching quality, social activities and having different facilities (e.g., accommodation, library and so on). While the long-term loyalty shows from the student satisfaction and the increasing number of new enrol students. Moreover, the same research referred to the relationship between customer loyalty, student satisfaction and reputation of institution. Furthermore, the positive feedback from the students and their experience with institution services impact positively in their loyalty. In conclusion, the key to the strength of the institution in loyalty is a good learning environment with high quality of services.

In the same vein, Pinna et al. (2018) found that the student can present the loyalty of the institution by start talking to other people about their experiences to encourage

them to enrol in the same institution. This positive experience with a good word of mouth from alumni or current students to the new potential students can be a strong support of intention for the institution. Most of HEIs are currently focus on reputation and good image in order to recruit more students. This will not be achieved without loyalty of the students and their support of intention for the institution.

### **2.2.3 Relationship between Retention, Attitudes and Behaviors on Students**

The market of higher education is very competitive and results-oriented where student retention is of huge importance to the institutions as well as their faculties since the institution look forward to improving the rates of graduation as well as decrease the loss of tuition revenue from the students who plan to either drop out or move to another university (Aljohani, 2016). The general cases of retention among students are well-known and the dropout rates vary from country to country. The main cause is the unrealistic expectation from the student's perspective with inadequate support from the universities.

The growing competition in the education industry has brought to light the reality of marketing in the education industry. From the marketing perspective in the education institution, student retention is more important than student loyalty and it is considered as one of the most powerful strategies for the competitiveness as well as maintenance of the educational institutions. There are some of the factors that influence student retention (Kunanusorn & Puttawong, 2015). These factors are faculty support, finances, cognitive and academic skills as well as involvement in the community. Student loyalty and student retention are commonly used terms and they are more or

less similar with slight differences. Retention is the broader measurement that states whether the student is enrolling themselves term over the term. Student loyalty is something that is done by the student to continue their studies and student retention is done by the institution to move the students closer to graduation (Vianden & Barlow, 2015). In order to achieve this, the institution provides different types of facilities so that they can attract the students and retain them. Student loyalty is influenced by a lot of factors such as a consistent experience, community belonging, effective tools, and many more.

Higher education is very important for the growth of a nation and it is mandatory to provide a high- superiority education to the students. In the present situation, education institutions are facing huge rivalry to appeal to new students as well as retain them. Loyalty is never restricted to the period in which students stay at the campus but sometimes it even continues after graduation (Austin & Pervaiz, 2017). The loyalty among students helps to increase student enrolment. Institutions put a lot of effort to nurture the emotion so that the students can stay loyal to their universities. There can be times when the students take admission at a university which is not of their choice but they had to take admission either due to low scores or financial issues. Due to this reason, the student does not stay loyal to the university and they will never refer any other students to that institution. Sometimes other reasons for not staying loyal could be the quality of education they are getting from the university, or sometimes there is pressure from the community to select the preferred university. Therefore, it is important for educational institutions to increase student loyalty as it can directly affect the bottom line of their business.

According to Tinto (2017) student retention in higher education is enhanced when students perform well and achieve high grades at university. Moreover, Kerby (2015) identified the diverse factors that promote loyalty among the students as including their perception of the education system, their satisfaction, commitment and trust.

According to Guilbault (2018) the HEIs required to set a strategic plan that includes improvement in student retention procedures. One of these procedures is creating supportive environment for student with high quality services. It would be helpful to have different facilities and activities in the campus. Herrero-Crespo et al. (2016) noted a high quality of service from HEIs to students can positively impact on intuitions. For example, developing the current services or implementing new ones can support the image of institution as well as growing the number of new enrolment students.

Loyalty arises when students participate on behalf of their university in different activities. Kim et al. (2010) found that student's contribution had a significant impact on intentions to support the institution. Furthermore, the student is ready to support the institution at any time and in various forms. This can mainly explain the highly student satisfaction that appears as highly support their institution.

Mah (2016) viewed student loyalty as a critical measure of overall success in higher education as one purpose of a university is to retain students until graduation. Furthermore, student retention helps to increase the chance of student success with university studies. However, there are also negative factors that increase the dropout rate, such as a lack of quality services and guidance.



Many studies have correlated the importance of both retention and loyalty in higher education with student satisfaction. According to Gaytan (2015) student loyalty in higher education helps the administrators establish appropriate programs to promote, establish and develop long-term relationships with both former and current students. Bawa (2016) states that successful institutions know that the student retention is a by-product of student satisfaction. Rates of attrition have been reduced when a high quality of education is provided by colleges and universities.

Furthermore, De Freitas et al. (2015) commented that the quality of services is vital in generating satisfaction and loyalty in students. Colleges and universities with high levels of satisfaction experience high retention and graduation rates. If students are satisfied with their educational institution, they are more likely to remain at the institution and ultimately graduate. There is a strong relationship between retention and satisfaction, which plays a major role in increasing loyalty among students.

Tinto (2017) defined student satisfaction as a multi-dimensional process, influenced by various factors such as the quality of the classroom, relationships between lecturers and students, and interaction between students, all of which creates satisfaction and gives these students a competitive advantage. In the same vein, Gaytan (2015) found that campus life outside the classroom is another essential aspect contributing to student satisfaction just as much as the educational experience.

On the other hand, Kerby (2015) notes the negative impact on student retention if a university has a poor reputation. If students do not perform well, and it can lead to a decline in the brand image of the university. That said, the retention and loyalty of

students can create a positive image and even impact on the ranking of the university, as previous students are often the best judges in ranking their colleges. An academic reputation is one of the main factors considered in ranking the top universities. According to Gaytan (2015) loyalty may not have a significant impact on the ranking of universities if they prefer to earn money and treat education as a business.

The image of an educational institutional is influenced by the number of students enrolled and the nature of these students. According to Herrero-Crespo et al. (2016) people consider an educational institution to be good, when a great number of students are enrolled in it. This reflects the fact that people think that if the teaching faculty is competent and effective, they will attract more students. Thus, Hemsley-Brown et al. (2016) believes that if a student is retained by the institute, they contribute to the positive image of the institute they belong to.

Therefore, it can be concluded that student loyalty and retention along with satisfaction, play a major role in improving the overall reputation of a university (both positively and sometimes negatively). The mediation model of student satisfaction plays a key role in improving overall loyalty among students.

### **2.3 Student Needs and Expectations in Higher Education**

The main aim of higher education institutions is to provide students with the required skills and knowledge for their future career. Therefore, HEIs should offer different services and activities that students may need in their study and life journey. These facilities are the key to gaining experience and are also what students expect to find at

an HEI. The move to higher education is a big step in any student's life. This new life is different from school life and is intended to prepare students for their careers.

Students expect to have more than just an education at their institution. They also need new experiences and skills. Kim and Bastedo (2017) investigated how student life and support often influenced early occupational outcomes. They examined the number of student life and support activities, and level of participation, that had an impact on the students. They used three national databases to assess correlation between student life and support, occupational outcomes, and the level of satisfaction across three different HEIs in the United States. The result of the survey revealed the types of activities pursued and how they correlated significantly with occupational outcomes and satisfaction. Their study showed that student life and support had additional market-based benefits and raised student satisfaction. This study included national and longitudinal data to allow for an in-depth analysis of changes in the relationship between student life and support, and levels of student satisfaction. The methodology used in the study restricted the size of the sample to only Bachelor's degree graduates who were working.

Ivanova and Logvinova (2017) looked at the issue of the arranging activities in the context of the Russian university. These studies were based on the concept that student life and support are part of the overall development of students. Student life and support can enhance professional qualities and competencies. This study suggested that just organising student life and support was educational. They also generated a lot of feedback from the student community. They further highlighted the need for an adaptive, flexible model for student life and support in HEIs.

## 2.4 Quality of Teaching

One of the main objectives of most HEIs is providing students with better services. Having high quality services is a constant challenge in a rapidly changing world. The number of HEIs in the market create competition between them, as well as contributing to a diversity of options for students.

The quality of services offered by HEIs is one of the most significant factors contributing to student satisfaction. The main service of HEIs is to provide teaching and facilitate learning. A lot of research has studied the impact of the quality of services available to students on their satisfaction levels. However, until now, there is still much debate on this subject among scholars. For example, the relationship of the quality of services to satisfaction was deemed as significant by Mao and Oppewal (2010). Zeeman et al. (2018) found that the learning process is the key to success in the education sector. Figure 1 shows the learner-centred teaching process.

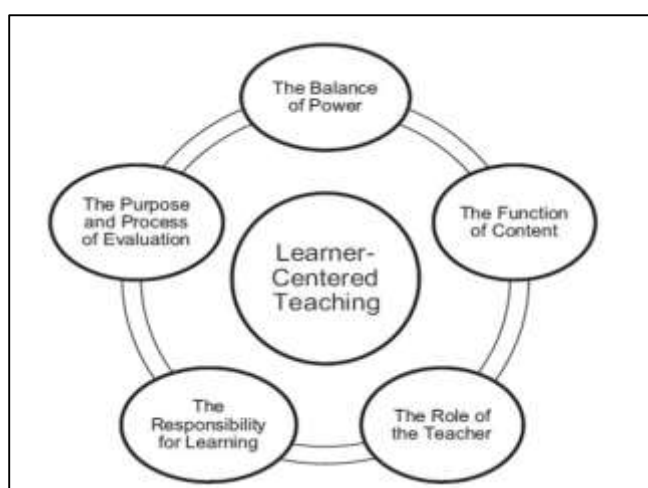


Figure 1: Learner Centered Teaching of Zeeman 2018  
(Zeeman et al. 2018)

According to Hullinger and Hogan (2014) this is important for students to understand as the more organized and comprehensive the information provided to students, the more stable, psychologically and academically, the student's journey will be. Understanding this process avoids many future problems, by providing the students with a sustainable lifelong learning model that they can utilise during their studies.

The Ministry of Higher Education in the UAE caters to more than 120,000 students in federal HEIs as a part of the UAE's vision to improve and develop education. They also recruit expatriate teachers and researchers to work in higher education. They do so by providing living expenses and other benefits (Bhayani, 2014).

According to Biermann et al. (2015) the quality of teacher education at an HEI is very important and high standards should be adopted when selecting and hiring teachers. For example, teaching experience is one standard as well as the teacher's knowledge and skills in their respective fields. Thus, providing students with a high-quality education will lead to better student outcomes. Athiyaman (1997) reiterated that the relationship between teaching and curriculum is significantly affected by the quality of the service provided.

Teachers play a large role in improving the learning process and often use different methods to deliver content and skills to students. These methods support the quality of the teaching and increase student satisfaction. Pihu et al. (2008) explored types of teaching behaviours that supported students psychologically and encouraged autonomy. This was supported by giving students the chance to think about different ways of finding solutions to scientific problems. Moreover, basic competence can

support knowledge acquisition by teaching student's new techniques leading to better learning outcomes.

Recently, using digital devices for classroom learning become widespread in most HEIs around the world as a part of new teaching and knowledge transfer approaches, aimed at improving the level of education. In a related vein, adopting such learning strategies and incorporating technology into the classroom can impact positively on student motivation and their intention to stay at the institution and complete their degree (McCoy, 2016). Overall, there is a clear and strong relationship between teaching methods that interest students and motivated, autonomous behaviour from the learners.

According to Lages and Fernandes (2005) the quality of these services is best explained from the point view of the literature on the marketplace: i.e. what can the customer expect from the organisation and what is the organisation's perception. Thus, they concluded that the level of these services influenced the satisfaction of the customer (in this case the students).

Thapliyal (2014) examined the relationship between the students and their HEI from the first day of the program. Students choose to join their HEI after searching for good HEIs to study in, while at the same time checking they had comprehensive services to aid the student on their journey.

Moreover, Alves and Raposo (2007) found that there was a strong relationship between the perceived quality an institution offered to students and the expectation of

student needs. Both service quality and expectation were significantly influenced by student satisfaction.

Giving high quality services to students increases their satisfaction and, in turn, encourages greater support from the HEI. Many scholars have tried to define how to measure the quality level in HEIs. The quality services has a direct relationship to the HEI's image (Figure 2). This study found that the relationship of the quality of services on both student satisfaction and HEI image was strong (Khalifa & Mahmoud, 2016).

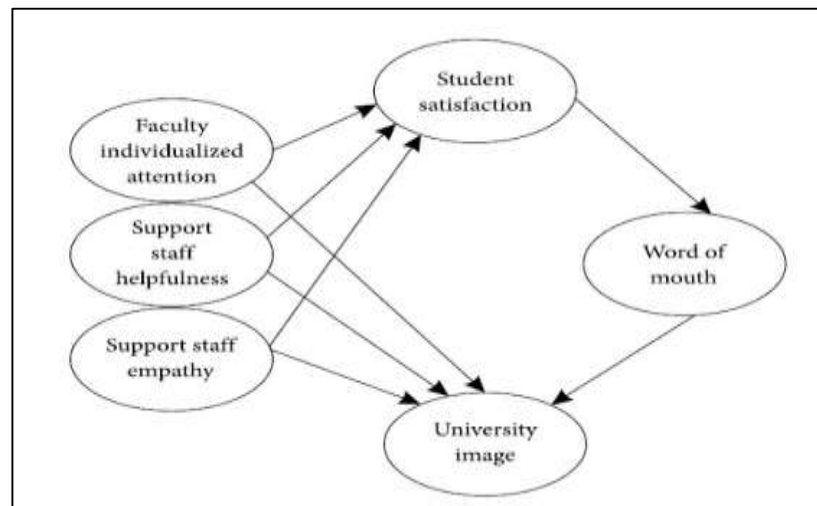


Figure 2: The hypothesized model of Khalifa and Mahmoud 2016  
(Khalifa & Mahmoud, 2016)

Research by Angell et al. (2008) noted that the most marketplace literature focussed on the link between the services provided by an organisation and the customers who received these products or services. This is the same with the relationship between HEIs and students, as HEIs are operating in a similarly competitive environment and use the same strategic indicators to improve the quality of their services.

Moreover, Ali et al. (2016) stated that well-known HEIs attracted students due to the amenities and facilities provided. The students assume that most reputable HEIs will provide the highest quality of teaching and services. Therefore, most students aimed to get a position in these HEIs in order to enhance their prospects of employment.

Measuring the quality of service in HEIs is not easy, but it is considered a vital part of instructional performance, because it reflects the success of the institution measured through student satisfaction. Thus, all the HEIs sought to achieve high levels of student satisfaction by providing students with better services.

Furthermore, Fernandes et al. (2013) found that supporting students can be defined as offering these different services. For example, careers advice can help students to improve their knowledge and skills. Having good facilities such as comfortable accommodation, and transportation to/from campus, increases levels of satisfaction. Furthermore, having additional services such as counselling to solve any issues and arranging social activities helps retention and increased enrolment in the future.

As per the comments of Del-Castillo-Feito et al. (2019), the quality of the teaching and learning is proportionately related to the reputation of the universities. The quality of the teaching and learning is dependent on a series of actions. First and foremost, the quality of teaching is reliant on the faculty of the universities. The development of a faculty which comprises professors belonging to different subjects or topics is substantially important when it comes to delivering top-quality training to the general students. Moreover, the development of a faculty which incorporates a high level of participation of the international professors and educators is considered to be important



in strengthening the reputation of the universities not only as a potent educational service provider but also as an employer of choice. Hence, it can be said that the development of a diversified faculty with a monumental level of international participation, will be important in not only improving the quality of teaching but also in enhancing the reputation of the universities.

## **2.5 Orientation and Induction for New Students**

New students need support from the first day of joining a college, so having a good orientation program is very important because it is the first meeting of students, faculty and staff. As mentioned in the previous section, new students to the HEIs will require information about student life.

Student life and support can add extra value to student life. However, it remains a basic fact that study and gaining knowledge is the student's key goal. The mission of an advanced college is not restricted solely to the preparation of subject experts, but also to help in shaping identity, encouraging social skills, building self-esteem framework, and encouraging self-advancement and personal growth (Weininger et al., 2015).

Student life and support aim to improve the students' coordination, inventiveness, self-assurance and self-knowledge (Gabdrakhmanova et al., 2015). Furthermore, student life and support are a basic tool in the march towards self-improvement and the learning of skills that cannot be taught in class (Tapia-Fonllem et al., 2017). This includes working in groups, organisational skills and time management (Hill et al., 2015). Student life and support can also help in expanding social networks as people

of all races and creeds get together over a shared hobby or professional interests (Nabatchi et al. 2017).

Jamaludin et al. (2018a) researched the factors that predict the intention, or destination, of student loyalty in an international educational context. The study focused on a sample of 378 long-term and short-term students of international studies who took part in an online survey in 2014. The study utilized a series of hierarchical analysis of regression for the identification of important and variables. The authors discussed the results from a psychological and social perspective in regard to the students' intention to stay on their course. They further highlighted sociological and cultural factors that were significant predictors of the intention to stay. The study illustrated the influence of an international, social, psychological educational perspective towards the choice of study destination.

Sutter and Paulson (2017) highlighted the importance of student life and support in terms of students staying on their course. Their study highlighted how a college education is essential in modern society, as young adults without a degree struggle to get by. While technological advances have been of great benefit, student life and support still have a major role to play. Certificates pertaining to student life and support can add balance and depth to a curriculum vitae. A students' intention to pursue a college course and make themselves more employable is enhanced by the added value offered from student life and support at HEIs. This intention to stay in higher education has been investigated in the light of goal orientation theory, expectancy-value theory, the theory of graduation intention, and planned behaviour theory. Their study furthermore included a pilot study measuring graduation intention and analysing the

reliability and validity of the instruments used. They analysed three major questions regarding student attitudes, perceived norms and the predicting potential graduation. They came across several differences of opinion depending on which colleges students were in and their attitudes towards student transfer. All of these influenced the intention to remain on the course.

## **2.6 Social Identification**

Wilkins and Huisman (2013b) defined social identification as a part of a person self-conception related to his/ her knowledge of, or behaviour within, a social group. Social identification is a significant factor affecting students, and there are many studies on this subject due to its importance in attempting to understand the behaviour and attitudes of individuals. Creating a social identification environment means crafting institutional goals in order to increase the enrolment and support the intention to stay.

Smyth et al. (2015) stressed the relationship between learning approaches, social identity and academic outcomes. According to Wilkins and Huisman (2013b) students usually preferred being in a group, so they can create their own social community and adapt easily to a new environment. These groups have common denominators, such as similar behaviours, habits, ideas, the same field of study, or even nationality if they are international students. Myers et al. (2016), believed that developing these kinds of social groups makes students more comfortable at their institutions. Thus, student satisfaction will improve.

Most HEIs around the world have a diverse body of students from different cultures and nationality, so having the social support a peer group can be very important. Kang (2014) found that international students seek out a supportive environment so they feel more comfortable and consequently study more efficiently. Furthermore, Kim et al. (2010) found that social identification has the power to persuade students to stay with their institution.

Social identification in higher education refers is mainly concerned with the students' self-concept. For instance, undergraduate students concentrate on academic self-perception, while postgraduate students focus more on career experiences as a type of self-concept (Wilkins et al., 2016b). However, Wilkins et al. (2016b) concluded that organizational identification has a more powerful impact on student satisfaction than social identification (Figure 3).

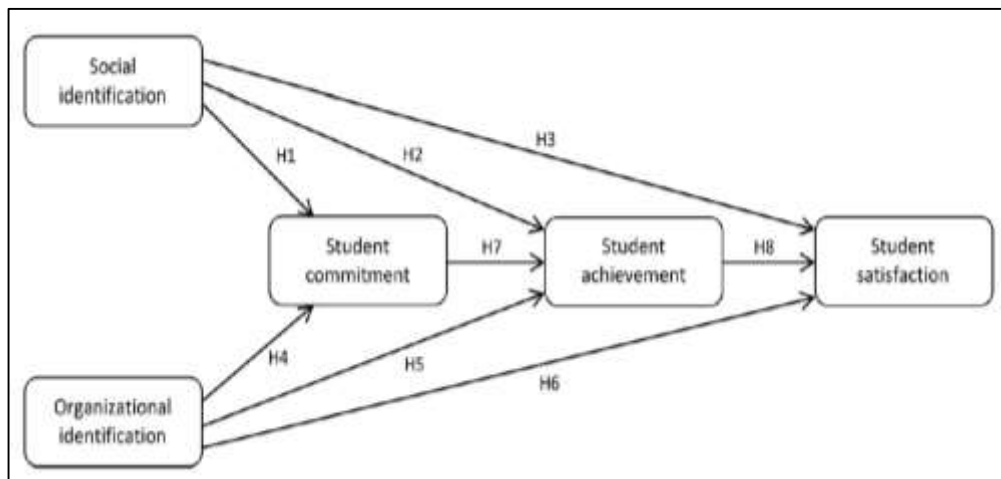


Figure 3: Conceptual Model of Wilkins 2016  
(Wilkins et al. 2016b)

## **2.7 Organizational Identification**

Organization identification refers to an individual's psychological connection with an organization (Wilkins et al., 2016b). The identity of the organization is the vision created by their leaders and managers in order to build organizational structures and strategies which represent the culture of the organization (McCaffery, 2018). Its group work displays the identity of the organization as much as the product or services it offers.

Breytenbach et al. (2013) observed the importance of the different factors affecting organizational identification in HEIs. For instance, the image or reputation of the respective institutions, the number of the activities or events that students are involved in during their academic life, and the methods of teaching and learning that the institutions promote. All of those factors, and more, are part of the decision made by students when they are selecting the best institution to join. Thus, the importance of organizational identification can be seen.

The theories of both social identity and organizational identity can strongly influence the relationship between customer identification and customer needs that, in turn, impact on development of companies in terms of their own identity and needs. Measuring customer intention and its influence on customer satisfaction with goods and services is not always easy to assess (Keh & Xie, 2009)

Therefore, student identification and their specific needs can influence the quality of service offered by HEIs who are attempting to keep learners in the program. Wilkins et al. (2018b) found that consumer-organization identification impacted more in

foreign institutions by decreasing instances of dissonance and increasing levels of satisfaction. While local institutions were quite the opposite. However, local institutions enjoy more advantages from co-branding partnerships than foreign institutions (Figure 4). Their research used marketing concepts to represent the relationship between consumers and companies. These are similar to the relationship between students and institutions.

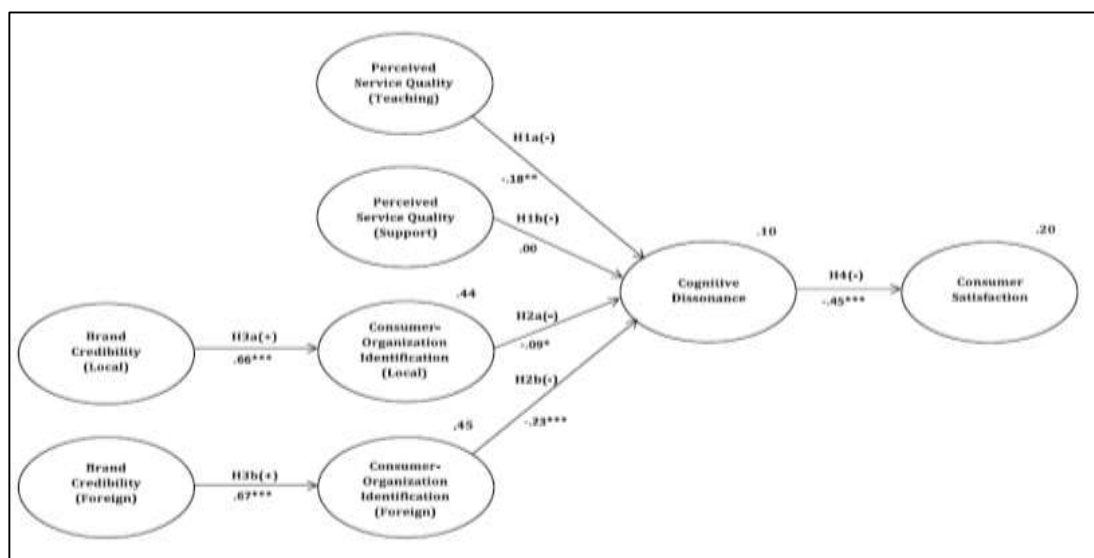


Figure 4: Conceptual Model of Wilkins 2018  
(Wilkins et al. 2018b)

On the other hand, Wilkins et al. (2016b) found that organizational identification was more than just social identification and has consequences for overall student satisfaction. Wilkins et al. (2012a) explored the positive relationship between student satisfaction and organizational identification by assessing student engagement with, and participation in, activities offered by the HEI, such as representing the HEI at an event.

Organizational identification can be developed based on feedback from students and staff. For example, Pinna et al. (2018) noted that the value of the organization is based

on the quality of services the institution provides for the students. If they get what they are looking for then they will enjoy a higher degree of satisfaction. Thus, acting on the feedback received from satisfaction surveys (e.g., ideas, comments, opinions, facts, etc.) will add value to the organization.

## **2.8 Student Experience and Evaluation**

When a student moves from high school to higher education, they start to become aware of the importance of this phase in their life. Thus, they start comparing institutions in order to select the best one to study at. This choice depends on certain factors that will influence their educational journey. The factors include the quality of services, the majors/ programs offered, the image or ranking of the HEI, cost of tuition fees, feedback from friends and the general environment at the HEI.

At this point, Jöns and Hoyler (2013) believe that most students perceive the educational standards of the HEI as being most important, if they are going to gain a competitive edge in the future job market. The branding of HEIs helps students to choose where to study. Additionally, Wilkins et al. (2012b) noted that most students also value the amenities provided by any given HEI.

Aldridge and Rowley (1998) highlight the importance of evaluating student needs through such instruments as an annual survey, in order to develop the quality of services on offer. They also explored the main elements that students valued, such as the teaching process, library access, accommodation, social activities, the living environment and other experiences.

According to the comments of Meyers and VanGronigen (2018), the continuous delivery of top-quality services from the part of the universities assists them in the development of a transparent image that enhances the potential of the universities in influencing the students to take part in their educational courses. The development of a unique library which incorporates books, scholarly articles, magazines of different topics, and different authors is substantially helpful for modern universities when it comes to providing top-quality educational services to the general students. Along with that, such significant library services play a massive role in the smooth conduct of the self-managed study of the students. Other than this, the library services provide enormous opportunities for the students to participate in group studies and concentrate on the development of the study notes for the better management of their education (Baryshev, Verkhovets & Babina, 2018). Moreover, the incorporation of technology and the internet in university libraries play a massive role in empowering the students to collect unique information which is important for their study.

Ali et al. (2016) and Thapliyal (2014) agree that student feedback is important for institutions seeking to attract more students. Such procedures can also increase enrolment and increase retention rates. The more attention given to student needs and feedback, the more loyalty and satisfaction the students will feel towards the HEI.

Students can make use of positive experiences from the institutional environment and additional activities to increase their knowledge and academic experience. Pinna et al. (2018) found that students prefer to share experiences and information with others. Furthermore, if students are satisfied with their institution, they will advise others to join the same institution to enjoy similar experiences in that educational environment.



### **2.8.1 Experience and Student Satisfaction**

To study the link between student experience with the decisions and behavior of students, particularly in higher education, it is important to explore the different components of satisfaction.

Most HEIs seek the highest level of student satisfaction as often this describes the quality of the education at the institution. Thus, positive feedback from students allows for the maintenance of current standards, whereas poor feedback can be the catalyst for improvement and change. Heffernan et al. (2018) noted that many scholars studied both student loyalty and student satisfaction. They found there is a relationship between student loyalty and student satisfaction in term of the effect on the institution. Douglas et al. (2015) perceives student satisfaction (especially in HEIs) as one of the key components in quality assurance in the competitive education market. The main point was focusing on the student experience as a way to understand their feedback and recommendations to help the HEI to improve its current, or future, services. Yusoff, et al. (2015), explored the psychosocial dynamics of student satisfaction. This level of general happiness is just as important in higher education as in business. Thus, there is a need to measure student satisfaction.

According to the Happy-productive Theory, student satisfaction is mediated by variables such as stress or well-being. Once students stress levels are high, they start feeling distress and lower levels of satisfaction (Weerasinghe & Fernando 2018). For instance, Alves and Raposo (2007) claimed that if students are happy and comfortable in their institutions, they will be more satisfied. Thus, there is a positive relationship between student satisfaction and student loyalty.

HEIs in the UAE recognise the importance of education in order to prepare a generation with knowledge and the ability to cope with technological and scientific developments. This generation will contribute to the future growth of the economy. The UAE government provides the educational sector with all the support needed to increase the number of students, not only at undergraduate but also at postgraduate level. Hijazi et al. (2008) mention some challenges, such as limited scholarships and high tuition fees in private institutions, but the Ministry of Higher Education continues to work towards increasing the number of satisfied students through providing high quality education.

In conclusion, student satisfaction incorporates diverse factors such as emotional intelligence, burnout, and satisfaction with life in general, financial costs and benefits and the quality of one's education.

### **2.8.2 Experience and Reputation for HEIs**

The undergraduate students in the university are influenced by the high academic standards of the professors. The students applying and studying in university keep a close eye on the reputation and quality of the studies to fit their requirements. For example, there are many universities in the UAE that are looking for improving the level of quality and reputation to compete with the high-ranked universities in the world. The concept in the universities that have a high reputation matches what undergraduate students want from the university and this also includes the abroad students who make the top reputation university as the first choice. The students studying in high reputation universities have been influenced by the factors such as teaching, services, location, history of the university, top research amenities, and

professional courses. These factors influence the student's choice and eventually their satisfaction with the education (Kusumawati, Perera & Yanamandram, 2019).

The reputation of the university has a great impact on the existing students. It has been always a substantial factor offering job prospects, enhances social activity, and guarantees high income. The students who have completed their study influences invitations of graduates for the interviews and high entry level salaries. Attaining graduation is the most significant factor for the personal advancement whereas university reputation is the most substantial for employability. Both university's reputation and programs are the major factors influencing to the student's decision for further studies because such universities providing prospects for an extensive variety of advanced careers (Hijazi, Kasim & Daud, 2017).

## **2.9 Student Behaviors**

Behavior is a group of activities and actions carried out by individuals (Hagger et al., 2003). The Self-determination Theory of Deci and Ryan (1985) explained that positive behaviour can thanks to self-determined activities. For students this means them becoming more motivated, interested and autonomous in their laboratory or classroom work.

Most HEIs seek to identify the main factors that make students satisfied, and one of these is the quality of services. Athiyaman (1997) stated that perceived quality of service had an impact on student behaviour. Thus, student satisfaction will rise in line with the level of service at the institution. Moreover, Sung and Yang (2009) examined

the behavioural intentions of institution students and noted the relationship between the quality of service provided and student behaviour.

Regehr et al. (2013) noted that the behavioural psychology of students was shaped by the perception that they were receiving a high-quality education from a reputed HEI. These attitudes were especially notable when an HEI had a good reputation based on their specialisations. The students from such HEIs were of the view that they were taught by experts and that this helped to enhance their skills. Such institutions should also monitor cognitive and personal concerns. The brand image of HEIs and the education that is delivered to the students can result in a growth in confidence and self-sufficiency.

Wilkins et al. (2016a) noticed the relationship between customer experience and customer behaviours in the business market. This can also apply to student experience and student behaviour. Once the students are comfortable with their institution, their behaviour will be more positive.

### **2.9.1 Intention to Stay and Student Retention**

In this current era of modernization and technology, education still plays an important role. Students want to enroll in the top HEIs. The process beginning in enrolment and ending in graduation is much more complicated than it seems. The major issue faced by HEIs is the low retention rate and how they can improve this rate of retention by knowing the factors that give rise to this issue. Several studies have been conducted in the field, and the results show that this phenomenon is increasing. Students' desire to study abroad and in western HEIs has severely increased the number of dropouts as

students leave before the completion of their course. Research has shown that several reasons lead to such dropouts. Certain issues that can be easily highlighted are an increased level of stress, economic conditions that require the student to work, failure to cope with the course and many other reasons (Peterson's, 2015).

Most HEIs plan ways to keep their students. Thus, studying the intention to stay is very important because increasing the number of students enrolled can directly affect the income of the institution. The intention to stay is related to attitudes and behaviours. It is clear that knowing how to attract more students to the institution is advantageous (Watrakul, 2014 ; Viljoen & Deacon, 2013).

Moreover, Tinto (2017) highlighted the main elements that effect a student's decision to stay, or to leave, higher education. The first factor was individual reasons dependent upon the student's background and experience. The second factor is the reputation of the HEI, and a third factor is the interaction of the students with the environment, whether that is social or academic activities (Viljoen & Deacon, 2013).

A recent issue in the higher education sector worldwide is the low rate of retention in institutions and how they can improve it. Scholars such as Dupéré et al. (2015), Heublein (2014) and Patrick et al. (2016) mention several factors that lead to dropping out. These include students finding a job, the student being under stress, a lack of interest in academic and social activities, and a lack of preparation for university at secondary school. Furthermore, choosing a major subject is a critical task. There are two common patterns here. Often a major subject fails to satisfy the needs of the student, and hence, the student leaves (Arhipova & Paura, 2014). The other trend is when a student unintentionally chooses a major that they are not interested in. These

two factors typically lead to students dropping out of courses. However, solving the factors will help to keep the students and improve the retention level.

Some students work while continuing with their higher education studies. In these cases, students need to care three things: their job, their education and their family (Crawford, 2014). This will tend to increase stress levels, and often students fail to keep track of all three things at the same time. Thus, family and the job become their priority, which ultimately forces them to leave with their courses incomplete.

Sometimes students fail to cope with the pressure of higher education (Peterson's, 2015). The methodology can be a problem for some students and they might fail to make the necessary changes to cope with a higher level. A study by Heublein (2014) summarized higher education dropout instances (Figure 5).

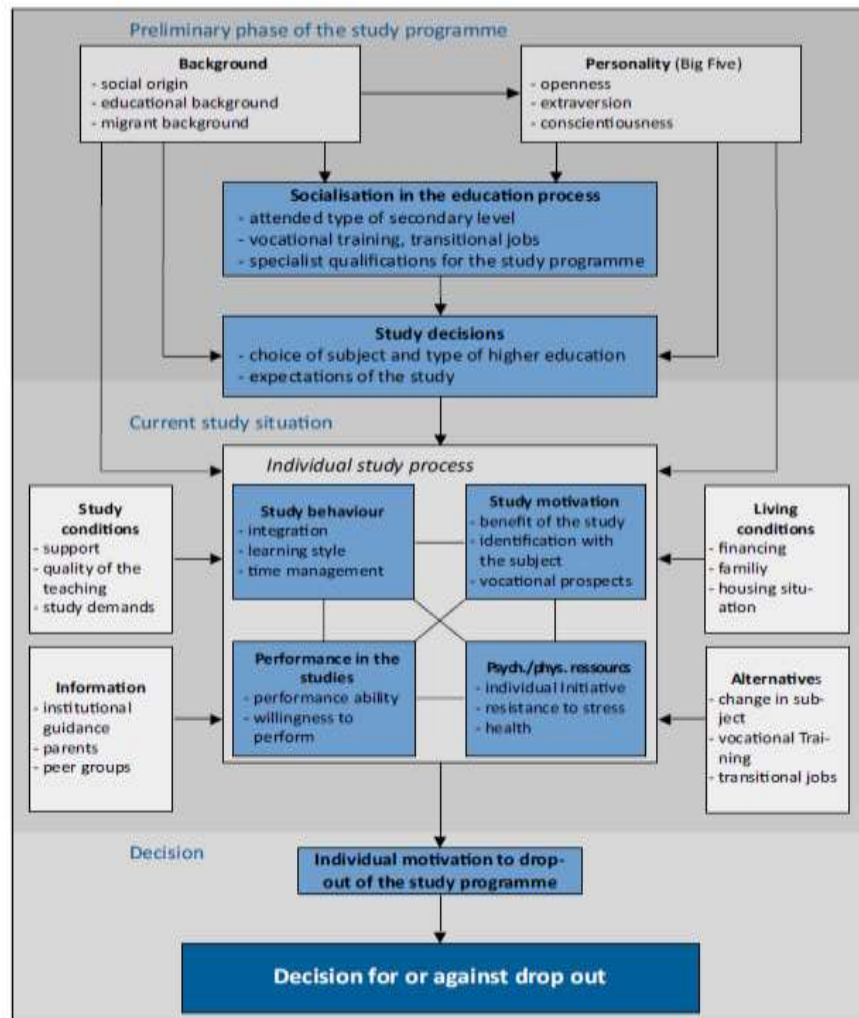


Figure 5 : The Process for Dropout  
(Heublein 2014)

Education is undergoing a huge change in order to make it more accessible to more students. Yet, the dropout level is persistently high. Looked at from a global level, dropout rates are quite high (De Witte et al., 2013). Duque (2014) created a conceptual model to explore the relationship between student satisfaction, dropout rates and cognitive outcomes. See Figure 6 for the impact of those variables on students.

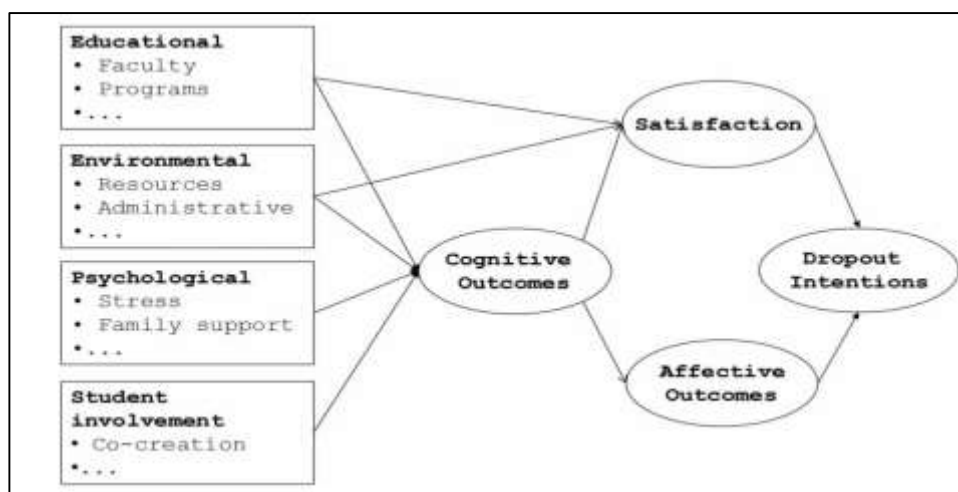


Figure 6 : Conceptual Model of Duque 2014  
(Duque 2014)

Dropout rates influence higher education in UAE and research has been conducted on the reasons for this high rate (14% in 2017) and so this study will investigate the reasons to rise the retention rate in the higher education. (Nasir, 2017).

## 2.9.2 Supportive Intentions

Students expect to have certain rights when they join an HEI. These include an appropriate learning environment with good quality services in order to enjoy many educational possibilities. There are different factors influence a student's supportive intentions towards their HEI, These include loyalty, satisfaction, educational outcomes, reputation and cultural experiences (Kang, 2014; Sung & Yang, 2009).

Regehr et al. (2013) studied the different stressors that affect university students during their study. Cognitive and behavioural factors can help to decrease stress levels and encourage students to stay in their HEI. The same paper also mentioned that the reputation an HEI enjoys influences student perceptions of gaining better employment



opportunities in the future. Therefore, the brand image and reputation of these HEIs can help to attract students who are focused on future employability.

Moreover, Ali et al. (2016) stated that most students undertake courses to enhance the prospect of getting their dream jobs. Additionally, Joseph et al. (2012) noted that students are of the view that well-known HEIs have greater networking potential and thus reputation remains a core concern. Walter et al. (2013) emphasized the importance of image as most students want to graduate from a known brand or high-ranking institutions. The students are of the view that the reputation of the HEI bestows prestige on the students and is helpful in getting a suitable job in the future. The reputation of HEIs also helps in attracting scholars and thereby enhances the HEIs. Changes undertaken by HEIs depends on the identification of student needs. This, in turn, helps to improve processes at the HEIs in order to enhance their operations and reputation. In short, a good reputation helps the students with their future career options.

## **2.10 The Student Satisficaion in HEIs**

Student satisfaction is important for universities for multiple reasons. First and foremost, the entry of the students for availing different educational courses is substantially important for the universities as it will help them in managing their business operations in a smooth manner. Moreover, the universities are primarily the service providers where they offer educational services. In such a situation, it becomes massively important for even the universities to ensure that they manage their financial sustainability. In order to successfully meet the financial sustainability, the universities

do face the necessity to continuously increase the participation of the students and in such situations, student satisfaction plays a crucial role (Weerasinghe & Fernando, 2017). Moreover, the quality of the educational services is also a massive contributor to the satisfaction level of the students. The majority of modern universities are focusing on the continuous enhancement of the quality of their educational services to ensure that the satisfaction level of the students continuously rises. Moreover, the higher satisfaction level of the students is monumentally important as it helps them in earning trust and helps the universities in promoting the excellence of their educational services through the word-of-mouth marketing (Rauschnabel et al., 2016). The satisfaction level of the students plays a crucial role in ensuring that the pass-out students become important alumni members. In the modern-day educational context, the alumni members are seen to help the existing university students with industry experiences, training, counseling, and job opportunities as well (Landoni, Bolzani & Baroncelli, 2021). The formation of such an alumni set up becomes possible when the students who are becoming alumni members, are satisfied with their universities. Hence, it is clearly understandable that the satisfaction level of the student is monumentally important for modern business houses.

## **2.11 The Reputation of the HEIs**

The reputation of an institute has become of more interest in the marketplace as it is an effective indicator of success. There is a strong correlation between reputation and excellence because every service provided by an institute is linked to the image held by the students. In turn, the performance of HEIs is influenced by its reputation, whether positive or negative. A lot of scholars define the reputation of an institute as the

combined effect of a variety of individual processes, activities or services (Khalifa & Mahmoud, 2016; Alves & Raposo, 2010; Sung & Yang, 2008). The reputation of a HEI is not only important for the institution, but also for the student. Students and their parents look for high-ranking HEIs, which also have better programs and offer high-quality services.

It is not easy to measure the image of an organization. It depends on several factors (Sung & Yang, 2008). Raposo and Alves (2010) presented a model proposed by Clow et al. (1997) (see Figure 7 below) and explained the impact of a company image on satisfaction with their services. Those services directly affect the company's image and influence satisfaction and quality.

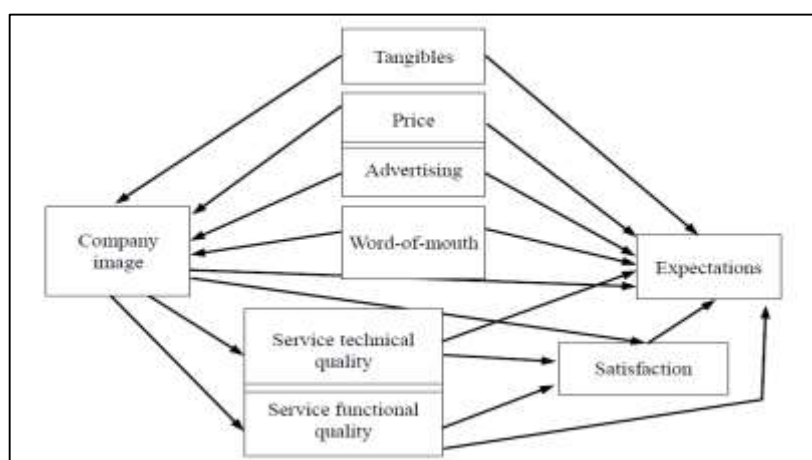


Figure 7 : Model of combined expectations by Clow et al. 1997  
(Raposo & Alves 2010)

The reputation of an institution relies on more than just the quality of services being provided. Student weigh many factors when making choices about where to study for their degree. Raposo and Alves (2010) explored the significance of reputation on student satisfaction.

Most students looking at the reputation of an HEI before joining because they spend a part of their life at this institute, so the size of the campus, facilities, location, accommodation, quality of teaching and services are the main factors when selecting an institution. Also, feedback from parents, friends and the experience of alumni can influence a student's choice of institute (Wilkins & Huisman, 2015; Sunaryo & Bahari, 2014).

Furthermore, Alves and Raposo (2007) observed that the image of an institution has a significant impact on student satisfaction and student loyalty. The experiences of students encourage them to support the institution whenever they have a chance to do so, or at least, talk positively about their institution.

The reputation of HEIs has become a research topic (Arpan et al., 2003). In this vein, Wilkins and Huisman (2013a) highlighted a lack of any relationship between the quality of HEIs, including teaching, and their reputation. Thus, students prefer high-quality services more than just focusing on the ranking or reputation of the HEI. This indirectly increases the quality of the education and leads to high levels of satisfaction.

Furthermore, the factors that influence the students while choosing universities vary from person to person. Such factors are categorized into institutional characteristics and communication strategies. Institutional factors comprise reputation, rankings, teaching quality, and employability predictions. The new graduate students select university majorly for prestige and wish to experience college life in an entirely unique framework. The students select universities on the basis of the high academic standards of the professors and peers (Nuseir & El Refae, 2021).

Downes (2017), mentioned that the educational services are becoming a booming industry across the globe and that is pretty prominent with the monumental financial success over the years. The education plays a key role in the successful and sustainable development of society. The education is seen to have a major role in the human development and the continuous increment in the rate of literacy is largely dependent on the successful and smooth delivery of the educational services to the people. As an educational services provider, the reputation of the universities plays a significant role in influencing the purchase interest of the students or their immediate families (Meyers & VanGronigen, 2018). Prior to the admission into the universities, the students carry out a brief search for testing the alignment of their hobbies, preferences and academic goals and the facilities, faculty, style of educational delivery and the reputation of the universities. The students who are more inclined towards sports, are focused on the identification of the availability of the sporting facilities and the reputation of the university in sports (Hextrum, 2018). The students with sole objective of education, are more focused on the identification of the smooth delivery of the top-quality educational services in the universities. On the other hand, the reputation of good governance is also a massive reputation which influence the students when they are to select the universities for their education.

## **2.12 Reputation and Student Satisfaction**

The difference in HEI environments generates excellence in the services provided to students. Thus, this can create competition between the HEIs to improve all their process and procedures to achieve greater student satisfaction. Hijazi et al. (2008) point out several factors that challenge such institutions. HEIs are still working to find a way

to develop and improve the quality assurances processes in their institutions and to increase student satisfaction. According to Alves and Raposo (2007) the experience of students at HEIs is a significant influence on their levels of satisfaction. This experience includes the educational and learning experience and the level of services at the institution. Therefore, the better experiences students have, the more satisfaction and loyalty to the institution they will feel. This satisfaction is a positive factor that helps the institution's reputation as students will recommend the institution to other students.

The reputation is a massively important aspect of modern universities and that is evident with the differentiated preferences of the general students. The reputation of the universities assists the university authorities in successfully influencing larger number of students for availing the educational services offered by the companies. According to the esteemed opinion of Braunack-Mayer *et al.* (2020), the reputation of the universities plays a massive role in gaining a competitive advantage over their competitors in the education industry. Moreover, the development of good reputation helps the universities in successful formulation of trust and develops credibility amongst the general students. The development of such credibility and trust assists the universities in achieving the participation of a larger number of students. Other than this, Wilkins and Huisman (2015), mentioned that the institutional reputation is substantially linked with the rankings. More specifically, the modern universities have started to use their rankings and score for the successful management of the analysis, policy making and the strategic planning (Pinheiro, Langa & Pausits, 2015). Other than this, the reputation is enormously important for the universities as it helps them in the professional enhancement of their internationalization (Ansoglenang et al.,

2018). In a nutshell, the successful management of the reputation is arguably one of the top priorities for the authorities of modern universities.

According to the comments of Elsharnouby (2015), the satisfaction level of the students is directly linked with the reputation of the universities. The satisfaction of the students depends on a variety of factors and that is why it is important to understand the contribution of the factors on the reputation of the universities. Considering the factors of the satisfaction, it can be said that the delivery of top-quality educational services is one of the most important factors that enhance the level of the satisfaction of the students. Moreover, it is important to understand that educational services are the fundamental services offered by any university and the quality of these services has an important role to play in ensuring good academic records of modern-day students. The successful delivery of top-quality educational services is also dependent on the formation of university faculty which includes the participation of professors, educators, or teachers for different topics and subjects. Along with that, the participation of the international professors, educators, and teachers in the faculty adds a monumental level of value and at the same time, it enhances the collective knowledge base of the universities. Consequently, the scope of delivering a higher quality of educational services increases in a monumental manner (Braunack-Mayer et al., 2020). Other than this, the excellence of the faculty in the continuous evaluation of the progress of the students and the exchange of constructive feedback on them also contributes to the improved delivery of educational services. As a result of the excellent quality educational services, the satisfaction level of the students increases in a rapid manner and that certainly boosts the reputation of the universities as eminent educational service providers.

Apart from this, it is seen that the development of a dynamic library where the students can source different books and articles for their studies, helps the students in the professional and progressive management of their study. Such dynamic libraries help the students in top-quality data collection for their studies, creation of notes, and continuous management of their group studies. Along with the offline library, the modern universities are substantially inclined towards the incorporation of online libraries where the students can access different books and articles with one single click (Hienert, Sawitzki & Mayr, 2015). Such an easy procedure of accessing a substantial amount of database enhances the ease of data collection for the students. Hence, the level of satisfaction of the students also increases, and at the same time, it boosts the reputation of the universities as well. Hence, it is clearly understandable that the satisfaction level of the students plays a massive role in the continuous enhancement of the reputation of the universities.

A good ranking helps universities attract students. Many universities may provide better scope to students and serve students from lower economic and social statuses, but they tend to be left out because they do not have a good ranking. Therefore, universities tend to be ranked in a better position to get all the facilities, to lure more students to increase admission. Attracting financially strong students is another motive to get better scoring. A good ranking also helps the university to obtain assistance with matters related to governance, quality, and management. In addition, it also helps to measure and improve their performance, and so universities in contemporary times are trying to secure a better university ranking. There are various benchmarking projects launched in Africa and India to get the maximum help for a better ranking score, to avail facilities that would benefit them in the future (Pavel, 2015). Ranking helps the



university to highlight its strength in many diverse areas and also helps the university plan in areas related to positioning, and branding. The ranking has changed the scenario of higher education and influenced further development internationally, and nationally. It is a standard feature, that helps in assuring quality service to the students. Once the university has received a good rank, it will automatically help to increase the reputation of the institution. Students want to get enrolled in universities that have a good ranking, this decision of getting admission in good ranked universities eventually helps to build a reputation.

### **2.13 Literature review conclusion:**

The UAE higher education sector has expanded dramatically in the last 20 years, and has been improving quickly and sustainably. Achieving this vision is not as easy as most people think. It requires a lot of resources and experience. At the same time, the HEIs have many challenges that need solving. So, the higher education sector is working to overcome those challenges through strategic planning. This literature review discussed several factors that affect the quality of services in HEIs and student satisfaction. The literature summarized the important elements that influence the higher education sector in the UAE. However, there is still a gap in the knowledge which is needed to improve the UAE higher education sector. This gap is the high dropout rate in federal HEIs (14% in 2017); the international rate is less than 10% (Nasir 2017).

To summarize the literature review chapter, it listed the possible factors that could impact students in HEIs and how institutions can decrease the number of students who plan to withdraw from the university without completing their program degree by understanding the retention factors. This comprehensive review leads us to propose and develop a conceptual framework for this research in the following chapter with more detail.

## **Chapter 3: Conceptual Framework and Hypotheses Development**

### **3.1 Introduction**

Having reviewed the literature on the quality of services delivered to students and the impact on student satisfaction (see Chapter 2), this chapter will present the conceptual framework on which this research is based. Then, the author will proceed with a detailed description of the eight hypotheses developed to answer the research questions in this study.

### **3.2 Conceptual Framework**

This chapter describes the conceptual model for this research study. The model is important as it was designed to support HEIs by carefully examining the literature and finding guidelines or recommendation to increase the retention rate. The new contribution to knowledge of this work is having an overall perception of the research gap explored here. Existing studies have focused on two or three independent variables to explain the reasons for lower retention rates, or the relationship between one factor and student satisfaction. This research study will include five independent variables. Moreover, the model will observe the role of reputation in influencing student perceptions of HEIs. To date, there have only been only limited studies on the impact of reputation on student choice.

A broad, diverse literature exists that investigates the elements that influence learning outcomes and there are many factors have an impact on student satisfaction and

reputation but this research examines only the five antecedent constructs to be presented for the following reasons:

- Most of the previous studies focused on only two or three independent variables. Scholars such as Fernandes et al. (2013), Annamdevula and Bellamkonda (2016), Duque (2014), Athiyaman (1997), Martínez-Argüelles & Batalla-Busquets, (2016), and Wilkins et al. (2016b) were mention two or three factors that effect on student satisfaction or the loyalty of students. They discussed the relationships between the factors and students and the impact of this relationship on students' journey.
- Most of the previous studies focused on antecedent's satisfaction factors that related more on program fees, family background, friendship support or personal problems as reasons for not continuing the degree. Scholars such as Metzger et al. (2015), Heublein (2014), Dupéré et al. (2015), Patrick et al. (2016) and Wilkins (2010) mentioned several factors that lead to dropping out and they include program fees, family background and personal reasons. Students face many challenges during their studies related to financial matters to pay tuition fees of the program, other life expenses and housing situation, which are very high for their family's budget who are from low income. Furthermore, most of the education systems are require the students to pay the full tuition fees for the services (program fees, accommodations, residence, etc.) in advance before joining the university which is a big load on some student's families. Thus, one of the student's decisions can be to drop out from

the university or to not join higher education at all which will affect on the retention rate of the institutions.

- Most of the previous studies investigated the image of institution, rather than reputation, as an independent, dependent, or mediator variable. For example, several scholars such as Khalifa and Mahmoud (2016), Syed Zamberi Ahmad (2015), Hwang and Choi, (2019), Ali et al. (2016) and Jiewanto et al. (2012) were measured the important of university image on students satisfaction rather than using the concept of reputation of the institution/university. They examined the image of institution in higher education and how this can affect a student's journey or a student's satisfaction.
- Limited studies investigated the reputation of the institution as an independent, dependent, or mediator variable impact on antecedent satisfaction factors. For example, the research of Del-Castillo-Feito et al. (2019), Al-salhi, El Damanhoury and Alawadly (2021), Syed Zamberi Ahmad (2015), Sung and Yang, (2009), Wong, Hsiang and Tong (2017), and Heffernan et al. (2018), studied the reputation as an independent, dependent, or mediator variable factor so this thesis consider reputation as an important independent variable.
- The conceptual model of this thesis focuses on constructs related to quality of service, activities and including student retention factors.

Fernandes et al. (2013) stated that the antecedents of student satisfaction according to National Student Survey in the UK are very important elements for any research

related to higher education because they are part of improvement at the institutions as well as developing their strategies and to understand the factors impact on student stratification. The main factors are teaching evaluation, academic support and organization identity. On the other hand, some research studies such as Ali, F. et al. (2016), and Chandra. et al. (2019) focus only on the impact of student satisfaction on university image while this thesis is focused on the opposite in measuring the impact of satisfaction antecedent including the importance of reputation as one of the satisfaction antecedents effects on student satisfaction. This thesis is more comprehensive, covers different factors, and contributes to new knowledge for researchers and the higher education sector.

According to Werblow & Duesbry (2009), one of the main challenges in relation to higher-level education modernization is an effective level of balance between the important inputs, as well as relevant outputs particularly an appropriate balance of registered students and graduated learners. In this vein, this thesis includes the five antecedents of student satisfaction factors to measure the gap from many different angles because dropout rates in relation to university students mainly result in the waste of governments money, especially in a federal institution that provides students with education without any tuition fees as well as wasting the resources of the institutions.

In order to investigate the research questions, examine the hypotheses, a conceptual model (see Figure 8 below) has been presented. The model has five independent variables on the left side (perceived service quality of teaching, student life and support, social identification, organizational identification, Institution Reputation).

These will be studied in order to understand the impact of those constructs on student satisfaction as mediation in the HEIs. All of these constructs have influenced students in terms of whether they chose to remain in higher education or withdrawal.

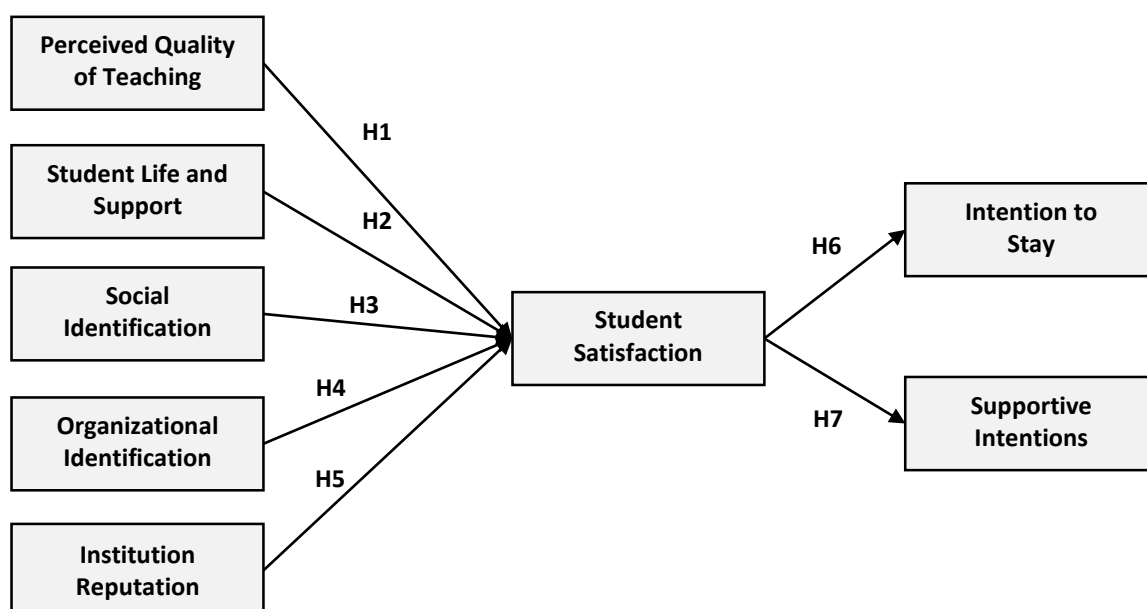


Figure 8 : The Proposed Conceptual Model

### 3.3 Hypothesis development

This section will present and describe the seven hypotheses as follows:

#### 3.3.1 Perceived Service Quality of Teaching and Student Satisfaction

The Higher Education sector has set criteria to distinguish between different HEIs in terms of educational quality in both the academic and service fields. Thus, quality of service, in general, is one of the main factors that have an effect on HEIs and student satisfaction. According to Annamdevula and Bellamkonda (2016), there is a strong

relationship between student satisfaction, student loyalty and the quality of services. The same measured teaching methodology as an important indicator that should always be improved.

On a related theme, Butt and Rehman (2010) found that the quality of teaching is a very important factor in terms of satisfaction, and this depended mainly on the experience of teachers. The students were aware that the method of learning was of paramount importance in the education sector.

According to McCoy (2016) the main requirement of teaching and learning techniques was to deliver information in an understandable manner so once the teachers successfully deliver the information, the positive impact will show on students.

Biermann et al. (2015) describe the significance of having good quality teachers for student satisfaction. Currently, most higher education institutions have high-quality faculty or instructors and are setting new standards for qualifications and teacher experience. The hire teachers from abroad who have an appropriate method of teaching and learning. In the same vein, Athiyaman (1997) emphasised the significance of teaching and curricula on the quality of service delivered to the student.

Several studies have focussed on the relationship between student satisfaction and institutional quality of service. A lot of HEIs are aware of the importance of having good quality services, not only to increase the levels of student satisfaction but also to meet the standards and requirements for higher rankings. The services offered by HEIs vary from institution to institution. However, some basic services must be



available at every HEI, such as accommodation and a library. While, other secondary services such as an annual orientation, workshops and clubs are also highly valued by students.

Annamdevula and Bellamkonda (2016) noted the direct relationship between each of the services, student satisfaction and student loyalty. The result of this relationship was positive. Pedro et al. (2018) examined the relationship between the quality of service and student satisfaction in HE. The results of the research showed a positive correlation. In the same vein, Lages and Fernandes (2005) also noted the strong relationship between satisfaction and the services provided by HEIs.

Likewise, according to Fernandes et al. (2013) there was a positive relationship between student satisfaction and the different kinds of services that were available for students, such as academic support and other services. Moreover, Watjatrakul (2014), found that student satisfaction had a positive impact on the level of service. In other words, the institutions evaluated student satisfaction and used it to drive further improvement of services.

Moreover, research by Khalifa and Mahmoud (2016) showed the importance of providing the students with high-quality services and how that increase both student satisfaction and the level of the quality in the HEI. Although several scholars measure the quality, there are still difficulties in assessing this. Thus, it can be concluded that student satisfaction, the HEI's reputation and the quality of services are all correlated positively.

According to the esteemed opinion of Scott and Scott (2016), the student satisfaction and reputation of the university are massively dependent on the quality and experience of the instructors, teachers and professors of the universities. The experience of the professors and educators influence the quality of the teaching services offered to the students. The experience of the professors helps them in many of the aspects of their educational services. First and foremost, the experience of the professors or the instructors assist them in designing educational plans without any sort of faults and such educational plans incorporate higher level of effectiveness as well. Moreover, the experience of the professors plays a key role in the selection, organization and utilization of the resources which will help them in the delivery of smooth and successful delivery of the top-quality educational services.

Furthermore, a recent study about the quality of services by Pedro et al. (2018) highlighted student satisfaction in terms of measuring different services at the institution. Based on the above, the first hypothesis was formulated:

***H1:** Perceived Service Quality of Teaching is positively related to Student Satisfaction.*

### **3.3.2 Student Life and Support and Student Satisfaction**

Many HEIs provide a variety of activities for students throughout the year to gain new experiences and achieve personal fulfilment. Student activities play an important role in honing skills and developing talent. This is institutions seek to renew programs from time to time and provide a diversity of social, artistic, cultural and recreational activities. These kinds of activities can engage students effectively.

Jamaludin et al. (2018b) addressed the significance of such activities and included an orientation, which was particularly welcome for international students. Once again, this leads to high levels of student satisfaction thanks to a variety of activities to take part in. Such activities also increase student loyalty. Moreover, the same study addressed the main factors that predict the intention to stay, choice of HEI and loyalty in an international educational context. This study applied hierarchical analysis of regression to identify the variables contributing to a desire to stay at the institute. This demonstrates the effect of an international, social, psychological, educational perspectives and its implications for institutions.

According to Sutter and Paulson (2017) there is a relationship between student life and support, and the intention of students to stay on a course. The models that the authors used included College Retention, Goal Orientation Theory, Expectancy-Value Theory, the Theory of Graduation Intention and the Planned Behaviour Theory in order to analyse student intention to stay. Kim and Bastedo (2017) explored the influence of student life and support on occupational outcomes. Their survey described the categories, and types of activities pursued and how significant they were for occupational outcomes and general satisfaction for graduates. This implies that student life and support are important in terms of student satisfaction.

It is understandable that modern universities offer wide range of services to their students for the continuous betterment of the students in both academic and non-academic context. The creation of a substantial scope for data collection from a dynamically well-built library will certainly contribute to the successful management of the education of the students. Moreover, it is observed that the library provides a

monumental scope of creating reader communities for the smooth management of the group studies. The collective approach to the data collection and to the management of the study, is substantially helpful for the modern students in the successful and efficient management of their education (Macaro *et al.* 2018). Moreover, the library creates monumental scope for the preparation of the study notes and that certainly helps the students in the continuous management of their studies. Consequently, the library support services are an enormously important services, which has massive scope of influencing the satisfaction of the students.

Therefore, the following hypothesis was addressed:

*H2: Student life and support are positively related to Student Satisfaction.*

### **3.3.3 Social Identification and Student Satisfaction**

Social identification is one important variable that significantly affects HEIs and student satisfaction. By creating an environment with social activities at the institution, positive student satisfaction is very likely to follow. Furthermore, positive word of mouth suggested can result from satisfied students who will encourage other people to join the institution as new students and support their own intention to stay.

Wilkins and Huisman (2013b) discovered that students like to work in groups and enjoy creating a social community at their institutions. Groups have common denominators such as similar behaviours, habits, ideas, the same field of study or even nationality, especially if the students are from the same area, or are international students. By having these kinds of group, the students can live comfortably at the

institution and adapt to the new environment. Myers et al. (2016) found that developing social groups in an institutional environment inspires a comfortable atmosphere and that this influences student satisfaction. Moreover, Kang (2014) believed that the institution should support student needs so they will feel more comfortable, and their academic performance will improve. Some HEIs enrol students from different nationalities. Thus, it is possible to have various group of students that have a similar culture and a strong social identity. Kim et al. (2010) found that the power of social identification in terms of student intentions to stay was very strong and positive. Furthermore, Wilkins et al. (2016b) has pointed out the relationship between social identification and the self-conception of students. This research found that undergraduate students focus on academic self-perception, while postgraduate students are concerned about career opportunities a self-concept.

Based on the above, the following hypothesis can be established:

*H3: Social Identification is positively related to Student Satisfaction.*

#### **3.3.4 Organizational Identification and Student Satisfaction**

Organizational identification is important to any business or organization regardless of its size, mission or purpose. This includes what the organization offers to customers, partners, and the public, and something that distinguishes it from others. A valid corporate identity makes an organisation recognisable to customers through its designs, actions and outreach.

Improved organisational identification for HEIs come through feedback from students and staff. For example, Pinna et al. (2018) realised the importance of using satisfaction feedback (ideas, comments, opinions, facts, etc.) to develop the organisation. According to Myers et al. (2016) organizational identification was strongly supported by different constructs that related to student experiences, attitudes, self-image and satisfaction. Furthermore, Wilkins and Huisman (2013b) pointed out that student satisfaction influences organisational identification because as the level of happiness and satisfaction rises, so does student loyalty. Thus, the number of new students joining the institution will grow, so the relationship is positive.

Many studies confirm the strong relationship between satisfaction and organisational identification. Wilkins et al. (2016b) studied this relationship found a positive relationship between organisational identification and student satisfaction. Moreover, the performance of HEIs is affected by the level of service provided. Thus, the level of organisational identification in higher education is very important, especially for students. This means that the higher the level of organisational identification that a student senses in the institution, the higher the support offered by the student (Breytenbach et al., 2013). The same study proposed a positive correlation between organisational identification and the student level of experience years; however, they returned a negative result. This analysis showed a negative relationship between organisational identification and the years spent studying at an institution. In other words, when the student stays for a longer time in an institution and gains more experience of the activities or services offered, it will actually lower organisational identification. This study illustrates some important factors that impact on

organisational identification, such as the reputation of the institution, student activities, and the teaching and learning model in use.

Wilkins et al. (2018a) found that a consumer-organisation identification role helped to reduce dissonance in foreign institutions and create rising levels of satisfaction, while the opposite occurred in local institutions. Based on the discussion and empirical evidence above, the following hypothesis was proposed:

***H4:** Organizational Identification is positively related to Student Satisfaction.*

### **3.3.5 Institution Reputation and Student Satisfaction**

Nowadays, the concept of reputation is more important in higher education. High-quality services and having a good standard of education are vital for enrolling and retaining students. Therefore, it is important students know about the institution by reputation. The main factors influencing the selection of the institution are the size of the campus, facilities, location campus, accommodation, quality of teaching and other services. Moreover, there are other important factors such as feedback from parents, friends and the experience of alumni students that can also affect students' decisions (Wilkins & Huisman, 2015; Wilkins & Huisman, 2014).

Furthermore, Marginson (2011) found that the primary make-believe is the impression of higher teaching as an economic marketplace: education and investigate as goods, higher education as nationwide economic rivalry, universities as corporate companies, the WTO-GATS visualization of a one-world unrestricted trade region in education and knowledgeable possessions. Higher education is perceived as a system for

manufacturing and issuing economic morals and for supplementing worth formed in other segments. The relation among higher education as an income-generating economic performer and as the handmaiden of wealth away, is not ever strong. The primary knowledgeable thoughts are human capital philosophy and manufacture purpose economics. There is additional than one financial fantasy. Though, these thoughts are not leading. International entrepreneurship delivers the foremost modernising fantasy of the latter two periods. Ordinary belief about higher tutoring is commanded by neoliberalism, a political programme understood in neo-classical economic linguistic, which focuses on the marketplace economy. Neo-liberalism is robust in higher schooling strategy in both the entrepreneurial West and communist China. Universally it governs national plans for higher education improvement. Another make-believe has older origins. This is universities education as an arena of reputation position and rivalry. Reputation is higher tutoring, mainly in education universities. Higher schooling manufactures and assigns social places, 'positional properties' or 'status products. Here the supportive knowledgeable thoughts are the sociology of position and positional products and screening concept in economics.

Older signs of position are essential to tier theoretical matters, with their primitive methods of community presentation. Standing also places universities in association with each other. Dissimilar profitable marketplaces, university status rankings are traditional, replicating ample the similar striking command from generation to generation. At the similar period limited in higher tutoring, though modernist in rage, is intact by the authority of position to safeguard acceptance, describe recognize and induce act. Organizations demonstrate position noticeably and repeatedly, in the earliest form of mediaeval constructions, the contemporary procedure of science



facilities and research productions and the business form of sites and international corporations.

Moreover, recent developments in institutions have made reputation even more important for students. Thus, most institutions have started to improve their services to meet the students' needs and expectations. Furthermore, the higher education market has many options, and students can choose the best institution depending on their reputation. On this point, Raposo and Alves (2010) explored the significance of reputation on students. Institutions recognized the importance of investment and began to improve their services to deliver student satisfaction.

Reputation is a very important indicator of the level of organizational excellence, and it is the basis of success and sustainability. Furthermore, it can play a big role in terms of keeping students in institutions and avoiding dropouts. Sung and Yang (2009) found that the reputation of institutions had a significant impact on student decisions and their intention to be supportive. Moreover, Heffernan et al. (2018) stated that the reputation of an institution has a significant effect on the student's supportive intentions.

The existing students have been influenced by the university's reputation on employability. It is quite tough to evaluate the communicative influence of the university reputation as it represents the apparent quality of the institution. The existing students evaluate the communicative influence of university reputation as it represents the perceived quality of the university. The university reputation has a great role in attaining competitive advantage. The university reputation is the major factor

assisting to construct competitive advantage and commitment with the existing students. UAEU's reputation offers the specific level of credibility to the existing students (Moussa-Inaty, 2020).

The university's reputation stimulates employability. The existing students placed in the good companies are likely to influence new students as well. The existing students are influenced in the university by effectual strategies. The existing students for the new students search for the relevant information and are represented as a trusted source of information. The existing students also have an influence in the terms of customer value and satisfaction. The students pursuing a degree in the university believe to have an advantage in the terms of job prospects. The employers are being impressed by the degree attained from the university (Minhas, 2018).

Based on the literature above, the importance of reputation to an institution cannot be ignored. The proposed model for this research has a reputation as a significant independent variable in the conceptual model. Reputation may have a strong influence on student satisfaction with other satisfaction variables such as quality of services. For example, if the institution has a good reputation in the market, but the quality of services is not as they expected, they will still prefer to stay in the same institution because they know the importance of this reputation on the job market after graduation. The truth here is that the power of reputation can compensate for lower quality and the students will not get upset if they still think they are at a good university.

Furthermore, the study of Pascarella et al. (2006) was found that there is a strong relationship between selecting the institution and good practices in undergraduate

education. The research mentioned that most of the national institutions are using the rank to measure academic quality such as the US annual report “News & World Report (USNWR)” that has seven important categories and reputation is one of them.

Furthermore, the study highlights the quality of teaching and supportive campus environment as factors impacting the student decision when selecting the university especially the decision of undergraduate students.

*H5: Institution Reputation is positively related to Student Satisfaction.*

### **3.3.6 Student Satisfaction and Intention to Stay.**

Based on the results of a study by Viljoen and Deacon (2013) the student’s intention to stay, and student satisfaction are positively correlated. Students need to feel that they belong to the institution and get involved in different activities in academic and non-academic fields. Thus, the relationship between student engagement and the intention to stay is well founded. Furthermore, Watjatrakul (2014) pointed out the relationship between the attitudes of the students and their intention to stay. This suggests that making sure students have all they need to make them comfortable and satisfied is a significant influence on a student’s decision to stay at the institution.

Additionally, Watjatrakul (2014) found a direct influence between continuing to study and improving the services at the institution. This improves student satisfaction and strengthens their intention to stay. As above, Annamdevula and Bellamkonda (2016) examined the link between student satisfaction and loyalty. High levels of satisfaction and loyalty will lead to the intention to stay in the institution, and students will support the institution when they are happy. According to Alves and Raposo (2007) providing

students with the educational experience and quality services they want, will increase the level of student loyalty as well as satisfaction.

The above discussion informs the following hypothesis:

*H6: Student Satisfaction is positively related to Intention to Stay.*

### **3.3.7 Student Satisfaction and Supportive Intentions**

A recent research study by Pinna et al. (2018) explained the significance of different factors that keep students in an institution. It is also important to improve and develop the services available to ensure the students are comfortable at the institution. According to several scholars (Kang, 2014; Sung & Yang, 2009) supportive intentions are impacted by different factors such as the reputation of the HEI, student satisfaction and the student experience. All of these elements support students as they continue their education. Moreover, Kang (2014) investigated the relationship between performance, supportive intentions and social support, which all have a positive influence. In the same vein, Kim et al. (2010) found the importance of supportive intentions at HEIs to have an impact on the students. There are a lot of factors that affect supportive intentions, such as social organisational identification. All of this will have a positive impact on student satisfaction.

Furthermore, Wilkins et al. (2018a) found that students support HEIs depending on their loyalty to, and satisfaction with, the institution. For example, if a student encourages others to join the institution with positive comments, then others will realise the positive factors and opportunities available for new students. The result of

the study confirms a strong relationship between student satisfaction and supportive intentions.

Based on these assertions, the final hypothesis was established as follows:

***H7:** Student Satisfaction is positively related to Supportive Intentions.*

Furthermore, an additional post-hoc mediation analysis will be undertaken to assess whether Student Satisfaction (SS) acts as a mediator in relationships between:

- a) Perceived Service Quality of Teaching and Intention to Stay.
- b) Student life and support and Intention to Stay.
- c) Social Identification and Intention to Stay.
- d) Organisational Identification and Intention to Stay.
- e) Institution Reputation and Intention to Stay.
- f) Perceived Service Quality of Teaching and Supportive Intentions.
- g) Student life and support and Supportive Intentions.
- h) Social Identification and Supportive Intentions.
- i) Organisational Identification and Supportive Intentions.
- j) Institution Reputation and Supportive Intentions.

Although the conceptual framework of this study has one mediation (Student Satisfaction), the thesis investigates the reputation of the institution as one of the important factors given its influence on students' decisions about where to study. Secondly, the study discovered the impact of student satisfaction as a mediating factor for five different factors on student attitudes at the undergraduate level – the first-year

enrolled students. Thus, the finding of this thesis will show the factors that affect more on student satisfaction either positively or negatively.

On the other hand, student satisfaction is directly related to the central research question of this study and the relationships between satisfaction and student behaviours (intention to stay, supportive intentions) are already well-established in the literature review (Chapter 2). For example, many scholars such as Heffernan et al. (2018), Vianden and Barlow (2015), Pinna et al. (2018), Wilkins et al. (2012a), Wilkins et al. (2012b) already investigated the positive relationship between student loyalty and student satisfaction which can encourage the current and potential students to stay in the institution and also show their support of intention as well. However, in some cases, students may follow the parent's decision to stay in the university. According to Ajuwon et al. (2009) and Yaacob et al. (2014), many parents prefer choosing universities for their children and even choose the major degree to study. This decision is related to the same factors such as the location of the university, quality of teaching, the environment of education, income level, and the performance of the university. Thus, students may stay only because they cannot afford to study elsewhere or because their parents make them stay but this may lead to withdrawal from the university without completing the degree as they did not choose the university or the program that they prefer to study in.

As a conclusion to this chapter section, this study will be conducting a mediation analysis to assess the potential influence of student satisfaction on all proposed relationships in the model.

## **Chapter 4: Methodology**

### **4.1 Overview**

This chapter explains the whole structure of the research methodology used in this study in order to answer the research questions posed in Chapter 1.

### **4.1 Research Approach**

The research approach adopted here follows sequential steps so that it is conducted in an orderly manner, makes use of relevant knowledge, and is documented. The results will, of course, depend to an extent on the research theory adopted: there are two here. The first approach is a deductive theory where the researcher devises hypotheses based on previous knowledge, or previous research studies of a similar theoretical persuasion consideration. After that, the hypotheses are tested to ascertain if they are supported or not. Thus, the latter research approach is inductive in design and focuses on research outcomes by generalising from the results of observation (Bell & Bryman, 2015).

Furthermore, Bell and Bryman (2015) point out that a deductive approach is used to test the hypothesis against the data, and this required the researcher to find a way to collect the data, and then use the concepts of the research model to build hypotheses. Figure 9 explains the process of deductive research, which has a strong focus on theory, as hypotheses are important starting points for data collection.

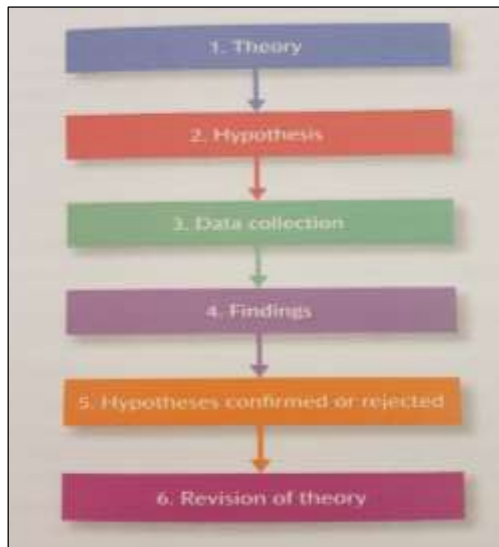


Figure 9 : The Process of Deduction Theory  
(Bell & Bryman, 2015)

This research adopts a deductive approach, as the purpose of the study is to investigate the research questions and examine the hypotheses. This approach is the most suitable for this research because it is appropriate for investigating observed phenomena and compatible with expectations. Furthermore, the constructs presented earlier have been tested already, even if the arrangement of those constructs are not in the same order as in this research study.

The model used here has five independent variables (perceived service quality of teaching, student life and support, social identification, organizational identification, and Institution Reputation). Those variables will be investigated to identify the influence of the constructs on student satisfaction as moderated by the reputation of the HEIs. Later, the study will attempt to explain the reasons for withdrawal from the institution, which forms the central knowledge gap in this study.

Researchers can decide to choose a particular research methodology, and this will influence the data collection and data analysis methods. There are three different



approaches to research methodology. They are the quantitative approach, qualitative approach or a mixed approach (Veal, 2005). Saunders et al., (2016) suggest a quantitative method when the research is related to numerical data (statistical). To test hypotheses in this manner the research can usually start with a questionnaire which presents us with a graph or other statistical analysis. On the other hand, the qualitative method is used when the data is correlated to information and observation, not numerical data such as images or words. Here the data collection is usually via interviews. The mixed method approach combines quantitative and qualitative methods. Overall, the main difference is between a deductive or inductive approach (Bell & Bryman, 2015).

The quantitative approach uses different techniques to test for validity. Most of these tests are related to standard statistical analysis (Bell & Bryman, 2015). In this method, the researcher should use acceptable statistical tests and logical techniques to answer the research questions. Thus, this research will employ the quantitative approach and is informed by a positivist philosophy. It was felt that a qualitative approach could not really analyse a concept such as student satisfaction adequately. Furthermore, an explanatory approach is more appropriate as it explains the impact of the different factors on other factors in the research model. Thus, this study is more scientific in design as it is both deductive and quantitative. The level of analysis in this research is at the level of individual students. Each analysis looks at the attitude, feelings, perspective and intentions of each student. Furthermore, the research will measure the reputation of the HEIs from a student's perspective.

## **4.2 Research Philosophy**

According to Saunders et al., (2016) the research philosophy is an essential part of the research methodology since it is correlated with the development of knowledge in a specific area and can answer research questions in order to bridge the gap. Moreover, there are three different ways to present one's research philosophy: they are ontology, epistemology and axiology.

Ontology focuses on the nature of the world and social activities as well as the reality of assumptions (Saunders et al., 2016). Objectivism is part of an ontological approach and it mainly refers to realism and the independence of obvious facts (Bell & Bryman, 2015). Epistemology is a philosophy that focuses on the nature of knowledge, and positivism is one popular epistemological approach: which will be adopted it in this study. The reason for using this method is as the study has hypotheses that need to be tested it is the most suitable approach.

As a researcher, it is important to have a clear understanding of the philosophical assumptions (objectivist ontology, and positivist epistemology) to simplify the research design. The aim of implementing objective (ontology) philosophical assumptions is the social science nature of this study exploring relationships between institutional delivery services and student satisfaction. Furthermore, these services are measurable facts and considered as true social reality (Saunders et al., 2016). On the other hand, the purpose of adopting positivist (epistemology) philosophical assumptions in this study are to find the relationship between the reputation of the institution and student perceptions, and to discover the reasons for high withdrawal rates in federal HEIs, while explaining the influence of the delivery of services on

student satisfaction. Since this research study is based on real data collected from two federal institutions, a positivist philosophy shall be implemented (Saunders et al., 2016).

On the other hand, Saunders et al. (2016) explain that axiology is a research philosophy that focuses on the role, values and ethics of both researchers and participants. As this researcher works at UAEU, it is believed it is critical to have more information on improving the quality of services. This information can be obtained from student satisfaction surveys, or by meeting with students to discuss the services they wish to have available. Furthermore, achieving this needs cooperation if any gaps in the education system are to be bridged, as well as improving or adding new services within the higher education sector. Moreover, staff at HEIs are responsible for providing the students with high-quality services which reflects on the reputation and institutional development.

Currently, this researcher is working at UAEU and dealing with students every day. From the researcher's experience with the students, they are always seeking a better opportunity or higher quality of service. As a researcher, ethical standards must always be followed and neutrality maintained when writing the study and not aligned to UAEU as the employer. All the data collection, analysis and interpretation processes should treat all two federal institutions equally and fairly.

In general, the HE community provides students with all kinds of services and knowledge to prepare them for a future contribution to the well-being of the broader community. To achieve that, the HE is responsible for educating students and must

first enrol and retain them, while cutting down dropout rates. This study will add more value to my work, as well as to HE, in terms of determining the reasons for the high rate of withdrawal, and finding solutions.

### **4.3 Research Design**

The research design is a vital part of any research project, and is more critical than simply selecting either a quantitative or qualitative approach. The research design underpins the quality of the whole project (Blumberg, Cooper & Schindler, 2008). Moreover, Saunders et al., (2016) suggest that a researcher using a sound research design to build their plan in terms of collecting, measuring and then analysing the data should be able to answer the research questions. Furthermore, project design of this sort can help us to understand the best method in terms of time, cost constraints, and the data collection techniques.

#### **4.3.1 Research Strategy: Survey**

Saunders et al., (2016) mention many research strategies and one of the most popular is the survey. This study will adopt a survey as part of a deductive approach. A survey is the best technique to help understand the sample's behavior by looking at the questionnaire. Moreover, it has many advantages such as flexibility, low cost and not taking up too much time. On the other hand, the main disadvantage of this strategy is the limited number of questions in the survey.

Moreover, the researcher can choose the type of questionnaire design (either an online survey or hard copy). It depends on the researcher's point of view which is the best

method. The response rate will usually be higher with a hard copy survey as faculty can be asked to distribute and collect responses in lessons. Furthermore, faculty can be ‘trained’ to offer guidance to the respondents and deal with any queries or problems that they may have. An online survey is better in term of archiving documents and ease of analysis, but it takes more time in term of following up with the target sample (undergraduate students) and you may need to keep sending out reminder emails.

This research study will use a hard copy survey, rather than online, to investigate the hypotheses and answer the research questions. The reasons of using hard copies are: it is more affective, faster, comments might also be observed or added and it saves time in terms of receiving the responses quickly. The disadvantage of this technique is the cost of printing the survey as a hard copy, and later collecting and entering the data into the system to analyze. In conclusion, the study will adopt the hard copy method.

#### **4.3.2 Time Horizon (Cross-sectional)**

Blumberg, Cooper and Schindler (2008) identified two main types of time dimension that researchers may use for both qualitative and quantitative studies. The first type is called ‘cross-sectional’ which is implementing the test one time only without any plan to repeat it later. The second type is ‘longitudinal’ where the test can be repeated several times. This is suitable for topics where the results could change over time, and it is mainly associated with the diary perspective. Thus, the most appropriate time horizon for my research is cross-sectional because data collection will be one time only as there is no need to repeat the same test with the same sample.

### 4.3.3 Quality of Research Findings

The quality of the research findings is an essential part of research as it reduces the possibility of measurement error in the data. For instance, Saunders et al., (2016) explored a business research project and highlighted the tools necessary to judge the quality of the research findings: they are validity, reliability and generalizability.

#### 4.3.3.1 Validity

Validity is defined as being concerned that the truth claims created by the research project are accurate (Bell & Bryman, 2015). It is essential to ensure the quality of the research findings. It makes sure that the measures used in the research to find the results are accurate and correct (Hair et al., 2014). According to Bell and Bryman (2015), there are four different types of validity test as follows:

- 1) **Measurement Validity:** is designed to explore whether the questions reflect the main concept of the research or not. This helps to measure all the items in the questionnaire and make sure they are accurate.
- 2) **Internal Validity:** refers to causality and explains the relationship between two or more variables. In other words, it clarifies the causal relationship between the independent variable and the dependent variable in the research project.
- 3) **External Validity:** explains whether or not the results of the study questionnaire can be generalized and are theoretically correct.
- 4) **Ecological Validity:** refers to worrying about the finding of the questions and if they are applicable to everyday social, scientific life or not.

Furthermore, the following are some validity tests:

- Factor analysis: is one common technique used to summarize important information from a large number of variables into a smaller number of factors (Zikmund, 1997).
- Structural Equation Modeling (SEM): is a technique for analyzing data. The researcher uses this technique for separating out the relationship between the dependent variables in a research project (Hair et al., 2014).
- Regression analysis: is when the research project includes one or more dependent variables. If the project has one dependent variable, the technique that needs to be addressed is called ‘simple regression’. However, if the project has more than two dependent variables, the tool required is called ‘multiple regression’ (Hair et al., 2014).

#### 4.3.3.2 Reliability

Reliability is carried out to ensure that the measurements used in the research project are error-free (Hair et al., 2014). Furthermore, it refers to the research findings in cases where the researcher gets the same result the first time and when the test is repeated with a different sample. So, it is a measure of the consistency of the study (Veal, 2005).

According to Bell and Bryman (2015) there are some factors involved:

- **Stability:** refers to a high correlation between two variables in the research project.
- **Internal reliability:** refers to a relationship between each variable. There are two ways to measure that, which are ‘split-half reliability’ and ‘coefficient alpha’.

Cronbach's Alpha is a technique to measure the reliability coefficient of the questions (Hair et al., 2014). Cronbach's alpha has a minimum score of 0.5 - 0.6 on a scale between 0 to 1 (Bell & Bryman, 2015). However, the expected score of coefficient alpha above 0.7 has a minimum score of 0.5 - 0.6 on a scale from 0 to 1. Thus, the best score for reliability should be 70% (0.7) or above. 60% (0.6) is also acceptable in some cases. Furthermore, the higher the score, the more positive the relationship and the subsequent reliability of the variables.

For this reason, Cronbach's Alpha is the reliability test used in this research. The test will be implemented in two ways. First, the research will measure the selected survey questions for reliability (75%, 0.75 or above). Secondly, the study will analyse and measure the data (for example: measure the Perceived Service Quality of Teaching).

#### **4.3.3.3 Generalizability**

According to Veal (2005) generalizability refers to the probability of getting the same result when using the same instrument with a different sample. In other words, will the model work in any situation and thus generalize the findings, or is it specific to that situation? Moreover, it is important that research is of general benefit to the community and that the results could be replicated and utilized in different institutions around the world.

The results of this study may be generalizable to other public higher education systems in the Gulf region, as they share certain similarities in terms of curriculum, institutional culture, and having a high proportion of domestic students. Furthermore, results could



be generalizable globally, but to a lesser extent, because the independent variables in this study have already been shown to have an impact on student attitudes and behaviors in multiple global studies.

Furthermore, most HEIs around the world have diverse students from different cultures and nationalities. Those students need social support, and high quality services. Kang (2014) found that international students are generally seeking a comfortable environment. Moreover, Kim et al. (2010) found that social identification had the power to persuade students to stay and support the institution. The issue of high higher education withdrawal rates is widespread. Many scholars have studied student dropout (Dupéré et al., 2015; Heublein, 2014; Patrick et al., 2016). They discovered the same common factors: a student finds a job, a student is under pressure, a student not focusing on and social activities, and a lack of preparation at secondary school level.

#### **4.3.3.4 Common Method Bias**

Common method bias (CMB) is majorly caused by the instrument instead of the variations in response by the respondents. When an instrument causes variation in responses rather than respondents' actual predispositions common method bias can be realized. Therefore, the researcher will be analysing variances caused by the bias introduced by the instrument. Furthermore, the solution obtained is affected by noise emanating from instruments which are biased. For the researcher to confirm if common method bias is significant in a particular study, the researcher may consider using Harman's single factor score. Here the items measuring a latent variable is put into a single factor which is common to all items. If the single factor's total variance

is found to be smaller than 50%, then a conclusion can be made that the common method bias does not affect the data; hence the output result can be relied on. Harman's approach can only test common method bias, but cannot be used to control common method bias thus it is not a suitable method for testing common method bias (Castejon et al., 2010). For example, a factor might be measuring a single trait and one, therefore, cannot be sure if there is method variance in this factor. Thus, the researcher may further consider at least other two different methods to establish common method bias. The other methods can include, for example, peer-report and self-report. Self-report is a report on a personality assessment. It is one of the psychological tests which can be administered on a computer or given in a paper-and-pencil format. The test presents some questions or statements that give descriptions on certain qualities of the test subjects, or the statements or questions may not describe those characteristics at all. In peer-report, it will be more of evaluating your co-worker instead. Allowing construct indicators of interest has an advantage that one can estimate the impact of method factors (Roth et al., 2013; Podsakoff et al., 2012; Podsakoff et al., 2003).

According to Veal (2005) generalizability refers to the probability of getting the same result when using the same instrument with a different sample. In other words, will the model work in any situation and thus generalize

#### ***4.3.3.4.1 Harman's Single Factor***

Harman's single factor test is one technique of the common bias method variance and it is a very easy and sample to be used by SPSS software. Most of the researcher used this test to control all the variables of the data by entered them into one single factor.

When the factor accounts for the bulk of the covariance among the measures, it is inferred that a significant degree of common method variation exists. The one-factor variance of more than 50% during an exploratory factor analysis with unrotated factor solutions shows common method bias (Fuller et al., 2016).

#### ***4.3.3.4.2 Common Latent Factor***

It has been found that common method bias occurs in the research when variations are caused in responses by the instrument rather than the actual predispositions of the participants that the instrument attempts to uncover. This term is used in applied statistics. The common latent factor (CLF) is used to confirm that if there is a common method bias present in the data based on the threshold values. In a large study when the question is used to retrieve the information from the various participants then there is a risk of common method bias or variance, however, the common latent factor method can be used in the research to remove the bias (Eichhorn, 2014).

The common latent factor promises statistical remedies such as partial correlation procedure and direct measure of common bias. This method also allows questionnaires to load on their theoretical constructs. Harman's test can be used to control and remove the possible common method bias (Kim et al., 2010). Research shows that the single factor test is not sufficient in the study to eliminate variance or bias, and it is not possible to rely on these methods, however, to measure and identify any singular attribute these methods can be adopted. However, to eliminate CMV (Common Method Variance) or bias is necessary to use two different approaches. For instance, the peer or self-report method can be used. These different methods are known as latent

factors to reduce bias from research. The upside of permitting the markers of the construct to stack onto the attribute factor just as the technique factor is that the method of strategy components can be assessed (Afthanorhan et al., 2021). The strategy presented by Sun et al. for removing the latent factors from the social and ecological factors. Halfway least squares and way displaying were utilized to investigate the causal connections between these elements and the impact of the main factor in the study which has been distinctive and was found a huge affiliation between the pervasiveness of the main factor and the inactive variables (Rao, 2017).

Apart from utilizing the single-factor test and the connection network strategy, it is suggested that analysts should use other factual procedures, like the straightforwardly estimated statistical technique and the deliberate reaction style method, that permit scientists not exclusively to recognize CMV yet additionally to evaluate the nature and the greatness of the predisposition. However, the straightforwardly estimated latent factor strategy, analysts model some possible wellsprings of CMV as latent develops. This allows them to evaluate the likely inclinations and fractional out their impacts on the exploration factors. A significant limitation of this procedure, nonetheless, is that there are some other likely reasons for CMV that cannot be straightforwardly estimated including consistency biases and normal scale properties (Meseguer-Artola & Rodríguez-Ardura, 2020).

#### **4.3.3.5 Confirmatory Factor Analysis (CFA)**

Confirmatory factor analysis (CFA) is used in an investigation analysis where a test is done to determine how well a number of constructs is represented by measured variables. (CFA) just like exploratory factor analysis (EFA) is a multivariate statistical

procedure which differs from EFA in that in EFA, it is simply data exploration and just gives the information concerning the number of factors required when data is presented, while with CFA, the number of factors required in the data is explained by the researcher and differentiate latent variable which is related to a measured variable (Marsh et al., 2014; Singh & Prasher, 2014; Black & Babin, 2019). As a tool, confirmatory factor analysis can be used in confirmation or rejection of measurement theory. The general procedure for using confirmatory factor analysis involves, firstly, the individual construct is defined theoretically. Defining these individual constructs, a pretest is done to evaluate construct items then CFA is used to do the confirmatory test on the measurement model. Secondly, the general measurement for model theory is developed by considering unidimensional concepts within error variance of construct and between error variance of the construct. The research should have a minimum of four constructs with constructs, each containing three items (Carvalho et al., 2015). Thirdly, a study is designed to give verified results by specifying the model of measurement. Here, the construct is considered to be allocated one loading estimate value (Cengiz & Fidan, 2017). The two methods used in the third step for identification is ordering condition and rank condition. Lastly, the model of measurement authenticity is assessed by comparing the non-empirical model of measurement with reality model to examine the fitness of the data. There are various indicators used to check the authenticity of the measurement model, such as factor loading latent variable where a value of more than 0.7 indicates that the model is valid. Other indicators include Chi-square tests.

Furthermore, AMOS refers to software in statistics that is an abbreviation from the analysis of a moment structures. This is an extra module added in SPSS called AMOS

whose main role is to assist in the SEM (Structural Equation Modelling), analysis of path, as well as analysis that involves confirmation of certain factors (Hair et al., 2014). On the same note, this kind of analysis is called (AOC) analysis of covariance or causal modelling software (CMS). In AMOS, there is a visualization of different language programming necessary in the analysis of structural equation modelling (SEM). From AMOS, the graphical presentation of modes has been made easy through the adoption of tools used in simple drawings, (Barnidge & De Zúñiga, 2017). With the help of AMOS, it is easy to perform computational statistics involving SEM thus display key findings.

Moreover, AMOS mainly applies other statistical methods such as Browne's asymptotically distribution-free criterion, Generalized least squares, Unweighted least squares, Maximum likelihood, and Scale-free least squares when it comes to the calculations of the coefficients of SEM, (Hair et al., 2014).

#### ***4.3.3.5.1 Confirmatory Factor Analysis and Sample Size***

CFA tend to give solution to some of the challenging questions when it is used; how accurate for example, your survey questions measure one factor and whether an instrument having twenty questions can have clearly identifiable constructs (Wu, 2009). The following assumptions are considered when dealing with confirmatory factor analysis; confirmatory must include multivariate normality, the sample size must be sufficient enough with  $n > 200$ , the data being used must be randomly sampled

and a priori model specification should be correct (Awang et al., 2015) (Perry et al., 2015).

#### ***4.3.3.5.2 Model identification***

Model identification involves introducing constraints on parameters. It is known that a model may or may not be identified with a set of constraints. It is also known that a model can or cannot be restricted to a few classes of distribution constraint sets. If a set can make the researcher identify a model without restraining the model within the boundaries of the class of distribution to a subset, then they are called the identification condition. Identification condition is applied for the model, which is statistically equivalent and identifiable. Only a single parameter sets satisfying a specific identification condition is discovered to index the distribution in the model. Therefore, identification condition cannot alter the model fitness, but instead can choose from the several parameters sets a parameter that can fit the model well.

In the measurement of the degree of freedom, both unique covariance and variance terms should be greater than the number of estimated parameters and to calculate the degree of freedom for a SEM model, this equation is required  $= \frac{1}{2} [(p)(p + 1)] - k$ . In the equation,  $p$  is referred to the total number of observed variables in the research, while  $k$  is referred to the number of estimated (free) parameters (Hair et al., 2014).

#### ***4.3.3.5.3 Factor Loadings and Goodness of Fit Indices***

Commonly used in social research, CFA is one of the distinguished forms of factor analysis used in testing the consistency between construct and understanding of a researcher on that particular constructor factor. Therefore, the goal of CFA is testing how a given data fit the researcher's hypothesized measurement model. The hypothesized model may base on the analytic research carried previously by the researcher or existing theory.

To carry out CFA, the researcher develops first the hypothesis about the construct they believe are underlying the used measures and may establish some constraints on the model according to the developed hypothesis. When such constraints are imposed by the researcher, then he/she is forcing the model and their theory to be consistent. The researcher, therefore, needs the model fit measure so that they can assess how the estimated model can explain the covariance between the measures or items in the model. The poor fit will be obtained if the imposed constraints by the researcher became inconsistent with the sample data leading to the rejection of the model. A poor fit can be caused by some items measuring multiple factors or due to the multicollinearity between measures or items.

In general, it is not required for the researcher to report all the fit indices of the study and three or four goodness of fit indices can be proposed to cover incremental, absolute, and parsimony fit indices (Hair et al., 2014). Furthermore, this study excludes the parsimony indices from the report since this research study have only one model. However, the report includes the essential indices to indicate model fit and consider sample size and the complexity of the model. Those indices are:



- **Absolute fit indices:** Normed Chi-square (CMIN/DF), Standardised Root Mean Residual (SRMR), and the Root Mean Square Error of Approximation (RMSEA).
- **Incremental fit indices:** Comparative Fit Index (CFI), Non-normed Fit Index (TLI), and the Relative Fit Index (RFI).

#### ***4.3.3.5.4 Research Confirmatory Factor Analysis***

Measurement models refer to indirect or detailed models that show the relationship between latent variables and their indicators. There are several basic questions which are supposed to be considered before a measurement model is built; whether there is casual or effect indicators, whether there are single or multiple latent variable indicators, whether the latent variable is continuous or noncontinuous, whether the indicators are continuous or noncontinuous, whether one or more than one latent variable affects the indicator.

The model can be inferior in fitting the estimated data in confirmatory factor analysis. To improve such model fit, the following indices can be applied accordingly on the same (Hair, 2014; Roth et al., 2013):

- Chi-square ( $X^2$ ) is used to compare the observed variance-covariance matrix to predicted variance-covariance matrix. When chi-square is 0, the fit is perfect while the fit becomes poor as it increases from zero. This comparison is considered satisfactory when it is statistically nonsignificant when p-value is more than alpha level. The problem with chi-square is that it highly

depends on the number of variables, and it is difficult to fail to reject the null hypothesis.

- Degree of freedom is only considered when it is more than 3 in large samples where the sample size is more than 200, more than 2.5 in sample size between 100 and 200 and more than 2 in small sample sizes of less 100.
- Akaike Information Criterion (AIC). AIC is used just like the degree of freedom above, but it can be adjusted with the complexity of the model. Theoretically, AIC ranges from a negative value (perfect fit) to a positive value (poor fit). When it is used to compare competing models, one with the lowest AIC is considered.
- Normed Fit Index is another index used to improve the model fit. It measures the improvement in the proportion of the overall fit of the model, which has been hypothesized when compared with the independent model. NFI ranges from 0 (poor fit) to 1 (perfect fit).

This study adopts the following indices in Table 4 with the stander tolerable ranges because they are the most insensitive to sample size, model misspecification and parameter estimates (Hu & Bentler, 1999; Schreiber et al., 2006; Loon Hoe 2008; Hair et al. 2014; Gallagher, Ting & Palmer, 2008):

Table 4: Groups and values of model fit indices

Goodness of fit values	Incremental fit indices
<ul style="list-style-type: none"> <li>• <math>CMIN/DF &lt; 5</math></li> <li>• <math>RMSEA &lt; 0.08</math></li> <li>• <math>SRMR &lt; 0.08</math></li> </ul>	<ul style="list-style-type: none"> <li>• <math>CFI \geq 0.90</math></li> <li>• <math>TLI \geq 0.90</math></li> <li>• <math>RFI \geq 0.90</math></li> </ul>

## **4.4 Data Collection Instrument**

### **4.4.1 Scales for Quantitative Study**

This study has eight constructs. Each construct is measured with a validated and published scale (Table 5). The table below represents the items in each scale and the source of each scale. The measurement scales have strong internal reliability, indicated by the fact that the lowest Cronbach's alpha score is 0.645, and this means the correlation between the items on the scale is acceptable. Cronbach's alpha is a common test used to measure the reliability of the internal consistency of a research scale, when the study has employed multiple items (Hair et al., 2014).

Generally, the minimum value for Cronbach's alpha to measure reliability is 0.70, and in some exploratory research even 0.60. In other words, the expected score should be above 0.7 and has a minimum of 0.5 - 0.6 on a scale from 0 to 1. Thus, the best score for reliability should be 0.7 or above, and 0.6 is also acceptable in some cases. Furthermore, the importance here for the researcher is the positive relationship between items and Cronbach's alpha regardless of score. Thus, having a large number of items in the scale will increase the level of reliability. Although the test is sensitive to a great number of items, a result of 0.60 for a scale with only two items may be considered acceptable in an exploratory research study (Hair et al., 2014).

Moreover, the higher score suggests a positive relationship and increases the reliability of the variables. Nevertheless, it also may indicate that the survey has redundant items, so it is unacceptable to have a high Cronbach's alpha with a score of more than 0.92.

For this reason, Cronbach's alpha is the reliability test used in this research, and the acceptable score for the survey items to be deemed significant is above 0.70 but below 0.92. The reason for having items that have a score of 0.92 is the variable of Student life and support that have this scaled score.

According to Table 5, the lowest Cronbach's alpha score is 0.645 was surprised even if this scale is acceptable but it was required further analysis in the pilot study and it performed well as it did in the final survey, scoring over .90 as Table 7. As mentioned earlier, a reliability score of 0.6 is acceptable in some cases because the positive relationship between items and Cronbach's alpha is more important as the results may have been affected by the low sample size or now number of items in the scale.

Table 5 : Scale items of the thesis study

Constructs Name	Items Name and Code	Cronbach's Alpha	Source
Perceived Service Quality of Teaching	QTS.1: The teaching staff motivates me to do my best work	0.75	Mao, W. and Oppewal, H. 2010. Did I choose the right university? How post-purchase information affects cognitive dissonance, satisfaction and perceived service quality. <i>Australasian Marketing Journal: AMJ; St. Lucia</i> 18(1), pp. 28–35.
	QTS.2: The teaching staff are extremely good at explaining things		
	QTS.3: The teaching staff work hard to make their subject interesting		
Student life and support	SLS1: My university/college has lots of clubs and societies for students	0.92	Wilkins, S. and Stephens Balakrishnan, M., 2013. Assessing student satisfaction in transnational higher education. <i>International Journal of Educational Management</i> , 27(2), pp.143-156.
	SLS 2: My university/college provides accommodation for students		
	SLS 3: My university/college has a good range of facilities, e.g., a refectory, sports and leisure provision		
	SLS 4: My university/college has a good careers advice and internships service		
	SLS 5: A lot of leisure activities and entertainment are provided for students		
	SLS 6: There is a lively social scene on my university/college		
Social Identification	SI.1: I feel a bond with the other students in my university/college	0.88	Wilkins, S. et al. 2016. The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. <i>Studies in Higher Education</i> 41(12), pp. 2232–2252. doi: 10.1080/03075079.2015.1034258
	SI.2: It is pleasant to be a member of the student cohort in my university/college		
	SI.3: Being a member of student cohort in my university/college give me a good feeling		
	SI.4: Fellow students are a source of friendship for me		
	SI.5: Fellow students are a source of future networking for me		

Organizational Identification	OI 1: I feel strong ties with my university/college	0.87	Wilkins, S. et al. 2016. The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. <i>Studies in Higher Education</i> 41(12), pp. 2232–2252. doi: 10.1080/03075079.2015.1034258
	OI 2: I feel proud to be a student at my university		
	OI 3: I feel a strong sense of belonging with my university/college		
	OI 4: I am glad to be a student at this university/college		
Student Satisfaction	SS.1: So far, my university/college has met all of my expectations.	0.89	Wilkins, S., Balakrishnan, M.S., & Huisman, J. (2012a). Student satisfaction and student perceptions of quality at international branch campuses in the United Arab Emirates. <i>Journal of Higher Education Policy and Management</i> , 34(5), 543-556
	SS.2: I am very satisfied with my university/college and would definitely choose it again		
	SS.3: My choice of university/college was a wise decision		
	SS.4: I would recommend my university/college to friends		
Intention to Stay	IS1: I intend to graduate within four to six years after I enrolled in my university/college	0.645	Sutter, N., & Paulson, S. (2017). Predicting college students' intention to graduate: a test of the theory of planned behavior. <i>College Student Journal</i> , 50(3), 409-421.
	IS 2: I plan to graduate within four to six years after I enrolled in my university/college		
	IS 3: I will make an effort to graduate within four to six years after I enrolled in my university/college		
	IS 4: I expect to graduate within four to six years after I enrolled in my university/college		
Supportive Intentions	SP1: I will recommend my university/college to others	0.87	Balaji, M.S., Roy, S.K. and Sadeque, S., 2016. Antecedents and consequences of university brand identification. <i>Journal of Business Research</i> , 69(8), pp.3023-3032.
	SP2: I will recommend my university/college to those who ask or seek my advice		
	SP3: I will recommend others on my university/college social media (e.g., Facebook or twitter)		
	SP4: I will post positive comments about my university/college on my social media (e.g., Facebook)		
	SP5: I would make suggestions to my university/college as to how it can be improved	0.84	
	SP6: I would let my university/college know of ways that could make it better serve my needs		
	SP7: I would share my opinions with my university/college if I felt they might be of benefit		
	SP8: I would contribute ideas to my university/college that could help it improve service		
	SP9: I would wear clothes (apparel) with my university/college logo	0.87	
	SP10: I would display a sticker (e.g., car or self) with my university/college		
	SP11: I would display merchandize (e.g., umbrella, mug) with my university/college		
	SP12: I would attend future events being sponsored by my university/college	0.81	
	SP13: I would attend future functions held by my university/college		
The Reputation of the Institution	RE1: The academic programme run by my university/college is reputable	0.84	Ali, F. et al. 2016. Does higher education service quality effect student satisfaction, image and loyalty?: A study of international students in Malaysian public universities. <i>Quality Assurance in Education; Bradford</i> 24(1), pp. 70–94.
	RE2: My university/college has a professional image		
	RE3: My university/college has a good image		
	RE4: My university's/college's graduates are easily employable		

### Measurement Section:

As in Table 5, there are some modifications to the original journal entries to fit the current study and to make sure that the sample target of undergraduate students who are still in their first year understand all the items on the survey to be able to answer the questions. At the same time, it is important to use a scale that normally measures Bachelor's students' responses. Thus, Table 6 is the present status of the items for each construct with appropriate modifications and added comments.

Table 6 :Modification in the Scale items of the thesis study

Constructs Name	Items Status	Reason of Reworded/Modified the items
Perceived Service Quality of Teaching	Originally Published	-
Student life and support	Appropriately Modified	EC.1, 2, 3, 5 and 6 have been modified by adding (College or University) to be clearer for students. The reason of this change is the target students of this study are still in their first year that called "Foundation Program". In this period "first year", most of the students are still at the early stage to decide which degree program to choose until they complete the first year. However, they already chose their college before they join the university. Moreover, institution B is College not a university like institution A.
Social Identification	Appropriately Modified	SI.1, SI.2 and SI.3 have been modified the (Degree Programme) to be (College or University). The reason of this change is the target students of this study are still in their first year that called "Foundation Program". In this period "first year", most of the students are still at the early stage to decide which degree program to choose until they complete the first year. However, they already chose their college before they join the university. Moreover, institution B is College not a university like institution A.
Organizational Identification	Appropriately Modified	OD.1, 2, 3 and 4 have been modified by adding (College or University) to be clearer for students. The reason of this change is the target students of this study are still in their first year that called "Foundation Program". In this period "first year", most of the students are still at the early stage to decide which degree program to choose until they complete the first year. However, they already chose their college before they join the university. Moreover, institution B is College not a university like institution A.

Student Satisfaction	Appropriately Modified	SS.1 and SS.2 have been modified the (Degree Programme) to be (University/College). The reason of this change is the target students of this study are still in their first year that called "Foundation Program". In this period "first year", most of the students are still at the early stage to decide which degree program to choose until they complete the first year. However, they already chose their college before they join the university. Moreover, institution B is College not a university like institution A. Furthermore, one question has been deleted because its repeated.
Intention to Stay	Appropriately Modified	The questions have been modified by adding (College or University) to be clearer for students. The reason of this change is the target students of this study are still in their first year that called "Foundation Program". In this period "first year", most of the students are still at the early stage to decide which degree program to choose until they complete the first year. However, they already chose their college before they join the university. Moreover, institution B is College not a university like institution A. Furthermore, two questions have been deleted because its repeated.
Supportive Intentions	Appropriately Modified	The questions have been modified by adding (College or University) to be clearer for students. The reason of this change is the target students of this study are still in their first year that called "Foundation Program". In this period "first year", most of the students are still at the early stage to decide which degree program to choose until they complete the first year. However, they already chose their college before they join the university. Moreover, institution B is College not a university like institution A.
The reputation of the Institution	Appropriately Modified	The questions have been modified by adding (College or University) to be clearer for students. The reason of this change is the target students of this study are still in their first year that called "Foundation Program". In this period "first year", most of the students are still at the early stage to decide which degree program to choose until they complete the first year. However, they already chose their college before they join the university. Moreover, institution B is College not a university like institution A.

#### **4.4.2 Questionnaire design**

As this research study is a questionnaire designed to collect data from university students, designing each question to meet the aim of this study was required. According to Saunders et al. (2016), questionnaires are one of the most popular methods used to collect data directly from a response sample. Designing the questions is a critical stage for the researcher as they have to ensure that the item will cover all the research questions.

Having a clear ethical statement on the first page is required and standard. This statement needs to be agreed to before answering the questionnaire. This researcher will plan to prepare and arrange all the ethical approval letters from the two federal institutions during the summer to be ready to start collecting the data in September 2019.

The questionnaire will comprise three parts. The first part will cover introducing the research topic, the ethical statement with some explanation about the confidentiality required. The second part will cover the 47 items that cover the 8 concepts in the research study (perceived service quality of teaching, student life and support, social identification, organisational identification, student satisfaction, intention to stay, supportive intentions and reputation of the HEIs). The structure of the questions includes 10 sections, and each section contains three to 13 items. The third part is section 11 and will have five items that include demographic questions to make sure that the sample is the actual target. The survey will measure all dependent and independent variables, and answer the questions using a seven-point Likert scale ranging from '7-Strongly agree' to '1-Strongly Disagree'. It will also help to mediate the reasons for dropping out and the relationship between institutional reputation and student satisfaction. A copy of the questionnaire is available in (Appendix 2).



## **4.5 Sample**

The researcher must select sampling techniques to match the desired research project.

### **4.5.1 Population**

The sample population are students who are studying in HEIs in the UAE, and are potential first year students. The students are from two federal institutions, and they are undergraduate students who are studying on a full-time basis. The purpose of targeting undergraduate students who are in their first year is that the majority of student withdrawal happen in this period. Furthermore, those students are available most of the time in the institutions because it is required of them to study full-time. Moreover, most part-time students are working, and have responsibilities such as workload or family which could affect their performance at the institution, even though tuition is free for undergraduates in federal institutions. Thus, this study will exclude any students who are studying part-time to avoid any external factors not related to institutional services that could influence the withdrawal rate. The total target number of participants is 450 students (200 + students from each institution). The sample size has a confidence level of 95% and an error of 5%.

### **4.5.2 Sampling Frame**

The sample frame is a list of elements from the target population, and can exclude aspects that are not within the range of the research (Zikmund, 1997). For example, this research study will list all the university students in the UAE as one population. The frame will exclude students who do not fit the desired demographic of first year students.

Having the exact details of each member of that population is too challenging and unnecessary. Both the CAA and Ministry of Higher Education collect such data but not in a consistent way that could be used in this research. Plus, such information is not made available to the public on the grounds of confidentiality and commercial sensitivity.

#### **4.5.3 Sampling Technique**

There are different sampling techniques that researchers can use. According to Blumberg, Cooper and Schindler (2008), one sampling techniques is using probability or non-probability sampling. Probability is a technique that focuses on a random sample, while non-probability is a technique for convenience sampling a non-random sample. Moreover, Saunders et al. (2016) have observed that non-probability is a more popular technique for selecting samples in business research because the size of the market sample may not be suitable for other techniques. Furthermore, it gives the researcher more opportunities to select the research sample and not use time on probability sampling.

Furthermore, non-probability sampling is a technique for choosing a sample dependent on personal judgment or convenience (Zikmund, 1997). Therefore, this research will follow the non-probability approach because it is not time consuming nor measuring a non-random sample. Moreover, a convenience sampling technique is best for large scale explanatory research and is extensively used at little cost (Zikmund, 1997). However, this study will actually adopt a purposive sampling strategy as the sample comprises only first-year, full-time undergraduate students (the most likely to consider

withdrawal) in the two federal institutions (selected to enable analysis of the influence of institution reputation).

The data collection will take place in two federal institutions in the UAE as the following:

- **Institution A:**

Institution A is the oldest and greatest university in the UAE and identified as an inclusive, research rigorous university devoted to innovation and superiority in teaching and research. The university provides an inclusive range of globally accredited, high-quality programs, and has formed research centres. It appears in World University Rankings with a particularly high score for its reputation among academics. It also achieves a strong score for its proportion of international students, making it a diverse place to study. The aim of institution A is to assure academic quality and accountability and to encourage improvement.

- **Institution B:**

Institution B is also a well-regarded higher education institution in the UAE and has traditionally focused on more vocational programs. It is an accredited institution in the UAE and aims to support the future needs in the different sectors by offering several degree programs for students that prepare the local and expatriate students for the industry with a highly-skilled and knowledge to serve the country. The aim of institution B is to assure the high quality of education and skills of the alumni for the industry.

This purposive sample will be from two federal institutions (Institution A and Institution B) that can be considered as a good sample of UAE undergraduate students as they are known to be more popular than other institutions in the country. The total sample will be 400 students (200 students from each institution). This purposive sample was selected based on the aim and objective of the study as well as answering the research questions by testing hypotheses, exploring causal relationship between variables from the conceptual model and finding results that will suggest solutions to the high withdrawal rate.

#### **4.5.4 Sample Size**

Saunders et al. (2016) point out that researchers prefer to select a sample size with a 95% confidence level and a margin of error of 5% so that the sample can represent the population. In some cases, researchers keep the range of error from 1% to 5% depending on the target population and the sample size. For instance, if the survey were implemented 100 times, the data would be within a 5% margin of error plus or minus the percentage reported most of the time (95 of the 100 surveys). This means, that for a population of 1000 or more, the sample size of 400 will achieved a 5% margin of error and 95% of confidence level. The total sample size of this study is 444 students from the two federal institutions. The survey covered more than 200 students in each of the two institutions. Thus, a total sample of 400 students will give a 95% confidence level with a 5% error margin. At the same time, the sample size of this research has presented well the population of undergraduates in UAE.

## **4.6 Data Collection**

This study will use two approaches for collecting the data. The first is a survey of university students who are studying in two federal institutions in the UAE. The second is secondary data from the UAE University for table 3 to have an overview about the attrition rate and graduation rate for undergraduate student at UAE University in three different cohorts to support this research.

### **4.6.1 Survey**

All the questions in the survey use a 7-point Likert scale from 1=Strongly Disagree to 7= Strongly Agree. The survey will be pre-tested to evaluate the items before distribution to the primary sample. The potential sample is undergraduate students who are in their first year of studying at one of two federal institutions. The survey will be distributed to more than 400 students (200 students in each institution). The procedure is as follows:

- Visit the two institutions and meet the staff who are responsible for these students, such as the Office of Student Affairs.
- Explain to the staff the purpose of my study and the required number of students who should participate and complete the survey.
- Check the database of the students and class schedules to select the best time for visiting and distributing the questionnaire.
- The selected sample should be undergraduate students in the first year of study, the second semester, and enrolled full-time in any major.
- Prepare the hard copies of the survey for the distribution.

- Before distributing the survey in the classes, explain to students the aim and essence of this research.
- Stay with the students until they complete the survey in case they have any questions and then collect the survey.

#### **4.6.2 Secondary Data**

Saunders et al. (2016) describe secondary data as important for both the qualitative and quantitative approach. It can provide the researcher with different kinds of information depending on what the researcher is looking for, such as historical or archived data. This study will need some information in order to understand the relationship between life at the institution and student satisfaction. The data collected from the UAE University and included enrolment trends over the past three years for three cohorts (2013/2014, 2014/2015, and 2015/2016). The data present in table 3 to have an overview about the attrition rate and graduation rate for undergraduate student at UAE University to support this thesis research.

#### **4.7 Prestudy**

According to Carpenter (2018) pretest study is a set of tests that is done through the help of questionnaires. Here questionnaires are tested in statistical terms and on the basis of the small sample of respondents before a full-scale study is done so as to find out any problems like unclear wording or the questionnaire taking a too long time to administer. Such type of pretests might also be utilised for referring to an initial measurement in the form of brand or advertising awareness before an experimental treatment is administered and the subsequent measurements are taken from it. It is just

like the test that is done beforehand so that actual examination. Here the syllabus is the questionnaire which suggests about whether they will be successful or not. On the other hand, Morling (2014) pretesting measures the reaction of the selected group of the persons and assist in determining whether the priority audience will trace the components mainly draft materials appealing, believable and understandable.

Leu et al. (2015) states that it is the benefit of the pretests studies will allow an organisation to ensure that resources do not get wasted when the actual funding is done. At the same time pilot studies suggests about the fact that whether the research will be going to complete in the given time or not. According to Ornstein, (2013) clarification pretest aim in research study is to provide the clarity of the questionnaire, suitability of the participants. There are several kinds of things that can be achieved through the help of the pretest study. The basic thing that they aim to achieve is find out the time needed to complete the research. This is necessary for ensuring that there whether the research will be successful or not. It is also for the researchers as it will suggest that what are the possible obstacles that can arise in the research and what are the things that can be done for removing these obstacles.

As per Compass, (2019) pretest is done to find out following things in the research. This include comprehension, i.e., are the materials being understood by the priority audience and they see the advantages of taking actions. It also helps to find attractiveness, i.e., do the materials used in the research capture the attention of the desired population. It helps in finding out the acceptance of the research, i.e., is there anything about the materials that is inappropriate or offensive. It also has benefit that it checks the ethical aspect of the research, i.e., whether that research or the material

that will be used is ethical or not (Van Wijk & Harrison, 2013). It is also used by the researches such as believability, i.e., whether the materials feel as realistic and believable to the audience. Researchers also try to find through pretest that whether the material induces involvement or not, i.e., whether the audience gets identified with the material or say does it 'feel right' to them. There is also bigger question that they try to find that is relevance, i.e., are the materials associated with the issues that is actually faced by their targeted group of people. There are certain complex things that are also being found out such as motivation or persuasion, i.e., whether the targeted group understand the call to action and motivated to act. Another important aspect is the improvement, i.e., the researcher tries to find that is there anything that can be done to make improvement in the materials as well as to find out the specific suggestions from the targeted people on research will be conducted.

As a conclusion, it can be said that a pretest study is highly critical for the research to be successful. Researchers conduct it so as to validate the materials that will be used for the overall research and to find out whether the audience on which research will be conducted are appropriate or not. If any gap is found in the results that was obtained through the pretest and the objective, they aimed to achieve through the research are different then they need to change the material. The purpose of doing pretest studies is to provide the clarity of the questionnaire, suitability of the participants. This is necessary for ensuring that there whether the research will be successful or not. Moreover, it helps to achieve the research goal by finding out problems in this early stage and revise any change in the questionnaire before using it for the primary sample.



#### **4.7.1 Preparation for the Prestudy**

Atkin and Freimuth, (2013) suggests the procedures of the pretest which include making of the objectives for doing the test. On the basis of it they make the questionnaire. A small set of people are decided on the basis of the research demand or the objective. It is tested on that small set of people so as to find whether they can act as a perfect material for conducting the further test or not. Once their responses are obtained the results are evaluated on the basis of the theories and with the help of tools. The evaluation process is done thoroughly so as to ensure that all the research objectives are evaluated. If any gap remains in the objectives that were set for the pretest and the results that were obtained through pretest then there is a need for changing the questionnaire and further pretest are conducted.

As mentioned eariler, the prestudy is used to validate the questionnaire and test the scale for each item before distribution. Its helps to check on the feasibility, design, and makes the survey better. Moreover, the purpose of using a prestudy test is to get feedback, or comments, on questionnaire items before distributing to the primary sample. Furthermore, the technique is essential to make sure that all items are clear, easy to understand and avoid any problems that could happen.

According to Johanson and Brooks (2010) pretest sample size is influenced by different elments dependent on the purpose of the study and they recommend a reasonable effect sample size of 10 – 15 for small groups and 30 – 40 for bigger ones. Furthermore, Bartlett have a preferred smaple of between 35 – 40 participants (Kotrlik and Higgins, 2001). Therefore, this study will employ the pre-study test and follow the below procedure:

- Prepare a draft of survey questions that covers all the variables. The item list of those questions covered are in the data collection section above.
- As this researcher works in UAEU, they can do this test easily by coordinating with the department in charge to recommend a group of students, or select a class to do the test.
- From available data provided by UAEU, select a group of students or a classroom (40 – 50 students) to roll out the survey questions to check if students understand the items earlier and clearly.
- Be attentive to all the comments and feedback received from the students and write down all the points raised because it may be useful to modify the primary survey.
- Revise and improve the design of the questions to make the survey ready for the primary sample and to preserve the integrity of the validated scales, wherever possible, items will not be added or deleted or modified in such a way that the core, underlying meaning of the item changes.

#### **4.7.2 Implementation the Prestudy**

The organised of the prestudy start at UAEU by visited the enrolment office and request them to provide me with a list of cohorts 2019 schedules in Spring 2020 semester to select one or two classes. Cohort 2019 are still relatively new and still possibly evaluating their choice to study at UAEU. They will be a good presenter for this research.

On the other hand, this researcher faced some challenging on category the list because it was very big and includes all the students in the university. This process takes long

time to sort cohort 2019 and also, it was not easy to separate between the students who enrolled as first or second semester. Moreover, it was very difficult to find a class that has at least 70% students from cohort 2019. However, after long time of searching and sorting the list of schedules, this researcher found some classes.

To start with the pretest, this researcher sent an email to the instructor of a selected class to obtain permission to take 15 minutes of the lecture time to distribute the questionnaire. The instructor replied to the email and agreed to take the last 15 minutes of the lecture. The questionnaire was pretested on 40 participants with the purpose of improving upon the questions as well as a minimum needed to run Cronbach's alpha test, to assess internal reliability of construct measurement scales. Questions asked to the seven participants who were interviewed. Based on the pilot study and the interview, all the questions are clear and easy to understand and the participants complete the answering of all items in the questionnaire. The main comment was in section eight (Intention to Stay) that the questions have the same meaning which they consider as repeated, but it is clear. In conclusion, there is no requirement to add or delete any items in the questionnaire as all of the participants were happy, and the feedback was positive.

The findings from this pretest study were helpful for this research and Table 7 presenting the Cronbach's Alpha score for each construct as follows:

Table 7 : Cronbach's Alpha score of the pretest study

<b>Construct</b>	<b>Cronbach's Alpha</b>
Perceived Service Quality of Teaching (QTS)	0.637
Student Life and Support (SLS)	0.825
Social Identification (SI)	0.885
Organizational Identification (OI)	0.815
Reputation of the Institution (RE)	0.767
Student Satisfaction (SS)	0.911
Intention to Stay (IS)	0.852
Supportive Intentions (SP)	0.893

The important note from Table 7 result is the low scores of the first construct. The score of Perceived Service Quality of Teaching (0.637) is below 0.70 which is a bit low to confirm internal reliability of scales. However, the results may have been affected by:

- The small sample size of this prestudy which was only 40 students.
- The low number of items in this scale. The construct includes only three items.

The Cronbach's alpha test is sensitive to the number of items in the scale (fewer items, lower CA scores). Thus, distributing the questionnaire to a large group of participants (400 students) may increase the result of scales.

#### **4.8 Data Analysis**

The data analysis is one of the most important steps in the research because, during this process, the research will realise the result of the project. Data analysis is the

process of organizing and evaluating the data to interpret the information and answer the research questions. To analyse the data, two software programs are used as below:

#### **4.8.1 Statistical Package for the Social Sciences software (SPSS):**

SPSS is a popular statistics software package that most researchers use to analyse numerical data. This study will use two types of analysis from the SPSS program:

- **Correlation Analysis:**

The first step is to analyse the correlation between the 8 constructs. This technique can analyse the relationship between different variables (Bell & Bryman, 2015). According to Veal (2005), there are three types of correlation (positively correlated, negatively correlated, uncorrelated), and the correlation relationships can be represented by using a scatter plot in SPSS.

- **Exploratory Factor Analysis (EFA):**

Factor analysis is a technique used to summarize important information from a large number of variables into a smaller number of factors (Zikmund, 1997). Exploratory factor analysis is used to confirm the validity of constructs and it avoids any outliers in the response. One of the analysis tests in SPSS to measure the EFA is Kaiser-Meyer-Olkin (KMO).

#### **4.8.2 Analysis of Moments Structures Software (AMOS)**

This research uses structural equation modelling (SEM) because it is used in the analysis the factors and the analysis of associations of structures between the variables that can be measured and those with constructs of latency (Hair et al., 2014). Thus, SEM can measure the relationship between all the constructs of this study as well as measuring the contribution of the five constructs in this study (quality of service, student life, social identification, organization identification and Institution Reputation) on both intentions to stay and support intention through student satisfaction.

AMOS is a software in statistics (SPSS) that is abbreviation from the analysis of a moment structures as an extra module to assist in the SEM, analysis of path, as well as analysis that involves confirmation of certain factors, (Hair et al., 2014). It is a visualization of different language programming necessary in the analysis of SEM as a graphical presentation of modes has been made easy through the adoption of tools used in simple drawings. AMOS helps to perform computational statistics involving SEM, and thus displays key findings and also can help to test several relationships that have more than one outcome or that have mediating variable (Barnidge, & De Zúñiga, 2017). Moreover, there are several outputs from AMOS that are normally obtained upon execution of the analysis which are always displayed on the graphical windowpanes such as total number of variables that have been used in SEM including both the variables observed and those not observed, a key summary statistic presented the values of kurtosis, skewness which in one way or another identifies the type of distribution in the variables (D'Agostino, 2017).

AMOS was developed to help researchers to eliminate errors, improve the results of research and for extending the standard method of research analysis such as analysis variation, correlation, and factor analysis. It is possible to build the reflective and complex relationship more accurately with statistics by the help of programming interfaces such as the AMOS system. This is an application supported in operating systems of computers to help individuals to enhance their research without heavy programming. It has been found that using the AMOS system it is possible to gain more insight from common latent factors. Using the AMOS system in the research method helps to identify the bias (Afthanorhan et al., 2021). AMOS incorporates a simple to utilize graphical interface with a high-level registering engine for SEM. The distribution quality way graphs of Amos give a clear portrayal of models for students and individual researchers. The numeric strategies carried out in Amos are among the best and dependable accessible (Arbuckle 2013).

Furthermore, AMOS having outputs showing any kind of error that might be experienced while executing the commands in case the error term was forgotten while displaying the SEM model results. To add more advantages, AMOS has two outputs to present the research result. 1) The output display can show some of the values of estimations which basically represent the weight of the regression, loading factors, correlation, effects of direction and effect totals among others. 2) The output text can present how fit is the model to indicate the goodness of the fit statistics of the model. On the other hand, the main disadvantage of using AMOS is when model is complex, then it is required to create many images which made the work very tedious (Haviv, 2016).

- **A Measurement Model and the Full Structure Model**

The measurement model was designed to indicate each construct as well as enable the validity of the construct in the research project. Structure modelling can test the hypotheses of the research project and examine the relationship between the independent and dependent variables. Structural Equation Modeling (SEM) is a technique for analysing data, measuring error, and separating the relationship between the dependent variables in the research project (Hair et al., 2014).

- **Mediator Analysis – Student Satisfaction:**

The conceptual model of this study has one construct as mediator, which is Student Satisfaction. Student Satisfaction will be tested to either accept or reject the null hypothesis and then see if the value has been positively or negatively mediated.

The mediator test will measure the relationship between the constructs of the model and the mediator construct. Student Satisfaction is a mediator between the five predictive constructs: quality of service, student life, social identification, organization identification and Institution Reputation. Thus, the using the mediator test can analysis the indirect relationship mediated by Student Satisfaction.

As it was explained in Chapter 3, the study is fundamentally about how first year undergraduate students evaluate their “purchase decision”, i.e., the decision to study at a particular institution.

Also, the study is interested to discover what its effect may be on student satisfaction and the role of reputation on determining student satisfaction (or dissatisfaction).



By measuring the factors that impact student's decision (QTS, SLS, SI, OI, and RE) through SS, a clear picture of student decision "purchase decision" will appear and explain the impact of the five factors on student satisfaction as direct and related.

Based on Paul and Pradhan (2019), many research studies has been investigated the relationship between student satisfaction in Higher education and the perceived quality of education. Thus, there is no need to re-examine the impact of student satisfaction as a mediator again on the perceived quality in this study.

Additionally, Alves and Raposo (2007) address the experience of students at HEIs and the significant influence of it on their levels of satisfaction. The provided services and learning experience at the institution can present the level of satisfaction and loyalty to the institution. Thus, a positive word of mouth from current or graduated students can encourage the prospective students to join the same institution so student satisfaction is a sensitive factor that impacts institutions.

To present the results of this mediator variable (Student Satisfaction), the survey was design to be distributed to students from two different institutions. Institution A have high reputation level and institution B have lower reputation level. The result comparison of the two different institutions can explore whether the role of satisfaction influences on the scores level of dissonance or not. This part will be present more in mediation analysis in chapter 5.

#### 4.9 Ethical Consideration

According to Bell and Bryman (2015) ethical consideration is required of any researcher because it helps them to stay away from bias and controversy. For instance, different ethical points must be considered by the researcher before starting data collection. The following are some important procedures in the ethics process:

- **Confidential:** information provided by participants/institutions will be confidential, and only for study. They should be made aware of this.
- **Happiness:** participants should be willing to do the survey. Furthermore, the institutions should be happy to cooperate with the research.
- **Frankness and Clarity:** the questionnaire should be clear and easy to understand by the participants to engender valid results. They are free to ask questions if needed. It can help the researcher to conduct the research efficiently.

## **Chapter 5: Results**

### **5.1 Introduction:**

The results chapter aims to assess the data obtained from the current study by using two methods. The first method is using Statistical Package for the Social Sciences (SPSS) version 27 to analysed preliminary data. The preliminary data analysis section includes: checking missing values, checking for outliers, assessing data normality, assessing data linearity and homoscedasticity, assessing multicollinearity, constructs efficacy assessment, reliability test and descriptive analysis. The second method is using the Analysis of Moment Structures (AMOS) software version 27 for the structural model analysis to test the hypotheses of this study and mediation analysis. Furthermore, this chapter will also include three techniques: exploratory factor analysis (EFA) to explore the relationships among the items for the factor, Common Method Bias to and confirmatory factor analysis (CFA) to assessment of scales' validity.

### **5.2 Preliminary data analysis:**

In any research process, the subsequent step that follows data collection is a preliminary analysis. Preliminary data analysis refers to the process in which data is edited and corrected in preparation for further analysis (Sharma, 2018). Predictive data analysis aims to restructure data in such a way that it is convenient for analysis. Any research is focused on identifying meaningful insights needs either descriptive or analytical analysis, or both. Data for such analysis needs to be pre-processed to

eliminate noise. Noise in data can be in the form of inaccurate entries, missing values, outliers and unnecessary entries or variables. The process of removing this noise is what entails preliminary data analysis. Preliminary analysis procedures are rather effortless but yet form an integral part of any multivariate analysis of data. A common method for conducting preliminary data analysis is the principal component analysis. The preliminary analysis essentially goes through three stages which involve; data coding, data punching and data editing in order to check for erroneous and missing-value entries (Zhao et al., 2020).

### **5.2.1 Checking for Missing Values**

Missing values are one of the noises that ought to be checked for in any research pre-processing stage. A missing value analysis can be defined as the data value that is not recorded for a variable or observation under interest. By using this method, the researcher will be able to understand the solution to analysis any missing value without effective the data (Hair et al., 2014). In order to successfully analyse and interpret data results, it is important that researchers and data analysts understand the concept of missing data. If missing values are not well handled, researchers may end up drawing inaccurate inferences concerning the data. Notable differences are, therefore observed between results found upon data with missing values and those with the presence of the missing values. A good way of handling missing data is the prevention of the occurrence of missing values through the good planning and careful gathering of observations. In situations where missing data are likely to occur, the researcher should focus on methods that are robust on missing values. Some methods of dealing with missing data include imputation which deals with filling in of the missing data,

interpolation which involves the construction of new data points, partial deletion which involves deleting variables with missing data and full analysis which takes full account of all available information (Yao et al., 2016)

In this study, the survey was allocated to the participants as a hard copy to ensure there is no unanswered questions at the time of distributing the questionnaires in the classes. Consequently, the procedures of missing data analysis and entering the results of the data collection showed that there is no loss or missing values. Thus, all the data are completed.

### **5.2.2 Checking for Outliers**

Another aspect of preliminary analysis that calls for a thorough check is the concern with outliers. An outlier refers to a data point that differs significantly from other data points (Wang & Li, 2017). Usually, outliers are an alarm cause to researchers on possible inaccuracies presented in recorded data. Outliers that are due to incorrect data imputation or incorrect observations should always be removed from the data set under investigation. If such outliers are not omitted, significant differences are observed in data analysis results when compared to results based on a dataset without the said outliers. Owing to this, it is important that researchers and data analysts have a proper understanding of data and its related anomalies. For accuracy of results and proper research conclusions, knowledge on how to calculate and interpret outliers is paramount. A formula on calculating outliers involves determining inner and outer fences which help in identifying minor and major outliers respectively by calculating the median, first quartile, third quartile and the interquartile range of the dataset under

investigation (Yuen, 2017). A simpler way of identifying outliers in a dataset is by creating graphs. Plots which include boxplots, scatter plots and histograms can prove important in the identification of dataset outliers. Alternatively, the mean and standard deviation could be used.

Furthermore, the outlier rule has two standards of scores depend on the sample size of the research study. The standard scores of 2.5 or higher are used to defined the small samples of 80 or less observations, while the standard scores of four or higher are used to defined the large sample (Hair et al., 2014). The result of this study showed the disappearance of outliers and the standard scores of values is up to four as this research has a large sample size. There are nine items that were deleted from further analysis as outliers in this study (QTS1, QTS2, QTS3, QTS4, SP9, SP10, SP11, SP12, SP13). This deletion produced great analysis results that explain the powerful of reputation and student satisfaction in HEIs.

### **5.2.3 Assessing Data Normality**

A determination has to be made on whether or not data under investigation is normally distributed. Normality tests are usually conducted in order to assess whether a data set is modelled by a normal distribution (Gilbride & Lenk, 2010). Normality checks also a present observation on how likely the sample was drawn from a data set is normally distributed. An easy way of assessing normality of data is plotting a frequency histogram, and comparing it to a normal distribution curve. If the histogram is bell-shaped and resembles the normal curve, then the data is normally distributed. Otherwise, it could have been drawn from other distributions. Other graphs that could

be used for assessing normality are the normal probability plots and Q-Q plots. These plots provide inference on how likely the data are drawn from a normal distribution. For data to be deemed normally distributed, they should fall in an approximately straight line in the case of both normal and Q-Q plots. Normality checks are important in that they present an insight into how best to analysis data in progressive stages. What tools and techniques to use for analysis is a determination of the distribution of the data?

In this research study, the normal probability plots have been adopted and the results are follows with span of -1.96 to +1.96 (Appendix 3). The QTS absolute value of skewness and kurtosis are -0.755 and 0.349, respectively. The SLS absolute values of skewness and kurtosis are -0.760 and 0.271, respectively. The SI absolute values of skewness and kurtosis are -0.567 and 0.190, respectively. The OI absolute values of skewness and kurtosis are -0.870 and 0.257, respectively. The SS absolute values of skewness and kurtosis are -0.613 and -0.164, respectively. The IS absolute values of skewness and kurtosis are - 0.617 and -0.068, respectively. The SP absolute values of skewness and kurtosis are -0.873 and 0.746, respectively. The RE absolute values of skewness and kurtosis are -0.744 and 0.511, respectively. The normality and the histogram in this research are not an issue as Figure 10 and the plotted variables show that the bell-shaped distributions indicate reasonable levels of normality.

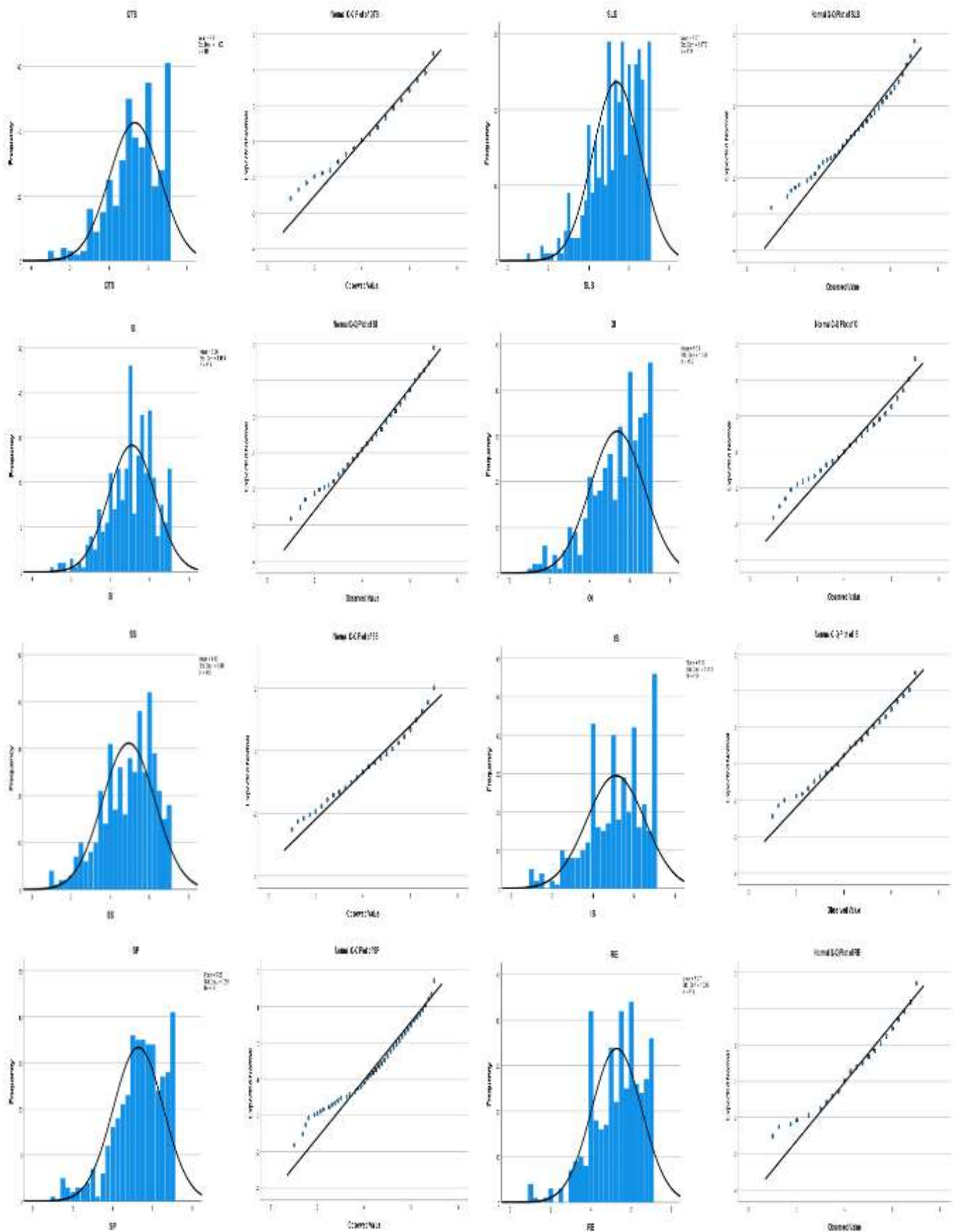


Figure 10 : Distributions scores and normal Q-Q plots of research variables



#### **5.2.4 Assessing Data Linearity and Homoscedasticity**

Preliminary data analysis also involves itself with assessing data linearity and homoscedasticity. A general assumption on the linearity of multiple data is that there exist straight-line relationships between different data pairs (Schützenmeister, 2012). One common way in which linearity is assessed is by conducting correlation analysis. However, it only captures linear relationships and ignores non-linear relationships among variables. Graphical representation such as scatter plots could be used in assessing linear relationships among variables. Linearity assessment goes hand in hand with homoscedasticity/heteroscedasticity assessment. Homoscedasticity refers to a statistical condition in which all variables in a data set have the same finite variance. When the data set fails to meet the homoscedasticity assumption, it is said to be heteroscedastic (Matew, 2017). Linearity and homoscedasticity are evaluated based on residual plots or bivariate scatter plots. When data is linear and homoscedastic, a bivariate scatters plot shows that points are spread in roughly the same width over the range of data values. A shift from linearity and homoscedasticity results to varying width over certain data point ranges. A way of ensuring that data is linear and homoscedastic is through normal transformation, which ensures that data follow a linear trend and have the same variance across the data range.

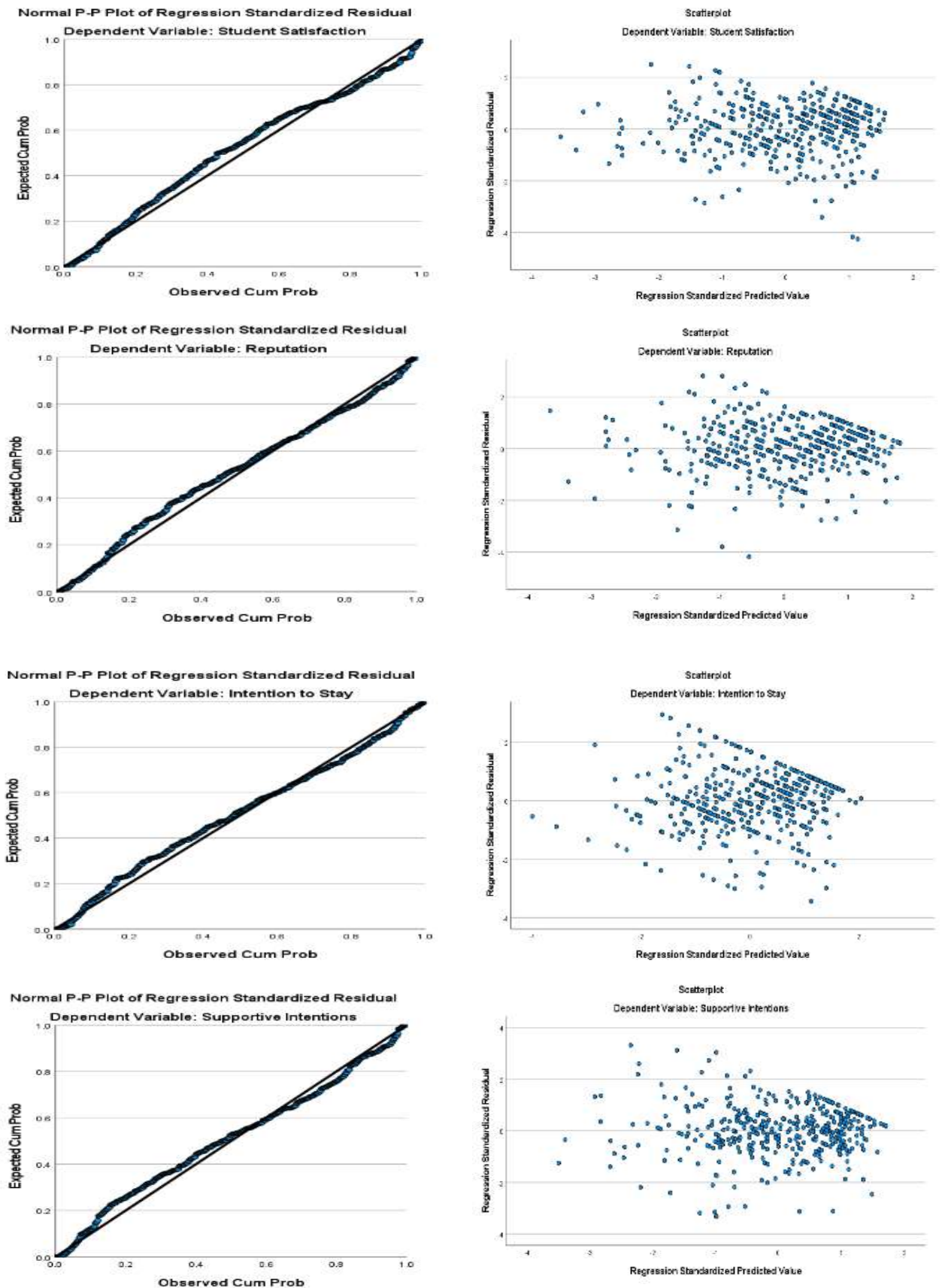


Figure 11 : Scatterplot and normal P-P plot of standardised residuals

The residual plot in the standard regression refers to the difference between observation values and predicted value. The highlights standardized residuals of the three factors (SS, IS, SP) in Scatterplot Figure 11 are greater than 2. This is not an issue in this research and will not negatively affect the research model because the Cook's distance statistics (Appendix 4) did not cross the threshold of 1.

#### **5.2.5 Assessing Multicollinearity**

Assessing multicollinearity refers to a statistical phenomenon in which one predictor variable can be linearly predicted by other predictor variables in the case of multiple regression. This situation leads to great instability or disturbances in the regression model. The magnitude of redundancy of one predictor variable based on other predictor variables is measured using the variance inflation factor (VIF) (Chen, 2012). Predictor variables should be screened in order to identify those with high VIF values. Mild redundancy is not problematic to the regression model. However, high redundancy is detrimental because it can increase the variance of the coefficient estimates, making the regression estimates very sensitive to changes (however minor). High VIF values imply high redundancy. Predictor variables depicting such observations can either be eliminated from the analysis, or they can be combined with those variables with which they exhibit redundancy. The regression model thereafter obtained upon eliminating the redundancy effect shall more accurately represent the study outcomes and shall also be able to answer the research question and test the study hypotheses in an accurate manner.

Looking to the results of the Multicollinearity of this research in Table 8, and Table 9, there are no issues since the statistic values of Variance Inflation Factor (VIF) are below

ten and lower than the more conservative cut-value of 2.5. Furthermore, the statistic values of tolerance are above 0.1 in both figures. In general, the more independent variable in the model, the more likely the experience multicollinearity issues (Appendix 5).

Table 8: Multicollinearity Statistics for Intention to Stay & Supportive Intentions

Coefficients <sup>a</sup>				
Model	Collinearity Statistics			
	Tolerance	VIF	Tolerance	VIF
Perceived Service Quality Teaching	0.759	1.318	0.759	1.318
Student Life and Support	0.485	2.064	0.485	2.064
Social Identification	0.509	1.964	0.509	1.964
Organizational Identification	0.446	2.240	0.446	2.240
Reputation of the Institution	0.603	1.657	0.603	1.657
Student Satisfaction	0.490	2.043	0.490	2.043
<b>Dependent Variable</b>	<b>Intention to Stay</b>		<b>Supportive Intentions</b>	

Table 9 : Multicollinearity Statistics for Student Satisfaction

Coefficients <sup>a</sup>		
Model	Collinearity Statistics	
	Tolerance	VIF
Perceived Service Quality Teaching	0.762	1.313
Student Life and Support	0.495	2.019
Social Identification	0.510	1.960
Organizational Identification	0.568	1.761
Reputation of the Institution	0.616	1.625
<b>Dependent Variable</b>	<b>Student Satisfaction</b>	

### 5.2.6 Constructs Efficacy Assessment

In the domain of big data and its related analytics, constructs efficacy assessment proves key. Efficacy can be described as the performance of an intervention under ideal conditions. In order to come up with results that represent the objectives of

interest under study, efficacy assessment is ideal. The tools, techniques and models to be employed in the course of the data analysis process ought to be assessed for efficacy. This shall ensure that all tools and constructs employed to the analysis of data shall lead to accurate and meaningful insights. An efficacy assessment shall also help in the determination of the quality of chosen designs, methodology and the statistical analysis of data. It relates to the reliability, strength and power of the study. A study that employs robust methodology, design and analytical tools shall present more accurate and reliable results as opposed to studies that employ less robust techniques and models. The validity of inferential results is therefore dependent upon the choice of methodology, design and data analysis models. A strong and stringent study that makes use of robust models and methodologies is deemed efficacious due to its ability to yield reliable results (Dunn et al., 2013).

#### **5.2.7 Demographic Data**

The total completed questionnaires and meet the requirements of this study were 419 out of 444 undergraduate students (94.5% response rate). All 419 response were full-time students and in the second semester of their study in the institutions. Moreover, the sample was from different colleges and majors in the two institutions. However, the 25 students out of 444 have been excluded from the response analysis because they are either part-time students or in their first semester.

### **5.3 Exploratory factor analysis (EFA)**

An important aspect of any research process is the analysis of data. Prior to main analysis, it is important that preliminary data analysis be conducted. Preliminary data

analysis involves itself with the editing and correcting of data in preparation for further analysis (Royston, 2007). Exploratory factor analysis (EFA) is one such aspect of preliminary data analysis. In statistics, exploratory factor analysis concerns itself with uncovering the underlying structure of relatively large data sets in order to understand the interrelationships that do exist among these variables and factors (Hoban et al., 2005). It involves modelling the variables for covariance structure using a set of the factors; factor loadings associated with unobserved variables, residual variances and factor correlations. Any research would be expected to have a large number of measured variables which could be associated with other unobserved variables of smaller quantities. Caution therefore ought to be taken on the number of variables to include in research analysis (Watkins, 2018).

The accuracy of EFA procedures depends upon the number of measured variables representing each factor. In order to improve accuracy, each factor should be represented by a multiple number of observed variables (Barańczuk, 2019). Exploratory factor analysis is usually employed before confirmatory factor analysis. EFA forms basis for analysis of underlying variable or factor constructs for an array of observed data. On the other hand, confirmatory factor analysis provides a framework for testing the hypothesis of the existence of a relationship between observed variables and their underlying constructs/factors (Gorsuch, 1997).

EFA proves to be an important tool in any data analysis process. Its critical role in data analysis should not be underestimated. With changing trends and shifting paradigms in the area of research, exploratory data analysis has found a place in almost every research. A number of previous researchers have delved into researching on the roles

of factor analysis and found that it can be used for evaluating measures, redefining variables, evaluating the validity of chosen constructs and in some cases, it could be used for testing hypotheses (Gorsuch, 1990). However, some conducted research to evaluate the effectiveness of factor analysis in organization research and found that organizational researchers and scholars tended to fail in the identification of appropriate factor analysis models (Marsh et al., 2014).

Exploratory factor analysis could be conducted for a number of research and scholarly uses. Two fundamentally important uses are for data reduction and the evaluation of construct validity (Lee et al., 2012). Data reduction involves the reduction of a fairly large data set into a relatively small size, considered manageable for purposes of data analysis, while being cautious enough not to alter variation from the original data set. On the other hand, the evaluation of construct validity involves drawing meaningful inference on the practical and functional efficiency of study constructs.

### **5.3.1 Assumptions in factor analysis**

Understanding the assumptions of exploratory data analysis provides for a framework of its usability. A major underlying assumption is that every data collection process is bound by the effect of some underlying unobserved factors that have an impact on the observed values (Pruitt, 2014). This assumption argues that in any research study, there could be unmeasured factors associated with observed variables. For instance, in a research study investigating factors that influence students' decisions on choice of courses, it could be found that not all factors under investigation actually lead towards the study's goal. Another assumption is that variation among variables and factors is not lost after conducting exploratory factor analysis. Since factor analysis is part of the

generalized linear model, it assumes some of the basic assumptions of the general linear model which include; the existence of a linear relationship between observed variables and the construct factors, there lacks multicollinearity implying that association between dependent and independent variables is not affected by the association between the independent variables themselves, and that there exists true correlation between observed variables and the construct factors (Perry et al., 2015). These assumptions imply that the association between variables and factors could be modelled using a generalized linear model.

To proceed with the analysis, the strong correlations between the variables must be tested by using the significant ( $p < .05$ ) Bartlett's test of sphericity. Moreover, the value of Kaiser-Meyer-Olkin (KMO) sample adequacy measurement must be higher than .50 to validate the degree of intercorrelations among the variables, and therefore the readiness for factor analysis. (Hair et al., 2014).

Table 10 below of the results of both Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) sample adequacy shows the assumptions has been met. Furthermore, the factor analysis can proceed further to the next phase of selecting the factor model, the number of factors, and the rotation methods.

Table 10 Results of Sample adequacy and Bartlett tests

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.937
Bartlett's Test of Sphericity	Approx. Chi-Square	12650.850
	Df	703
	Sig.	.000



### **5.3.2 Factor Models, numbers, and rotation methods**

Different methods and techniques of extracting factors from the data set do exist. One of these methods is the principal components analysis which is the most commonly used by researchers and scholars. This technique involves reducing large data sets into manageable sizes for further analysis (Abdi & Williams, 2010). The method ensures that variation in the data set is maintained. The maximum variance is extracted and mainstreamed into the first factor. Variation in the data set explained by the first factor is then removed, and the maximum variance extracted for the second factor. The process recurs till the variance explained by the last factor is eliminated. A second method used for extracting factors from a data set is the common factor analysis. Researchers and scholars prefer this method second to principal component analysis. This method involves the extraction of the common variance and putting it into factors, rather than the extraction of the unique variance available for every variable (Linting & Kooij, 2012). The common factor analysis method is commonly used in Structural Equation Modelling (SEM). A third method of factor extraction is image factoring. This involves the use of ordinary least squares regression in predicting factors. The correlation matrix provides the factors extracted from OLS regression.

Another method is the Maximum Likelihood method of factor extraction. It is also based on the correlation matrix but as opposed to the use of OLS it makes use of maximum likelihood. Alfa and weight square factoring are also methods used for factor extraction. Apart from extraction of factors, it is also important that the number of factors be determined. A criterion of determining factors is the use of Eigen values and Eigen factors. Upon conducting principal component analysis, if an Eigen value is greater than 1, it should be considered a factor, otherwise it cannot qualify to be a

factor (Zwanenburg et al., 2011). According to the variance extraction rule, a variance of greater than 0.7 could be considered a factor (Scharf & Nestler, 2018). Extracting too many and too few factors may result in erroneous interpretations. It is therefore recommended that researchers make the right choices on the extraction method to use. In order to understand the output of factor analysis, rotation is involved since unrotated factors are ambiguous. A number of rotation methods exist and they include; the no rotation method, the Varimax rotation method, the Quartimax rotation method, the Direct Oblimin rotation method and the Promax rotation method. All these methods can be easily run in any data analysis software, for instance SPSS, and a comparison of the variation explained by these methods be made factors (Hair et al., 2014).

In this research, the pattern matrix of components has been used for the method of extraction and, principal components and oblique methods with Promax approach implement for rotation methods to achieve the simplest possible factor structure as the correlations between constructs of this study are expected to appear.

### **5.3.3 Exploratory factor analysis findings**

Another step of exploratory factor analysis is the interpretation of findings. While interpreting findings, it is crucial that the researcher or scholar takes a keen look on the loadings in order to determine the strength of the relationships among variables and factors. Factors can generally be identified by the largest loadings, but the examination of the zero and low loads is also crucial in order to verify the factor verification (Peterson, 2000). In order to ensure that there is distinct definition of clusters by each factor, there should be few item cross-loadings. A cross-loading can be defined as a scenario whereby the loading of an item is at 0.32 or higher on two or

more factors (Aït-Sahalia & Xiu, 2019). The direction of correlation among variables and factors is determined by the sign of the obtained loading. A negatively signed loading implies a negative association whereas a positive loading implies positive correlation. The signs do not however impact on the magnitude of the factor loadings or the number of factors to be retained after conducting exploratory factor analysis.

For researchers and scholars to be able to determine a rotated loading that is statistically significant, it is important that they make a determination and set a cut-off upon which they will consider their rotated loadings statistically significant. For large sample sizes, smaller loadings should be allowed for the factors to be considered statistically significant. A rule of thumb suggests that when using a 10% level of significance, a rotated loading for a 300-sample size should be at least 0.32 in order to be considered statistically significant (Fabrigar et al., 1999). Choosing the cut-off point upon which to make a determination of the significance of factor loadings depends upon the ease of interpretation of the chosen cut-off. In this vein, the results of this study explained ten components as opposed to the main number of research constructs of nine components. Thus, the factors' structure has been revised and depend on the analysis result of the structure matrix that highlights some items (QTS1, QTS2, QTS3, QTS4, SP9, SP10, SP11, SP12, SP13) cross-loaded highly on two components. Thus, these nine items were deleted from further analysis in this study.

Figure 12 shows the result of components extraction that follows the new structure and without the problematic items. The rotated pattern matrix consists of eight components, and each component shows the consists of items. All these items are loaded above the threshold of .35.

Pattern Matrix <sup>a</sup>								
	Component							
	1	2	3	4	5	6	7	8
QT 1								.892
QT 2								.899
QT 3								.814
SLS1		.856						
SLS2		.762						
SLS3		.820						
SLS4		.739						
SLS5		.878						
SLS6		.681						
SI 1			.722					
SI 2			.683					
SI 3			.620					
SI 4			.953					
SI 5			.877					
OI 1					.799			
OI 2					.854			
OI 3					.815			
OI 4					.862			
SS 1							.846	
SS 2							.902	
SS 3							.699	
SS 4							.587	
IS 1				.808				
IS 2				.910				
IS 3				.854				
IS 4				.851				
SP 1	.565							
SP 2	.575							
SP 3	.723							
SP 4	.746							
SP 5	.964							
SP 6	.959							
SP 7	.865							
SP 8	.872							
RE 1						.618		
RE 2						.847		
RE 3						.905		
RE 4						.973		
Extraction Method: Principal Component Analysis.								
Rotation Method: Promax with Kaiser Normalization. <sup>a</sup>								
a. Rotation converged in 7 iterations.								

Figure 12 : Pattern matrix of components extractions

The first component consists of items SP1, SP2, SP3, SP4, SP5, SP 6, SP7, and SP8.

The second component consists of items SLS1, SLS 2, SLS3, SLS 4, SLS 5, and SLS6.

The third component consists of items SI1, SI2, SI3, SI4, and SI5. The fourth component consists of items IS1, IS2, IS3, and IS4. The fifth component consists of

items OI1, OI2, OI3, and OI4. The sixth component consists of items RE1, RE2, RE3, and RE4. The seventh component consists of items SS1, SS2, SS3, and SS4. The eighth component consists of items QTS1, QTS2, and QTS3.

Table 11 highlights the components' eigenvalues and explained variance. The first component has an eigenvalue of 15.72, and the three items explain 41.36% of the total variance. These questions mirror the theoretical construct of Perceived Service Quality Teaching (QTS). The second component has an eigenvalue of 2.92, and the six items explain 7.69% of the total variance. These items mirror the theoretical construct of Student Life and Support (SLS). The third component has an eigenvalue of 2.42, and the five items explain 6.36% of the total variance. These questions mirror the theoretical construct of Social Identification (SI). The fourth component has an eigenvalue of 1.76, and the four items explain 4.65% of the total variance. These items mirror the theoretical construct of Organizational Identification (OI). The fifth component has an eigenvalue of 1.56, and the six items explain 4.100% of the total variance. These items reflect the theoretical construct of Student Satisfaction (SS). The sixth component has an eigenvalue of 1.37, and the four items explain 3.62% of the total variance. These items mirror the theoretical construct of Intention to Stay (IS). The seventh component has an eigenvalue of 1.35, and the four items explain 3.55% of the total variance. These items reflect the theoretical construct of Supportive Intentions (SP). The eighth component has an eigenvalue of 1.01, and the four items explain 2.67% of the total variance. These items mirror the theoretical construct of Reputation of the Institution (RE).

Table 11: Components' variance extracted and eigenvalue

Constructs	No of Items	Factor loading	Eigen-Value	% of Variance	% of Cumulative Variance
QTS	3	.791, .819, .776	15.719	41.366	41.366
SLS	6	.685, .662, .717, .689, .776, .689	2.924	7.694	49.061
SI	5	.701, .716, .708, .761, .746	2.417	6.362	55.422
OI	4	.668, .797, .822, .807	1.765	4.645	60.067
RE	4	.615, .812, .842, .774	1.013	2.665	74.001
SS	4	.714, .810, .683, .742	1.558	4.100	64.167
IS	4	.756, .778, .812, .812	1.374	3.616	67.783
SP	8	.704, .722, .669, .599, .746, .772, .713, .721	1.350	3.553	71.336

The analysis show that the eight components explained 74.001% of the variance and met as well the eigenvalue criterion (Appendix 6). The scree plot in figure 13 shows that the curve becomes approximately horizontal after component eight, and the all the study components (8) above the inspection line have eigenvalue greater than 1.

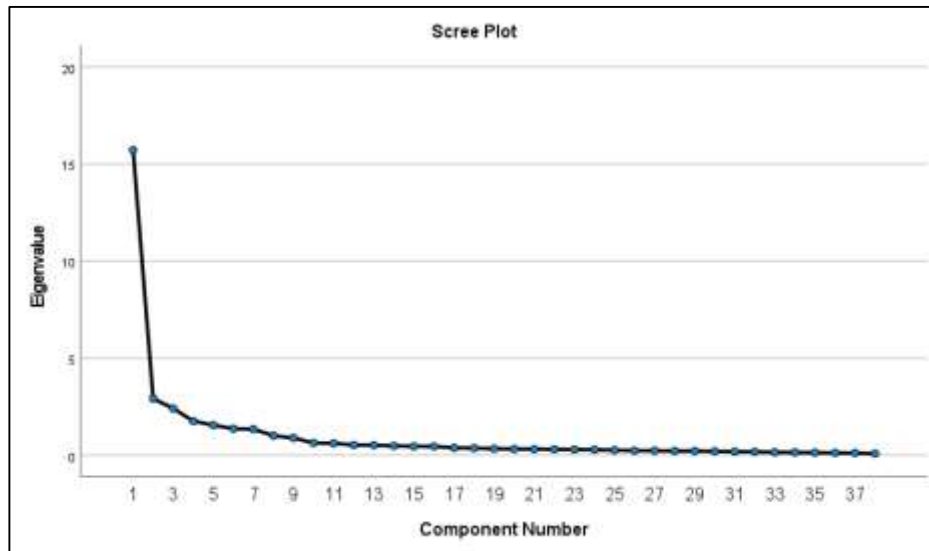


Figure 13 : Eigenvalue scree plot of the exploratory factor analysis

To conclude the findings of exploratory factor analysis, Table 12 is summarizing the findings of eight latent variables which are the theoretical constructs of this study and the 38 items that had significant loading factors.

Table 12 : Summary of exploratory factor analysis findings

Latent variable name	Eigenvalue extracted	Variance extracted	Factor loading	Factor code	Factor Statement
<b>Component 1</b> Perceived Service Quality Teaching	15.719	41.366	.791	QTS1	The teaching staff motivates me to do my best work
			.819	QTS2	The teaching staff are extremely good at explaining things
			.776	QTS3	The teaching staff work hard to make their subject interesting
<b>Component 2</b> Student Life and Support	2.924	7.694	.685	SLS1	My university/college has lots of clubs and societies for students
			.662	SLS2	My university/college provides accommodation for students
			.717	SLS3	My university/college has a good range of facilities, e.g., a refectory, sports and leisure provision
			.689	SLS4	My university/college has a good careers advice and internships service
			.776	SLS5	A lot of leisure activities and entertainment are provided for students
			.689	SLS6	There is a lively social scene on my university/college
<b>Component 3</b> Social Identification	2.417	6.362	.701	SI1	I feel a bond with the other students in my university/college
			.716	SI2	It is pleasant to be a member of the student cohort in my university/college
			.708	SI3	Being a member of student cohort in my university/college give me a good feeling
			.761	SI4	Fellow students are a source of friendship for me
			.746	SI5	Fellow students are a source of future networking for me
<b>Component 4</b> Organizational Identification	1.765	4.645	.668	OI1	I feel strong ties with my university/college
			.797	OI2	I feel proud to be a student at my university
			.822	OI3	I feel a strong sense of belonging with my university/college
			.807	OI4	I am glad to be a student at this university/college
<b>Component 5</b> Student Satisfaction	1.558	4.100	.714	SS1	So far, my university/college has met all of my expectations.
			.810	SS2	I am very satisfied with my university/college and would definitely choose it again
			.683	SS3	My choice of this university/college was a wise decision
			.742	SS4	I would recommend my university/college to friends
<b>Component 6</b> Intention to Stay	1.374	3.616	.756	IS1	I <i>intend</i> to graduate within four to six years after I enrolled in my university/college
			.778	IS2	I <i>plan</i> to graduate within four to six years after I enrolled in my university/college
			.812	IS3	I will <i>make an effort</i> to graduate within four to six years after I enrolled in my university/college

			.812	IS4	<i>I expect to graduate within four to six years after I enrolled in my university/college</i>
<b>Component 7</b> Supportive Intentions	1.350	3.553	.704	SP1	I will recommend my university/college to others
			.722	SP2	I will recommend my university/college to those who ask or seek my advice
			.669	SP3	I will recommend others on my university/college social media (e.g., Facebook or twitter)
			.599	SP4	I will post positive comments about my university/college on my social media (e.g., Facebook)
			.746	SP5	I would make suggestions to my university/college as to how it can be improved
			.772	SP6	I would let my university/college know of ways that could make it better serve my needs
			.713	SP7	I would share my opinions with my university/college if I felt they might be of benefit
			.721	SP8	I would contribute ideas to my university/college that could help it improve service
<b>Component 8</b> Reputation of the Institution	1.013	2.665	.615	RE1	The academic programme run by my university/college is reputable
			.812	RE2	My university/college has a professional image
			.842	RE3	My university/college has a good image
			.774	RE4	My university's/college's graduates are easily employable

#### 5.4 Internal Reliability analysis, Mean Values, and Standard Deviations

The process of exploratory factor analysis seeks to understand whether given sets of items form a basis for consideration of factors. An evaluation on how well determined factors is measured or how well the methods used for measuring factors lead to valid results forms basis for internal reliability. Internal reliability tests could be performed in order to validate the methods chosen in exploratory factor analysis for the determination of factors and cut-offs. Internal reliability also seeks to answer the question on whether observed relationships among the individual items of the scale are consistent with the expectations of the items forming a scale for the measurement of



single variables (Limon et al., 2017). It is also important to evaluate whether a factor under examination needs all the items for effective measurement. The Cronbach's alpha is a method for evaluating internal reliability of the methods used during the process of EFA. The coefficient alpha, which is a component of the Cronbach's test measures the internal validity and consistency of the factor items (Bonett & Wright, 2015). Like other measures of reliability, the Cronbach's alpha ranges from 0 to 1. An alpha value of between 0.7 to 1 is considered good by most researchers implying that research findings with an alpha value between these values can be considered to have used reliable methods and constructs. Basing on the Cronbach's alpha, the higher the value of the alpha the higher or the better the internal reliability. Likewise, the lower the alpha value the lower the internal validity (Cho & Kim, 2015). After exceeding an alpha value of 0.9, however, there is expected diminishing reliability. Since the aim of exploratory factor analysis is to understand variation and model the interconnection among items, variance and covariance are preferred over the mean of values (Vaske et al., 2017).

In factor analysis, the focus is on two types of variances: the common variance and the unique variance. The common variance refers to variability in items shared by all the items involved in the EFA process. The common variance ranges from 0 to 1. Variances closer to 1 imply that extracted factors explain more of the variation in individual items while those closer to 0 imply that less of the variation in the individual items is explained by the extracted factors. Unique variance, on the other hand, is the portion of variance that is not shared among items. Total variation in individual items explained by the extracted factors is therefore composed of the common and unique variances (Zamary et al., 2019).

A good way of obtaining valid inferential results pertinent to a study under investigation is by focusing on the reliability of the method, designs and techniques used during the study. Research reliability can be defined as the extent to which research methods and designs produce consistent and stable statistical results. It concerns itself with how well research techniques explain the variables and research questions under study. According to Bernstein (2014) reliability is assessed by checking the consistency of results over time with which certain techniques were employed. Methods with greater reliability are said to be more likely to lead to better results in comparison to the those with less reliability. Reliability can be categorized into Test-retest, which concerns itself with the consistency of a measurement tool over time; Interrater reliability which is involved with the consistency of a measure across people and; Internal reliability which involves consistency of the chosen measurement itself. This type tries to investigate the consistency of results obtained from different parts of a chosen test or model. However, caution ought to be observed when using reliable measurement tools since the reliability of measurement does not imply reliability of results obtained. In order to ensure consistency in results, reliability should be considered throughout the research.

In this study, the measurement of individual analysis of each variable has a highly correlation greater than .60 for its items which indicate to highly reliable scales for measurement in the eight variables (Appendix 7). On the other hand, the result in Table 13 shows the mean values, standard deviations and Cronbach alpha of each construct. The scale measurement of the variables is reliable as the Cronbach alpha achieved 0.88 for both institutions together.

Table 13 : Means, standard deviations, and reliability analysis

Variables	Mean			Std. Deviation			Cronbach's Alpha		
	Institution A	Institution B	Both Institutions A & B	Institution A	Institution B	Both Institutions A & B	Institution A	Institution B	Both Institutions A & B
Perceived Service Quality Teaching (QTS)	5.00	5.62	5.30	1.310	1.230	1.307	0.875	0.838	0.864
Student Life and Support (SLS)	5.47	5.27	5.37	1.204	1.144	1.178	0.917	0.899	0.906
Social Identification (SI)	5.07	5.08	5.08	1.189	1.181	1.183	0.905	0.884	0.894
Organizational Identification (OI)	5.47	5.23	5.36	1.244	1.440	1.348	0.903	0.912	0.907
Student Satisfaction (SS)	5.08	4.78	4.93	1.269	1.399	1.341	0.872	0.868	0.872
Intention to Stay (IS)	5.46	4.75	5.11	1.330	1.419	1.418	0.913	0.894	0.908
Supportive Intentions (SP)	5.41	5.14	5.28	1.229	1.267	1.254	0.925	0.930	0.928
Reputation of the Institution (RE)	5.37	5.18	5.27	1.192	1.282	1.239	0.862	0.898	0.877
Total							0.851	0.910	0.880

- Comparing the mean between the two institutions:**

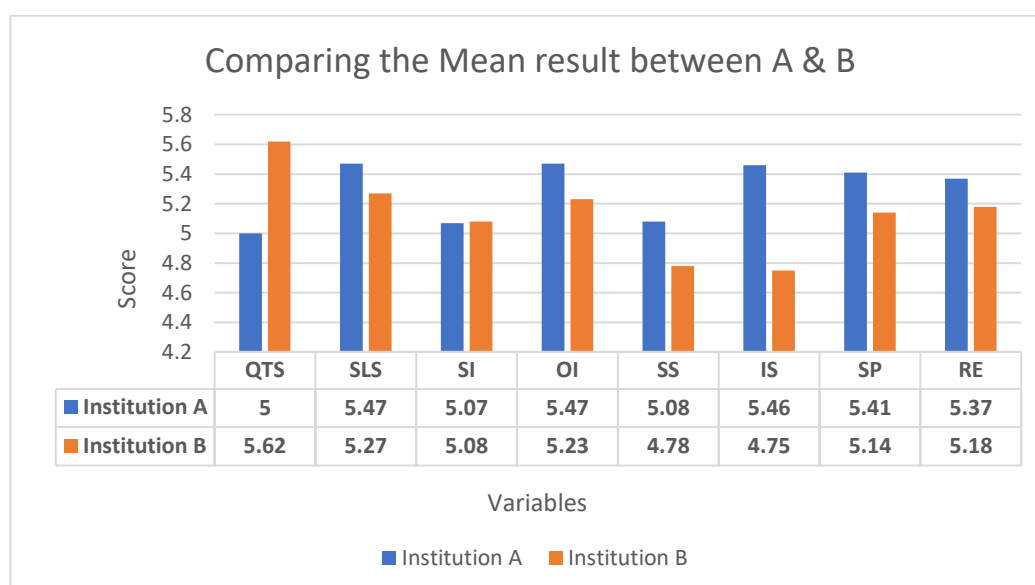


Figure 14 : Comparing Mean between Institution A and Institution B

The results of above Figure 14 show the compared mean between the two institutions (A & B) and the following are the highlighted comments:

- Institution A has a greater mean score of (5.47) for both OI (organizational identification) and SLS (student life and support). The result of institution A students showed that their institution did better in these factors compared to institution B student's results which were lower. OI and SLS have strongly influenced students and their needs in a positive way which reflects having the highest mean score compared to other factors.
- Institution B has a greater mean score of (5.62) for QTS (Service Quality of Teaching) compared to institution A that has the lowest mean score of (5) in the same factor because institution B is more interested in academics in teaching than involving in research so it is the better-quality institution which reflects positively on students and has the highest score compared to other factors. While institution A is more interested in their academic research than teaching.
- Institution B has the lowest mean score of (4.75) in Intention to Stay (IS) because the students always prefer to study at the top of the most prestigious university in the country even if the current university is excellent.

- **Comparing the Standard Deviation (SD) between the two institutions:**

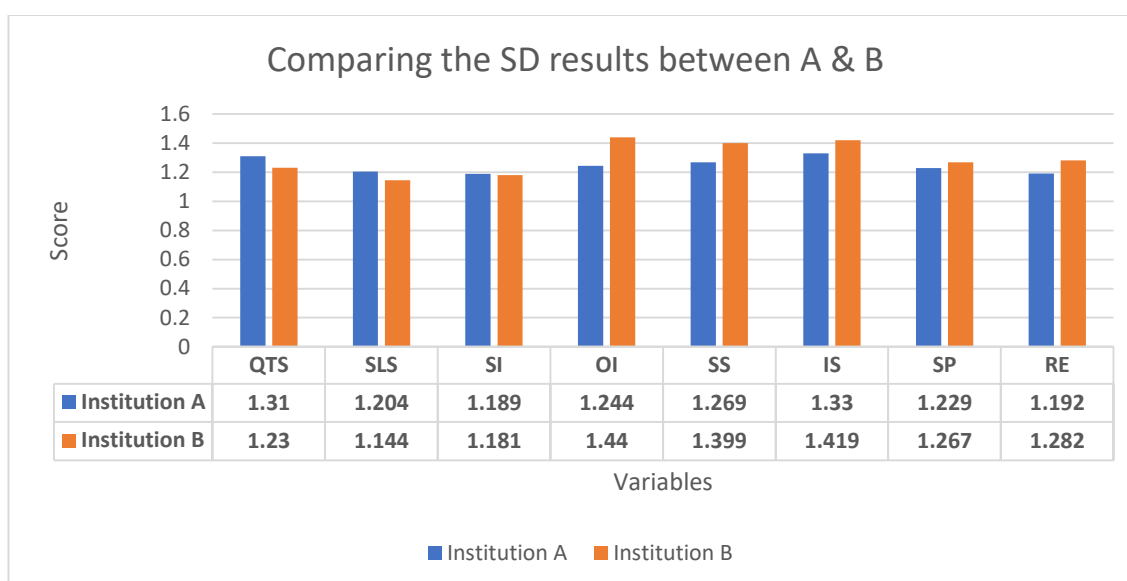


Figure 15 : Comparing Standard Deviation between Institution A & Institution B

The results of above Figure 15 show the compared standard deviation between the two institutions (A & B) and the following are the highlighted comments:

- Institution A has a higher standard deviation score of (1.33) within the data of IS (Intention to Stay) and QTS (Quality of Teaching) with score of (1.31) which indicates that the values are spread out over a wider range to the mean more than the other factors (less reliable).
- Institution B has a higher standard deviation score of (1.44) within the data of QTS (Quality of Teaching) and IS (Intention to Stay) with score of (1.42) which indicates that the values are spread out over a wider range to the mean more than the other factors (less reliable).

- Institution A has a lowest dispersion score in SI with (1.19) while institution B has the lowest dispersion score in SLS with (1.44). This indicates that the values tend to be close to the mean (more reliable).
- **Comparing the Cronbach's Alpha between the two institutions:**

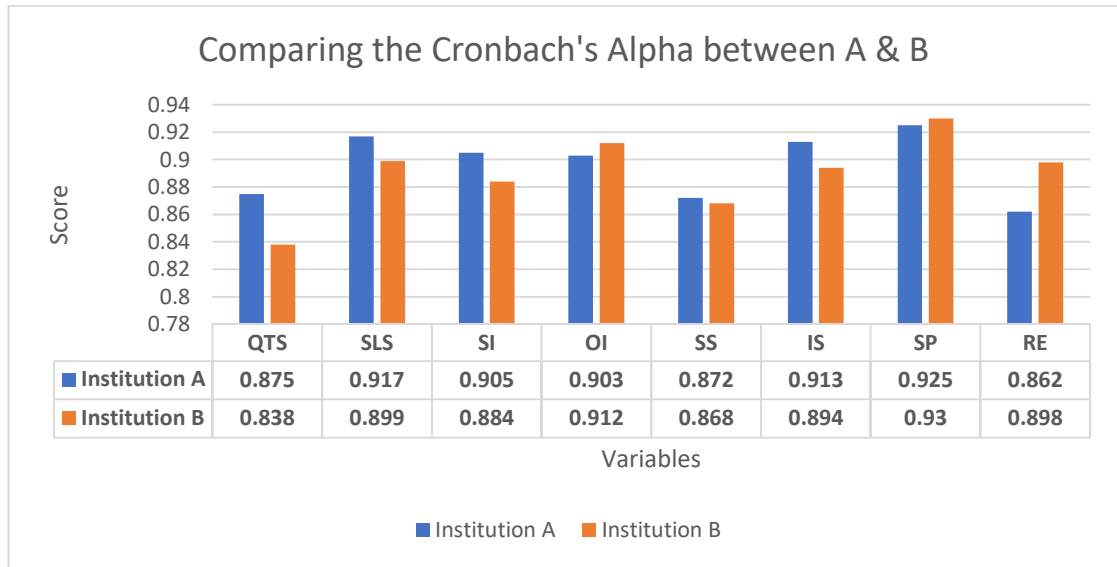


Figure 16 : Comparing Cronbach's Alpha between Institution A & Institution B

The results of above Figure 16 show the compared Cronbach's alpha which is a measure of scale reliability in the two institutions (A & B) and the following are the highlighted comments:

- Institutions A and Institutions B have the highest Cronbach's alpha score in SP with a score of (0.93).
- Institutions A have the lowest Cronbach's alpha score in RE with a score of (0.86). While, Institutions B have the lowest Cronbach's alpha score in QTS with a score of (0.84).
- In general, all the Cronbach's alpha score of the variable is above 0.80.

- Overall, the values of Cronbach's alpha in both institutions are close to each other. The reason for that could be the support of Ministry of Education as they are governmental institutions.

## 5.5 Correlation

The interrelationships among observed values under study could be presented in a correlation matrix by calculating the correlations between each pair of variables. These correlations are normally calculated prior to conducting exploratory data analysis in order to reduce some of the variables that exhibit high multicollinearity. The dimensions of this matrix could be reduced upon conducting the exploratory factor analysis. The variables that correlate highly with other variables within the same group but correlate poorly with variables from other groups are considered to contain high collinearity (Lopes et al., 2012). Therefore, such variables are removed from the correlation matrix. The resulting variables after reduction and the factors extracted are therefore expected to exhibit low or no multicollinearity. In cases where missing values exist and missing value or robust imputation methods are involved, the correlations are affected. When the missing value techniques are not employed, the correlation matrix should be constructed from those observations that do not depict missing values (Schmitt & Sass, 2011).

The decision rule for assessing if the test is significant (for  $\alpha = .01$ ):

- If the  $p \leq .01$ , the test is significant (there is a significant relationship between the two selected variables).
- If the  $p \geq .01$ , the test is not significant (there is a not significant relationship between the two selected variables).

The results indicate in Table 14 are highlighted the correlations (Appendix 8)

between this research variables as the follows:

- The QTS correlates positively and significantly to SLS ( $r=.424$ ,  $p < .01$ ), SI ( $r=.442$ ,  $p < .01$ ), OI ( $r=.358$ ,  $p < .01$ ), SS ( $r=.345$ ,  $p < .01$ ), IS ( $r=.183$ ,  $p < .01$ ), SP ( $r=.361$ ,  $p < .01$ ), and RE ( $r=.309$ ,  $p < .01$ ).
- The SLS correlates positively and significantly to SI ( $r=.625$ ,  $p < .01$ ), OI ( $r=.579$ ,  $p < .01$ ), SS ( $r=.542$ ,  $p < .01$ ), IS ( $r=.505$ ,  $p < .01$ ), SP ( $r=.470$ ,  $p < .01$ ), and RE ( $r=.516$ ,  $p < .01$ ).
- The SI correlates positively and significantly to OI ( $r=.531$ ,  $p < .01$ ), SS ( $r=.483$ ,  $p < .01$ ), IS ( $r=.389$ ,  $p < .01$ ), SP ( $r=.483$ ,  $p < .01$ ), and RE ( $r=.527$ ,  $p < .01$ ).
- The OI correlates positively and significantly to SS ( $r=.679$ ,  $p < .01$ ), IS ( $r=.450$ ,  $p < .01$ ), SP ( $r=.643$ ,  $p < .01$ ), and RE ( $r=.531$ ,  $p < .01$ ).
- The SS correlates positively and significantly to IS ( $r=.516$ ,  $p < .01$ ), SP ( $r=.605$ ,  $p < .01$ ), and RE ( $r=.498$ ,  $p < .01$ ).
- The IS correlates positively and significantly to SP ( $r=.466$ ,  $p < .01$ ), and RE ( $r=.493$ ,  $p < .01$ ).
- The SP correlates positively and significantly to RE, ( $r=.583$ ,  $p < .01$ ).

Table 14 : Correlation table of study variables (both institutions A&B)

	QTS	SLS	SI	OI	SS	IS	SP	RE
QTS	1							
SLS	.424**	1						
SI	.442**	.625**	1					
OI	.358**	.579**	.531**	1				
SS	.345**	.542**	.483**	.679**	1			
IS	.183**	.505**	.389**	.450**	.516**	1		
SP	.361**	.470**	.483**	.643**	.605**	.466**	1	
RE	.309**	.516**	.527**	.531**	.498**	.493**	.583**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed),  $p < .01$



## **5.6 Common Method Bias Test Result**

### **5.6.1 Harman's Single Factor Test**

To apply the Harman's single factor test, the thesis used SPSS v.27 to found the result and its show that the highest variance accounted for a single factor was 39.835% which is less than 50%, then a conclusion can be made that the common method bias doesn't affect the data; hence the output result can be relied on and unlikely to be a risk in this research study (Appendix 9). Thus, the data of this thesis is free from CMB because the result is below 50.

### **5.6.2 Common Latent Factor Test**

To test the CMB of the thesis variables by AMOS v.27, the variable "Common Factor" has been added and to make this analysis more correctly, the Common Laten Factor test (CLF) has been applied. The result of CLF after comparing the tables of Standardized Regression Weights estimated results with CLF and without CLF showed that the data of this thesis is free from CMB because the delta result of all variables are lower than 0.2 (Appendix 10).

## **5.7 Confirmatory Factor Analysis (CFA) Test Result**

In this research, the 419-sample size of the study is considered to have sufficient data to run CFA analysis and the item communalities are higher than 0.59 (Appendix 10) for the majority of the items. The initial CFA of this study suggests the deletion of eight items that have loading factors below the threshold of 0.7. The measurement in Table 15 highlights the model goodness of fit indices and indicates that these values

are within standards and acceptable. It is less impacted by sample size and the number of parameters estimated showed acceptable values. The model fit indices were 0.076 for RMSEA, .0479 for SRMR, 3.403 for CMIN/DF, .876 for CFI, 0.863 for TLI, and .817 for RFI. The improvement process of construct validity and goodness of fit was performed by deleting the lower factor loadings items QTS1, QTS2, QTS3, QTS4, SP9, SP10, SP11, SP12 and SP13 which support the research constructs without contradict the main objective of the research (Hair et al., 2014).

Although Table 15 shows that the incremental fit indices are below the cut-values and it is related to the sensitivity of this application statistic on a sample size of the research, the values can be accepted because the loadings for all 8 constructs in this research ranged from 0.60 to 0.84, and all showed significance. In addition, the convergent validity of the construct is still adequate because the results data are meeting the requirements of Hair et al. (2014) and Fornell and Larcker (1981), such as:

- Factor loading of the research study was above 0.60.
- Composite reliability of the research study was above 0.80.
- AVE of the research study was above 0.60.

Table 15 : Measurement model summary of goodness of fit test

<b>CMIN</b>	<b>CMIN/DF</b>	<b>SRMR</b>	<b>RMSEA</b>	<b>RFI</b>	<b>TLI</b>	<b>CFI</b>
2167.927 p-value .000	3.403	0.0479	0.076	0.817	0.863	0.876

On the other hand, the visual diagram of the CFA procedure by AMOS in Figure 17 shows the covariance variance matrix of the eight latent variables of this research and the regression lines to their corresponding observable variables. The values of the standardised factors loading were highlighted and the estimates were higher than 0.7.

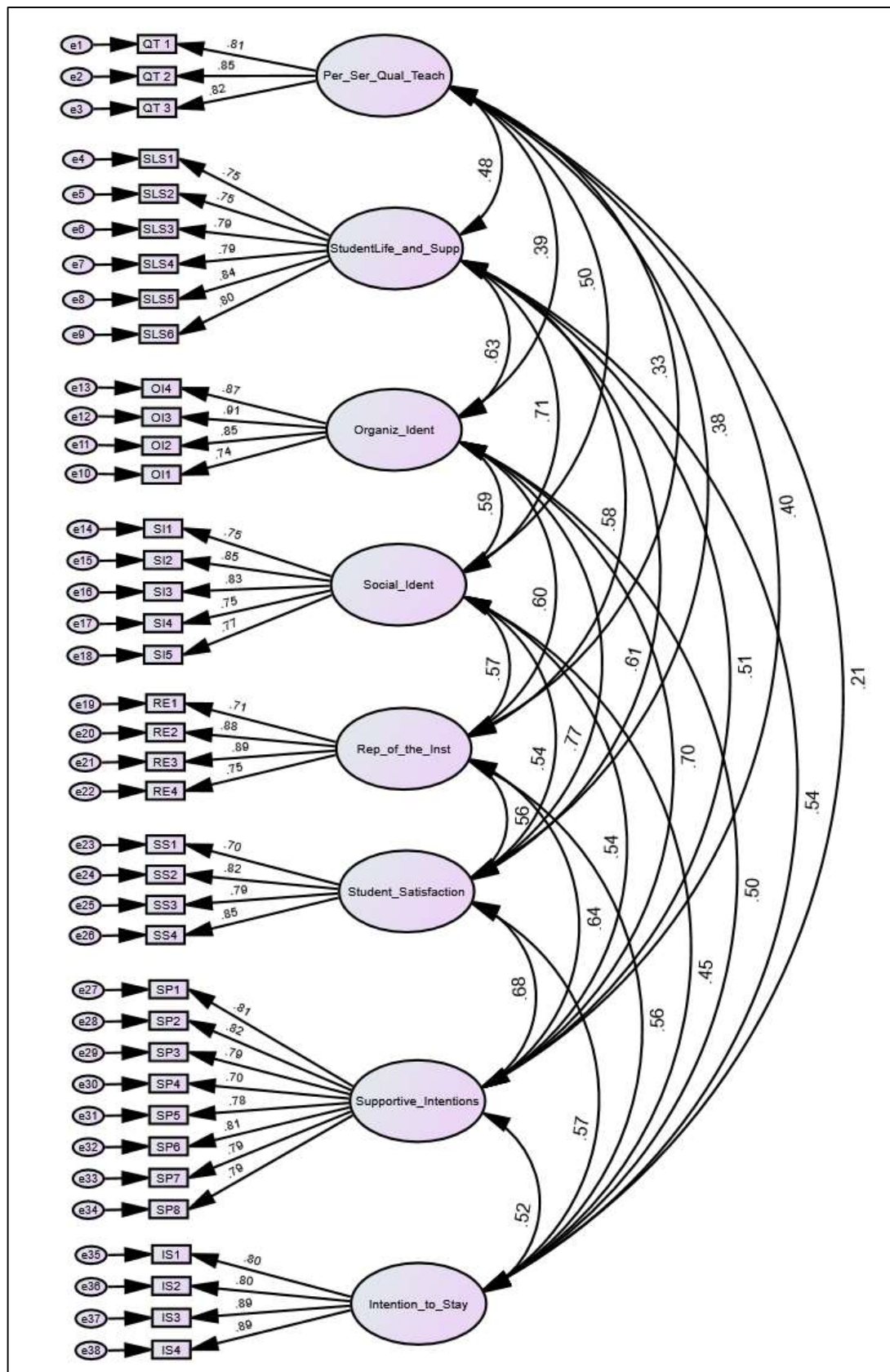


Figure 17 : Research measurement model visual diagram

## **5.8 Construct validity**

There are tests which are used to measure some concepts and if an extent to which those tests measure a particular concept needs to be established, the construct validity is used. In testing the validity of evidence, construct validity is one of three main validities alongside criterion validity and content validity (Li, 2016). Construct validity is established intentionally by the researcher in order for them to visualize and understand the latent variable, which seems to be correlated with scores on a provided concept. When the researchers need an appropriate inference to be made when measurements or observations are made, then construct validity is what they go for. In an overall test validity, construct validity is viewed to be essential as it is vital, particularly in the psychometrics, psychology, social sciences and language studies.

Construct validity construction is based on the key theoretical ideas which the trait being considered is having, for example, how concepts that constitute how the personality and intelligence aspects are viewed. If the highest number of inferences can be built in a most direct fashion around a construct, then that construct can be considered to be best (Meng, 2017) (Capafons et al., 2018). Construct validity can be influenced by scale purification. Scale purification is the removal of some items from a scale with many items a process which may need the consideration of both judgmental criteria and statistical criteria.

### **5.8.1 Convergent validity**

This is the degree to which two construct measures, which should relate theoretically, are actually related. It is a parameter which is mostly applied in psychology, sociology and other behavioural sciences. Convergent validity is a construct validity that is obtained when two constructs which are similar correspond with each other (Fincham et al., 2008)

Correlation coefficients are used to estimate the convergent validity. Evaluation of convergent validity becomes successful when a test of an individual concept is correlated highly with an analysis of similar concepts measured theoretically (Suen et al., 2017). For example, convergent validity can be shown by correlating scores of a mathematical skills test on other tests which are established to evaluate the ability in basic mathematics. When a high correlation is realized, then there will be a possibility of convergent validity.

The presence of convergent validity can be interpreted well if its relativity to discriminant validity. When the intercorrelations between measures which are not similar are low, then it is expected that the correlation between two same measure is likely to be strong evidence of convergent validity. For instance, if convergent validity is tested on a standard such as a self-esteem, measures of constructs such as self-appraisal, self-worth, social skills, and confidence can be seen to be related while measures of a construct such as intelligence should not be related (Scott-Parker et al., 2012)

Table 16 shows the values of the average variance extracted (AVE) for the eight study constructs by using the AVE formula:  $\sum_{i=1}^n L_i^2/n$  ( $L_i$  = standardised factor loading of  $i$  item, and  $n$  = number of total items), and all of them are greater than 0.6 so the research constructs indicate convergent validity (Hair et al., 2014).

Table 16 : The AVE values of the study variables

Variables	AVE formula	AVE
Perceived Service Quality Teaching (QTS)	$.807^2 + .848^2 + .821^2 / 3$	<b>.68</b>
Student Life and Support (SLS)	$.753^2 + .75^2 + .789^2 + .79^2 + .843^2 + .797^2 / 6$	<b>.62</b>
Social Identification (SI)	$.754^2 + .847^2 + .835^2 + .747^2 + .772^2 / 5$	<b>.63</b>
Organizational Identification (OI)	$.743^2 + .855^2 + .91^2 + .867^2 / 4$	<b>.72</b>
Reputation of the Institution (RE)	$.712^2 + .875^2 + .885^2 + .751^2 / 4$	<b>.66</b>
Student Satisfaction (SS)	$.703^2 + .82^2 + .793^2 + .852^2 / 4$	<b>.63</b>
Intention to Stay (IS)	$.8^2 + .798^2 + .886^2 + .89^2 / 4$	<b>.71</b>
Supportive Intentions (SP)	$.811^2 + .821^2 + .793^2 + .704^2 + .784^2 + .812^2 + .788^2 + .786^2 / 8$	<b>.65</b>

### 5.8.2 Construct reliability

Construct reliability is when the measure is consistent. The consistencies considered by psychologists include overtime (test-retest reliability), across items (internal consistency) and across different researchers (inter-rater reliability). When a construct

is consistent across time, and the scores obtained also assumed to be consistent across the time, then the researchers apply test-retest reliability. A measure such as intelligence is thought generally to be consistent across time (Chiou & Chen, 2010).

The intelligence of a person will remain the same across time; therefore, a good measure of intelligence score of a person is expected to remain the same next month as it is roughly today. If a measure produces scores which are greatly inconsistent overtime on a construct which is presumed to be consistent, then that is not a very good measure. Internal consistency is the people's response being consistency across items on a measure with multiple items (Tavakol et al., 2011). Generally, those measure's items should be reflecting the underlying construct, which is the same; therefore, the score of people on these items are supposed to be correlated with each other. Finally, inter-rater reliability is a reliability measure used in assessing the extent to which assessment decisions are agreed upon by different judges or ratters. Inter-rater reliability is important where the observers are believed to have interpreted the answers in different ways (Ferguson et al., 2012)

Table 17 shows the values of the construct reliability (CR) for the eight study constructs by using the AVE formula:  $(\sum_{i=1}^n L_i)^2 / (\sum_{i=1}^n L_i)^2 + (\sum_{i=1}^n e_i)$ . ( $L_i$  = standardised factor loading of  $i$  item, and  $e_i$  is the error variance term of  $i$ ), and all of them are above 0.85 so the research constructs indicate convergent validity (Hair et al. 2014).

Table 17 : The CR values of the study variables

<b>Variables</b>	<b>CR</b>
Perceived Service Quality Teaching (QTS)	<b>0.87</b>
Student Life and Support (SLS)	<b>0.91</b>
Social Identification (SI)	<b>0.89</b>
Organizational Identification (OI)	<b>0.91</b>
Reputation of the Institution (RE)	<b>0.88</b>
Student Satisfaction (SS)	<b>0.87</b>
Intention to Stay (IS)	<b>0.91</b>
Supportive Intentions (SP)	<b>0.93</b>

### **5.8.3 Discriminant validity**

Discriminant validity is used in psychology to measure whether measurements or concepts are unrelated in reality when they are supposed not to be related (Fournet et al., 2015; Suen et al., 2017). Evaluating discriminant validity is successful when it shows that the measurements are not greatly correlated with other designed tests; non-empirically measured different concepts or measurements. The discriminant validity is the square root of AVE and the result must be more than the latent variables correlation.

In assessing the discriminant validity, the correlation should not be carried out before correcting attenuation in the correlation, which is usually caused by the errors in measurements. Once the correlation is calculated, the decision is made based on the result found. There is no discriminant validity standard value used for making the decision, but when the result becomes less than 0.85, then there is a likelihood that discriminant validity is present among the scales. Meanwhile, when the output is above 0.85, it indicates that there is a chance that the two constructs overlap largely and that



a chance is that they are just but measuring the same thing. If this happens then, discriminant validity cannot be said to exist between them (Yang-Wallentin et al., 2010).

For instance, when researchers developed a concept to measure something like narcissism, they may want to use self-esteem as a measuring scale to assess discriminant validity. Theoretically, narcissism and self-esteem are concepts which are completely different, and hence researchers must develop a scale to measure narcissism but not self-esteem.

Furthermore, the discriminant validity of this study was presented in Figure 17 and the diagonal covariance arrows correlation between the eight factors were below 0.8 which is good.

The measurement of the discriminant validity of this study was achieved. Table 18 shows the AVE of the laten variables are higher than the squared correlations and more than 0.5 (Hair et al., 2014).

Table 18 : Construct reliability, convergent, and discriminant validity

	CR	IS	QTS	SLS	OI	SI	SS	SP	RE
IS	0.909	0.845							
QTS	0.865	0.207	0.826						
SLS	0.907	0.540	0.479	0.788					
OI	0.909	0.500	0.391	0.630	0.846				
SI	0.894	0.448	0.502	0.711	0.592	0.792			
SS	0.872	0.573	0.382	0.606	0.766	0.537	0.794		
SP	0.929	0.522	0.402	0.506	0.700	0.537	0.675	0.788	
RE	0.883	0.560	0.325	0.575	0.596	0.568	0.563	0.639	0.809

## **5.9 Structural model and hypothesis testing**

Structural equation modelling (SEM) is basically a statistical technique used to present multivariate analysis that in one way or the other are used to present, describe, and summarize the analysis of various structural relationships. The SEM approach is a combination of both analyses of factors as well as analysis of multiple regression statistics. Furthermore, it is used in the analysis of associations of structures between the variables that can be measured and those with constructs of latency (Hair et al., 2014).

Literature shows that SEM is one of the most preferred methods for many researchers given that different multiples and interrelated dependence in a single analysis can easily be estimated through this method, (Hair et al., 2014). For illustration, two different types of variables can be used in the analysis, namely endogenous variables and exogenous variables. To note, variables considered to be endogenous simply means outcome or dependent variables while the variables considered to be exogenous simply means the independent variables.

In theory, it can be assumed that variables of interest in order to understand the association between class attendance and academic performance among sampled university students. By investigating this theory, existing associations with the provision of consistency can be identified while exploring a given phenomenon under a study. To answer this, SEM has identified at least two main models discussed below (Hair et al., 2014).

The first model is the measurement model which specifically represents the theory with the specifications on how these two variables interplay to represent the theory itself. The next model refers to the structural model that specifically identifies how different constructs interact with other constructs. It is also worth to note that the SEM model can also be taken to mean modelling of causal relationship now that it identifies the existing causal associations, (Rothenhäusler, Ernest & Bühlmann, 2018).

In the SEM model, the following assumptions are normally made. First, there is asymmetric distribution in the multivariate component analysis given that the maximum likelihood method is used thus assuming normality in the multivariate distribution and that any significant change in the normality of the multivariate can easily lead to a wide variation in the value of the chi-square test. Another assumption is the SEM model has a relationship which is linear between the dependent and independent variables. In addition, there should not be the existence of any outliers in the given dataset now that model significance can be affected by the presence of outliers in the dataset. Moreover, independent variables and dependent variable are expected to have a cause-and-effect association and that before the event, a cause must have occurred. Furthermore, any covariance to be observed must be true to make it meet the assumption of non-spurious relationship.

Additionally, parameters of estimation need to have equations considered to be low. In other words, the models created need to be identified exactly the way it is or slightly higher while models with under-identification are deemed weak thus not utilized. Finally, the sample size in the SEM model must be large enough. Literatures have

shown that most researchers prefer an average of 200-400 with about 15 variable names to be fit in SEM model analysis (Sánchez, Kim, & Sammel, 2017).

Having mentioned that SEM is relevant and produces both linear and nonlinear associations, it is easy to test hypothesis without any complication through SEM. For example, SEM applies different statistical methods such as regression analysis, factor analysis, independent sample t test among others to test the association between variables. On the other hand, the AMOS outputs display some of the values of estimations, which represents the weight of the regression, loading factors, correlation, effects of direction and effect totals, among others. The output text also presents how fit the model is to indicate the goodness of the fit statistics of the model. As usual with other statistical software, AMOS also have outputs showing any kind of error that might be experienced while executing the commands, (Haviv, 2016). This is basically to alert in case the error term was forgotten while displaying the SEM model results.

Figure 18 is presenting the measurement of the structural model. It highlights the structural relationship between the constructs of this research study and test the developed hypotheses in Chapter 3.

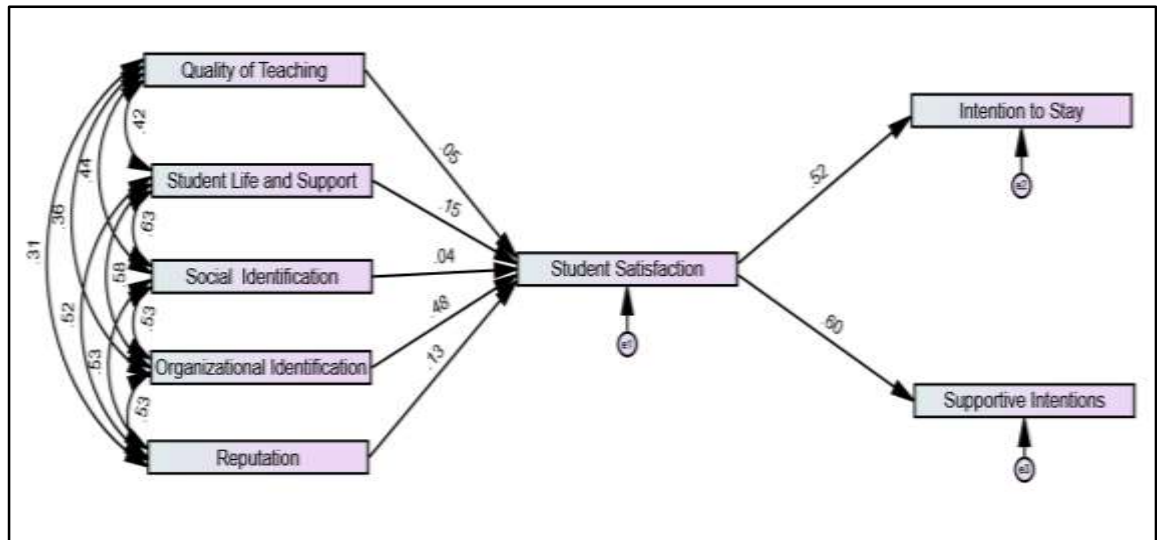


Figure 18 : Research structural model visual diagram

### 5.9.1 The Relationships between QTS and SS

The findings of path analysis indicate that Perceived Service Quality Teaching (QTS) relates **positively and not significantly** to Student Satisfaction (SS) ( $\beta = 0.051$ ,  $t\text{-value} = 1.271$ ,  $p > .204$ ). Thus, hypothesis 1: *Perceived Service Quality of Teaching is positively related to Student Satisfaction*, was not supported (Not Significant Relationship).

### 5.9.2 The Relationships between SLS and SS

The findings of path analysis indicate that Student Life and Support (SLS) relates **positively and significantly** to Student Satisfaction (SS) ( $\beta = 0.168$ ,  $t\text{-value} = 3.034$ ,  $p < .002$ ). Thus, hypothesis 2: *Student Life and Support is positively related to Student Satisfaction*, was supported (Significant Relationship).

### **5.9.3 The Relationships between SI and SS**

The findings of path analysis indicate that Social Identification (SI) relates **positively and not significantly** to Student Satisfaction (SS) ( $\beta = 0.051$ ,  $t\text{-value} = 0.936$ ,  $p > .349$ ). Thus, hypothesis 3: *Social Identification is positively related to Student Satisfaction*, was not supported (Not Significant Relationship).

### **5.9.4 The Relationships between OI and SS**

The findings of path analysis indicate that Organizational Identification (OI) relates **positively and significantly** to Student Satisfaction (SS) ( $\beta = 0.482$ ,  $t\text{-value} = 10.670$ ,  $p < .001$ ). Thus, hypothesis 4: *Organizational Identification is positively related to Student Satisfaction*, was supported (Significant Relationship).

### **5.9.5 The Relationships between RE and SS**

The findings of path analysis indicate that Institution Reputation (RE) relates **positively and significantly** to Student Satisfaction (SS) ( $\beta = 0.137$ ,  $t\text{-value} = 2.893$ ,  $p < .004$ ). Thus, hypothesis 5: *Institution Reputation is positively related to Student Satisfaction*, was supported (Significant Relationship).

### **5.9.6 The Relationships between SS and IS**

The findings of path analysis indicate that Student Satisfaction (SS) relates **positively and significantly** to Intention to Stay (IS) ( $\beta = 0.546$ ,  $t\text{-value} = 12.328$ ,  $p < .001$ ). Thus, hypothesis 6: *Student Satisfaction is positively related to Intention to Stay*, was supported (Significant Relationship).

### 5.9.7 The Relationships between SS and SP

The findings of path analysis indicate that Student Satisfaction (SS) relates **positively and significantly** to Supportive Intentions (SP) ( $\beta = 0.565$ ,  $t\text{-value} = 15.521$ ,  $p < .001$ ). Thus, hypothesis 7: *Student Satisfaction is positively related to Supportive Intentions*, was supported (Significant Relationship).

To conclude the test full structural model and hypotheses of this research, table 19 summarizes the seven hypotheses testing results as 5 hypotheses out of 7 hypotheses are supported:

Table 19 : The summary of the research hypothesis test results

Hypotheses	Structural Relationships	Standardised estimate ( $\beta$ )	Standard Error	Critical Ratio	P values	Result
H1	Perceived Quality of Teaching → Student Satisfaction	0.051	0.040	1.271	0.204	Not Supported
H2	Student life and support → Student Satisfaction	0.168	0.055	3.034	**	Supported
H3	Social Identification → Student Satisfaction	0.051	0.054	.936	0.349	Not Supported
H4	Organizational Identification → Student Satisfaction	0.482	0.045	10.670	***	Supported
H5	Institution Reputation → Student Satisfaction	0.137	0.047	2.893	0.004	Supported
H6	Student Satisfaction → Intention to Stay	0.546	0.044	12.328	***	Supported
H7	Student Satisfaction → Supportive Intentions	0.565	0.036	15.521	***	Supported
** $p < 0.01$ , *** $p < .001$						

## **5.10 Mediation Analysis**

Mediation analysis is used to upturn the information gained from research when the mediating procedure processes are available. It is used to test whether another variable explains the relationship between the dependent and independent variables, the mediator variable. Mediator variable is also known as the intervening variable or a moderator variable (Thakur & Bhatnagar, 2017). The mediation model proposes that the independent variable does not directly impact the dependent variable; rather, it affects the mediator variable, not observable. It transmits the effect to the dependent variable.

Mediation analysis is used to establish how one variable impacts another variable, not directly but by using the mediator variable. Mediation analysis helps to understand two variables better when the two variables, independent and independent, do not directly relate. Mediation analysis enables one to choose which test to conduct from a pool of options (Danner, Hagemann & Fiedler, 2015). To establish the relationship of how a mediator variable affects the other variables, full mediation or partial mediation is worked on. Full mediation aims at providing full evidence for the mediation process. Partial mediation is aimed at maintaining the mediating variables for some accounts of the relationship between the variables.

The relationship between the dependent and the independent variables is important when the dependent variable's variance is proved by one of the many tests involved in testing either partial mediation or full mediation (MacKinnon, Fairchild & Fritz, 2007). Such tests include the Sobel test and preacher and Hayes bootstrap method. On the other hand, the correlation between the dependent and the independent variable is



insignificant if the mediator introduced a small variance between the variables. In such a case, the mediator introduced is not always a real mediation. It is therefore commanding to show an essential reduction in variance brought by the independent variable.

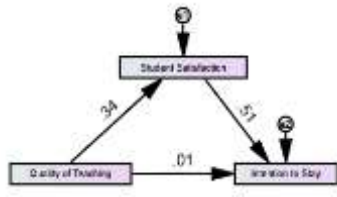
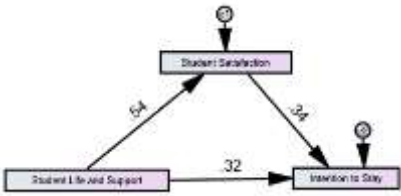
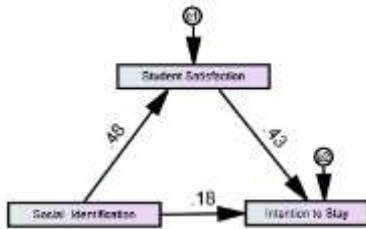
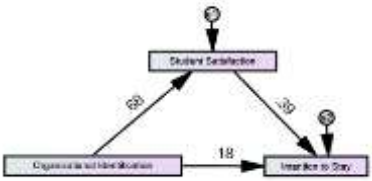
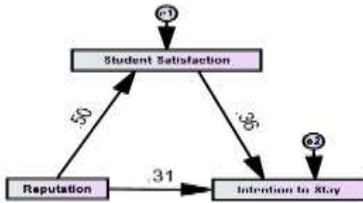
The transmission of effect to the dependent variable from the independent variable is mediation. The transmission of the impact can be either direct or indirect. Direct effects do not need to be mediated, while an indirect effect needs to be transmitted via a mediator (Maniu, Abdessalem & Cautis, 2011). The degree to which the dependent variable changes when an independent variable upturn by a unit and when the intermediary variable remains unchanged, measures a direct effect. On the other hand, the indirect effect is brought by changes in the dependent variable when the independent variable remains unchanged (Donaldson, 2001). In this case, the intermediary variable change by a quantity equal if it would have transformed if the independent variable is improved with one unit. When the independent variable passes through either one or more mediator variables, the impact is transmitted to the dependent variable, referred to as an indirect effect. A direct effect needs not to be transferred through a mediator, but it directly affects the other variable. The amount of indirect and direct effects in linear systems brings the total impact (Maniu, Abdessalem & Cautis, 2011). In non-linear systems, the total effect is obtained by a modified combination of the direct and indirect effects.

#### **5.10.1 Mediation Test for Institution A and Institution B (Common)**

This study has 10 mediation tests. The first group has five medication tests between QTS, SLS, SI, OI, and RE with IS using SS as a potential mediator. The second group

has five mediation tests between QTS, SLS, SI, OI, and RE with SP using SS as a potential mediator. Table 20 showed the mediations paths figures and the mediations results by using AMOS.

Table 20 : The summary results of mediation tests (Institution A&B Common)

Mediations tested	Mediations paths	Mediations results
QTS → SS → IS	 <p>Standardized Direct effect = .006 ns (0.894) Standardized Indirect effect = .177 ** (0.001)</p>	Full Mediation
SLS → SS → IS	 <p>Standardized Direct effect = .319 ** (0.001) Standardized Indirect effect = .186 ** (0.001)</p>	Partial Mediation
SI → SS → SI	 <p>Standardized Direct effect = .182 *** (0.001) Standardized Indirect effect = .207 *** (0.001)</p>	Partial Mediation
OI → SS → SI	 <p>Standardized Direct effect = .185 *** (0.001) Standardized Indirect effect = .265 *** (0.001)</p>	Partial Mediation
RE → SS → SI	 <p>Standardized Direct effect = .314 *** (0.001) Standardized Indirect effect = .179 *** (0.001)</p>	Partial Mediation

QTS → SS → SP	<p>Standardized Direct effect= .173 *** (0.001) Standardized Indirect effect = .188 *** (0.001)</p>	Partial Mediation
SLS → SS → SP	<p>Standardized Direct effect= .201 *** (0.002) Standardized Indirect effect = .269 *** (0.001)</p>	Partial Mediation
SI → SS → SP	<p>Standardized Direct effect= .249 *** (0.001) Standardized Indirect effect = .234 *** (0.001)</p>	Partial Mediation
RE → SS → SP	<p>Standardized Direct effect= .375 *** (0.001) Standardized Indirect effect = .208 *** (0.001)</p>	Partial Mediation
OI → SS → SP	<p>Standardized Direct effect= .431 *** (0.001) Standardized Indirect effect = .212 *** (0.001)</p>	Partial Mediation
ns (not significant) * p < .05 ** p < 0.01 *** p < .001		

#### 5.10.1.1 Mediation of SS on the relationship between QTS and IS

Testing the mediating role of Student Satisfaction (SS) on the relationship between the Perceived Service Quality Teaching (QTS) and Intention to Stay (IS) illustrated in Table 21 by using AMOS was conducted through examining the related is not significant in the direct effect and significant in indirect effect. The standardized indirect (mediated) effect of QTS on IS is significantly different from zero at the 0.001 level ( $p=.001$  two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias-corrected confidence intervals. The bootstrapping mediation results presented in Table 21 found that Student Satisfaction has **Full Mediation** the relationship between Perceived Service Quality Teaching and Intention to Stay.

Table 21 : Mediation test for SS between QTS & IS (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
QTS → SS → IS	.006 ns (0.894)	.177 **(.001)	Full Mediation
**= $p < .001$ ns = not significant			

#### 5.10.1.2 Mediation of SS on the relationship between SLS and IS

Testing the mediating role of Student Satisfaction (SS) on the relationship between the Student Life and Support (SLS) and Intention to Stay (IS) illustrated in Table 22 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of SLS on IS is significantly different from zero at the 0.001 level ( $p=.001$  two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias-corrected

confidence intervals. The bootstrapping mediation results presented in Table 22 found that Student Satisfaction has *Partial Mediation* the relationship between Student Life and Support and Intention to Stay.

Table 22 : Mediation test for SS between SLS and IS (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
SLS → SS → IS	.319 ** (0.001)	.186 ** (0.001)	Partial Mediation
**= p < .001			

#### 5.10.1.3 Mediation of SS on the relationship between IS and IS

Testing the mediating role of Student Satisfaction (SS) on the relationship between the Social Identification (SI) and Intention to Stay (IS) illustrated in Table 23 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of SI on IS is significantly different from zero at the 0.01 level (p=.001 two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias- corrected confidence intervals. The bootstrapping mediation results presented in Table 23 found that Student Satisfaction has *Partial Mediation* the relationship between Social Identification and Intention to Stay.

Table 23 : Mediation test for SS between SI and IS (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
SI → SS → IS	.182 *** (0.001)	.207 *** (0.001)	Partial Mediation
***= p < .001			

#### 5.10.1.4 Mediation of SS on the relationship between OI and IS

Testing the mediating role of Student Satisfaction (SS) on the relationship between Organizational Identification (OI) and Intention to Stay (IS) illustrated in Table 24 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of OI on IS is significantly different from zero at the 0.01 level ( $p=.001$  two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias- corrected confidence intervals. The bootstrapping mediation results presented in Table 24 found that Student Satisfaction has *Partial Mediation* the relationship between Organizational Identification and Intention to Stay.

Table 24 : Mediation test for SS between IO and SI (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
OI → SS → IS	.185 *** (0.001)	.265 ***(0.001)	Partial Mediation
***= $p < .001$			

#### 5.10.1.5 Mediation of SS on the relationship between RE and IS

Testing the mediating role of Student Satisfaction (SS) on the relationship between Institution Reputation (RE) and Intention to Stay (IS) illustrated in Table 25 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of RE on IS is significantly different from zero at the 0.01 level ( $p=.001$  two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias- corrected confidence intervals. The bootstrapping mediation results presented in Table 25 found that Student

Satisfaction has ***Partial Mediation*** the relationship between Institution Reputation and Intention to Stay.

Table 25 : Mediation test for SS between RE and SI (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
RE → SS → IS	.314 *** (0.001)	.179 ***(0.001)	Partial Mediation
***= p < .001			

#### 5.10.1.6 Mediation of SS on the relationship between QTS and SP

Testing the mediating role of Student Satisfaction (SS) on the relationship between the Perceived Service Quality Teaching (QTS) and Supportive Intentions (SP) illustrated in Table 26 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of QTS on SP is significantly different from zero at the 0.001 level (p=.001 two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias-corrected confidence intervals. The bootstrapping mediation results presented in Table 26 found that Student Satisfaction has ***Partial Mediation*** the relationship between Perceived Service Quality Teaching and Supportive Intentions.

Table 26 : Mediation test for SS between QTS and SP (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
QTS → SS → SP	.173 *** (0.001)	.188 ***(0.001)	Partial Mediation
***= p < .001			

#### 5.10.1.7 Mediation of SS on the relationship between SLS and SP

Testing the mediating role of Student Satisfaction (SS) on the relationship between the Student Life and Support (SLS) and Supportive Intentions (SP) illustrated in Table 27 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of SLS on SP is significantly different from zero at the 0.001 level ( $p=.001$  two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias- corrected confidence intervals. The bootstrapping mediation results presented in Table 27 found that Student Satisfaction has ***Partial Mediation*** the relationship between Student Life and Support and Supportive Intentions.

Table 27 : Mediation test for SS between SLS and SP (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
SLS → SS → SP	.201 *** (0.002)	.269 *** (0.001)	Partial Mediation
***= $p < .001$			

#### 5.10.1.8 Mediation of SS on the relationship between SI and SP

Testing the mediating role of Student Satisfaction (SS) on the relationship between the Social Identification (SI) and Supportive Intentions (SP) illustrated in Table 28 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of SI on SP is significantly different from zero at the 0.01 level ( $p=.001$  two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias- corrected confidence intervals. The bootstrapping mediation results presented in Table 28 found



that Student Satisfaction has *Partial Mediation* the relationship between Social Identification and Supportive Intentions.

Table 28 : Mediation test for SS between SI and SP (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
SI → SS → SP	.249 *** (0.001)	.234 ***(0.001)	Partial Mediation
***= p < .001			

#### 5.10.1.9 Mediation of SS on the relationship between OI and SP

Testing the mediating role of Student Satisfaction (SS) on the relationship between Organizational Identification (OI) and Supportive Intentions (SP) illustrated in Table 29 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of OI on SP is significantly different from zero at the 0.01 level (p=.001 two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias-corrected confidence intervals. The bootstrapping mediation results presented in Table 29 found that Student Satisfaction has *Partial Mediation* the relationship between Organizational Identification and Supportive Intentions.

Table 29 : Mediation test for SS between IO and SP (Institution A&B Common)

Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
OI → SS → SP	.431 *** (0.001)	.212 ***(0.001)	Partial Mediation
***= p < .001			

#### 5.10.1.10 Mediation of SS on the relationship between RE and SP

Testing the mediating role of Student Satisfaction (SS) on the relationship between Institution Reputation (RE) and Supportive Intentions (SP) illustrated in Table 30 by using AMOS was conducted through examining the related significant of both effects direct and indirect. The standardized indirect (mediated) effect of RE on SP is significantly different from zero at the 0.01 level ( $p=.001$  two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias-corrected confidence intervals. The bootstrapping mediation results presented in Table 30 found that Student Satisfaction has *Partial Mediation* the relationship between Organizational Identification and Supportive Intentions.

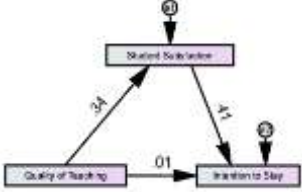
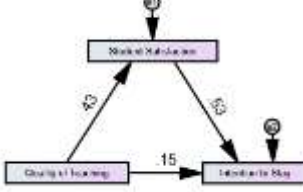
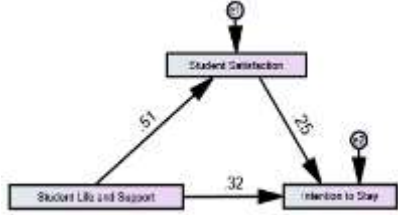
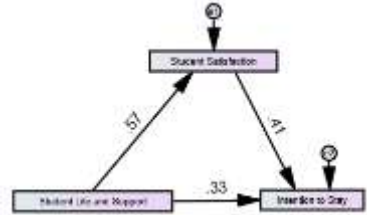
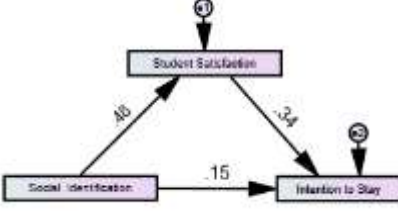
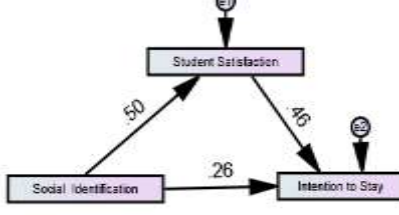
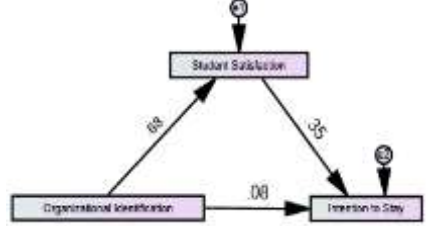
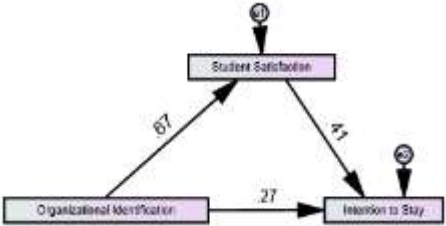
Table 30 : Mediation test for SS between RE and SP (Institution A&B Common)

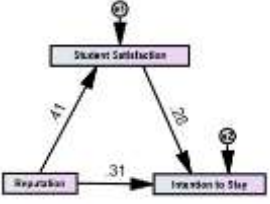
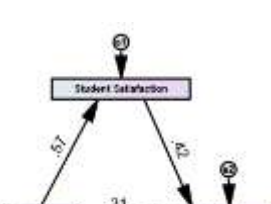
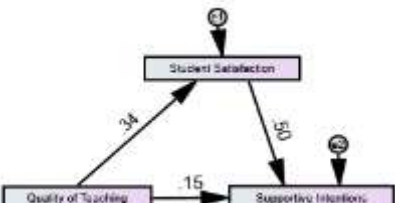
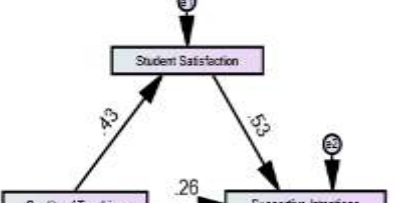
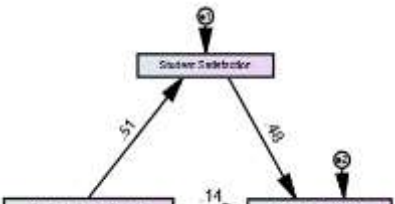
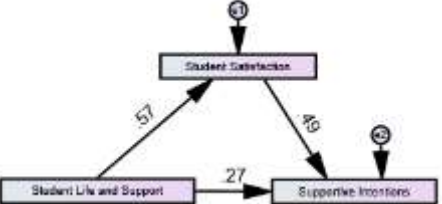
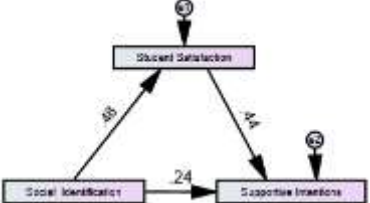
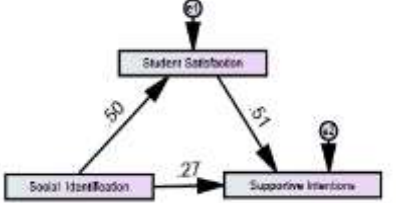
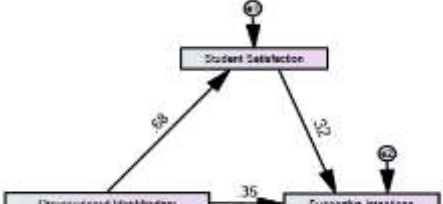
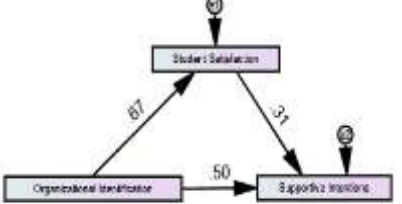
Relationship	Standardized Direct effect	Standardized Indirect effect	Mediation Result
RE → SS → SP	.375 *** (0.001)	.208 ***(0.001)	Partial Mediation
***= $p < .001$			

#### 5.10.2 Mediation Test for Institution A and Institution B (Individually)

In the section, the mediation test will be individually to compare the result between institution A and institution B. Table 31 showed 10 mediation tests between QTS, SLS, SI, OI and RE with IS using SS as a potential mediator with mediations paths figures and the mediations results by using AMOS.

Table 31 : The summary results of mediation tests (Institution A&B Individually)

Mediations tested	Mediations paths & results (Institution A)	Mediations paths & results (Institution B)
QTS → SS → IS	 <p>Standardized Direct effect= .008 (0.896) ns Standardized Indirect effect = .140 *** (0.001)</p>	 <p>Standardized Direct effect= .147 ** (0.05) Standardized Indirect effect = .228 *** (0.001)</p>
	Full Mediation	Partial Mediation
SLS → SS → IS	 <p>Standardized Direct effect= .322 *** (0.001) Standardized Indirect effect = .126 *** (0.002)</p>	 <p>Standardized Direct effect= .326 *** (0.001) Standardized Indirect effect = .232 *** (0.001)</p>
	Partial Mediation	Partial Mediation
SI → SS → IS	 <p>Standardized Direct effect= .152 (0.60) ns Standardized Indirect effect = .161 *** (0.001)</p>	 <p>Standardized Direct effect= .260 *** (0.001) Standardized Indirect effect = .230 *** (0.001)</p>
	Full Mediation	Partial Mediation
OI → SS → IS	 <p>Standardized Direct effect= .084 (0.441) ns Standardized Indirect effect = .241 *** (0.001)</p>	 <p>Standardized Direct effect= .266 *** (0.007) Standardized Indirect effect = .277 *** (0.001)</p>
	Full Mediation	Partial Mediation

<p>RE → SS → IS</p>	 <p>Standardized Direct effect= .315 *** (0.001) Standardized Indirect effect = .115 *** (0.001)</p> <p><i>Partial Mediation</i></p>	 <p>Standardized Direct effect= .308 *** (0.001) Standardized Indirect effect = .238 *** (0.001)</p> <p><i>Partial Mediation</i></p>
<p>QTS → SS → SP</p>	 <p>Standardized Direct effect= .150 (0.063) ns Standardized Indirect effect = .172 *** (0.001)</p> <p><i>Full Mediation</i></p>	 <p>Standardized Direct effect= .258 *** (0.001) Standardized Indirect effect = .229 *** (0.001)</p> <p><i>Partial Mediation</i></p>
<p>SLS → SS → SP</p>	 <p>Standardized Direct effect= .142 (0.118) ns Standardized Indirect effect = .244 *** (0.001)</p> <p><i>Full Mediation</i></p>	 <p>Standardized Direct effect= .270 *** (0.001) Standardized Indirect effect = .279 *** (0.001)</p> <p><i>Partial Mediation</i></p>
<p>SI → SS → SP</p>	 <p>Standardized Direct effect= .244 *** (0.031) Standardized Indirect effect = .207 *** (0.001)</p> <p><i>Partial Mediation</i></p>	 <p>Standardized Direct effect= .268 *** (0.001) Standardized Indirect effect = .254 *** (0.001)</p> <p><i>Partial Mediation</i></p>
<p>OI → SS → SP</p>	 <p>Standardized Direct effect= .347 *** (0.001) Standardized Indirect effect = .215 *** (0.001)</p> <p><i>Partial Mediation</i></p>	 <p>Standardized Direct effect= .502 *** (0.001) Standardized Indirect effect = .206 *** (0.001)</p> <p><i>Partial Mediation</i></p>

RE → SS → SP	<p>Standardized Direct effect= .311 *** (0.002) Standardized Indirect effect = .173 *** (0.001)</p>	<p>Standardized Direct effect= .448 *** (0.001) Standardized Indirect effect = .222 *** (0.001)</p>
	<i>Partial Mediation</i>	<i>Partial Mediation</i>
ns (not significant) * p < .05 ** p < 0.01 *** p < .001		

Table 32 showed a summary mediation test for the Mediator SS and the following are the main highlighted points from this test:

- All results of Medication test in institution B are **Partial Medication**.
- QTS→SS→IS: **Full Mediation** in institution A and **Partial Mediation** in institution B.
- SLS→SS→IS: **Partial Mediation** in both institution A and institution B.
- SI→SS→IS: **Full Mediation** in institution A and **Partial Mediation** in institution B.
- OI→SS→IS: **Full Mediation** in institution A and **Partial Mediation** in institution B.
- RE→SS→IS: **Partial Mediation** in both institution A and institution B.
- QTS→SS→SP: **Full Mediation** in institution A and **Partial Mediation** in institution B.
- SLS→SS→SP: **Full Mediation** in institution A and **Partial Mediation** in institution B.
- SI→SS→SP: **Partial Mediation** in both institution A and institution B.
- OI→SS→SP: **Partial Mediation** in both institution A and institution B.
- RE→SS→SP: **Partial Mediation** in both institution A and institution B.

Table 32 : Compare of mediation tests result (Institution A&amp;B Individually)

Institution	Mediator Test	Direct effect Mediator	Indirect effect	Mediation Result
<b>A</b>	QTS → SS → IS	.008 (0.896) ns	.140 *** (0.001)	Full Mediation
	SLS → SS → IS	.322 *** (0.001)	.126 *** (0.002)	Partial Mediation
	SI → SS → IS	.152 (0.60) ns	.161 *** (0.001)	Full Mediation
	OI → SS → IS	.084 (0.441) ns	.241 *** (0.001)	Full Mediation
	RE → SS → IS	.315 *** (0.001)	.308 *** (0.001)	Partial Mediation
	QTS → SS → SP	.150 (0.063) ns	.172 *** (0.001)	Full Mediation
	SLS → SS → SP	.142 (0.118) ns	.244 *** (0.001)	Full Mediation
	SI → SS → SP	.244 *** (0.031)	.207 *** (0.001)	Partial Mediation
	OI → SS → SP	.347 *** (0.001)	.215 *** (0.001)	Partial Mediation
	RE → SS → SP	.311 *** (0.002)	.448 *** (0.001)	Partial Mediation
<b>B</b>	QTS → SS → IS	.147 ** (0.05)	.228 *** (0.001)	Partial Mediation
	SLS → SS → IS	.326 *** (0.001)	.232 *** (0.001)	Partial Mediation
	SI → SS → IS	.260 *** (0.001)	.230 *** (0.001)	Partial Mediation
	OI → SS → IS	.266 *** (0.007)	.277 *** (0.001)	Partial Mediation
	RE → SS → IS	.308 *** (0.001)	.238 *** (0.001)	Partial Mediation
	QTS → SS → SP	.258 *** (0.001)	.229 *** (0.001)	Partial Mediation
	SLS → SS → SP	.270 *** (0.001)	.279 *** (0.001)	Partial Mediation
	SI → SS → SP	.268 *** (0.001)	.254 *** (0.001)	Partial Mediation
	OI → SS → SP	.502 *** (0.001)	.206 *** (0.001)	Partial Mediation
	RE → SS → SP	.448 *** (0.001)	.222 *** (0.001)	Partial Mediation
*** = p<0.001, ** = p<0.05, ns = not significant				

## **Chapter 6: Discussion of the Research Findings**

### **6.1 Introduction**

This chapter presents in the first part the discussion of the research findings. Then it moves to the second part to summarise the results of the research questions and hypotheses compared to existing literature.

The main objective of this chapter is to answer the main study questions through the interpretation of results and hypotheses testing. This study aims to understand the relationship between of institution reputation and organizational identification on student satisfaction in higher education. In addition, as highlighted in the literature review chapter, the many researchers have highlighted the importance of university reputation in general and this thesis is designed to address the shortcoming in the literature by focusing on choosing four main constructs that could influence satisfaction. Thus, this chapter discusses the impact of institution reputation, organizational identification and the other factors on student satisfaction of undergraduate students and especially in their first year of studying.

### **6.2 Summary of Key Research Findings**

#### **6.2.1 The Relationship Between Factors influence student retention**

The research study of this thesis investigates the relationships between the eight main constructs and also shown hypotheses that have been created to accomplish this study. The result of this thesis found that there are many factors that can impact on student satisfaction negatively at the institutions and lead students to withdrawal from their

program before complaining the degree. However, other factors can also impact positively on students and make them retract the decision to withdrawal from the program such as the high quality of services and the reputation of the institution in higher education locally or globally or at both levels.

According to the article of Tinto (2017), results of many works of literature early-stage explained the point to many promising directions regarding future work. This has extended the analysis to the dataset and other universities, including important dealing with challenges linked to imbalances of class. It intends to expand the evaluation beyond the first terms transcript data as well as take a comprehensive look in relation to attrition procedures. It has presented the technical improvements in relation to prediction models. Three initial models of prediction yielded the same results. In relation to the hope of improving the models, intends to utilize the feature engineering on existing feature space. This is utilized within the evaluation of consumer churn from organizations. Student retention is the main concern within the education as well as policy-making communities. Almost 40% of learners pursuing degrees of bachelor do not fully complete the degree in 6 years. Universities are losing a huge amount of billion in revenues every year as well as decreasing the number of enrolled students.

Nevertheless, improvement in quality and educational environment that includes activities or services has regularly seen improvement with the effect to support the student to stay in the university and complete the academic degree. Moreover, Tinto (2017), presented the preliminary results in relation to predicting the alteration of a student from the big, records of the transcript, and results in relation to predicting the attrition of students. Prediction about the attrition of students yielded good and



promising results from the balanced data set of more than 32,500 learners with logistic regression provided the strongest predictions. All of this supports the thesis results in this related topic.

### **6.2.2 The Factors that Influence students becoming supportive of the HEI**

As demonstrated in the literature review chapter and in the finding of this thesis that related to the ways by which student satisfaction can be defined and the importance of the levels of student satisfaction in higher education-related aspects. Different factors that have been taken into consideration for the purpose of understanding the levels of student satisfaction include accountability, a decrease of the student attrition rates, the importance of the first-year experience, complexity levels, and the relationship between student satisfaction and retention. This also includes the different aspects influencing student satisfaction that have been described including course rating, skills and knowledge, interaction with the members, and utilization of the campus resources.

According to Al-Sheeb, Hamouda and Abdella (2018), the discussion of the study was related to various experiences that are provided to students who are in the first year of their college with the perceptions that students have developed regarding the environmental, social, and academic aspects of the college community. are also a major part of the discussion. Overall experiences that have been gained by the students during their student life in the institution can provide information about the support services or activities that lead to student satisfaction as the sense of belonging of the students has also been considered as a major factor that is related to their satisfaction in the university. The experiences of the students contribute to identifying various areas of the strengths and weaknesses that are a part of the first-year experience of

students and this will help the institutions to appropriate goals that can be set to support the students and to set new initiatives that improve the reputation of the institutions in higher education as well.

The universities need to maintain good university governance, quality of the lectures, and effective learning facilities for the purpose of ensuring the satisfaction of the students. Student satisfaction in turn is able to affect the reputation that has been developed by the university and the ways in which it can attract students from different parts of the world (Muhsin et al., 2020).

The study of Vázquez et al. (2015) has been successful in highlighting as well as discussing how the experiences of the student's university social responsibility, and perceptions of their experiences lead to satisfaction of quality services. The paper has also highlighted the factors that help in determining student perception of university social responsibility within a Spanish university. The research states that every university has to take responsibility for their effects as well as consequences that are caused through the strategies, policies, performances as well as structures like any other business organization. At the same time, every university should also provide quality services to their students and opportunities for social responsibility that will help in forming satisfying perceptions within the students.

Mayhew et al. (2016) was raising the inquiry of how the colleges in the 2000s can affect students learning in higher education. This study was comprehensive and go through different factors that affect students during their study at the institution. In the 21st century, the institutional experience has been used new methods of teaching and

curricula. Furthermore, the environment of learning at these institutions has improved significantly as they start focusing on important areas for students such as social identity, quality of teaching, organization identity that include advising to select the right academic major for their career life, the academic experience that includes the academic activities and facilities (library, class, club), and other fields which prepare students to be ready for their future life after they graduate.

Furthermore, Many institutions in higher education recognized the importance of investment and began to improve their services to deliver student satisfaction. Heffernan et al. (2018) definite that a reputation has a significant effect on the student's supportive intentions. Raposo and Alves (2010) explored the significance of reputation on students.

This thesis research investigates the relationships between eight main constructs. The following hypotheses have been created to accomplish this study.

### **6.2.3 Relationships between the Antecedents of Satisfaction and Student Satisfaction**

This part concludes the research finding of the 5 hypotheses that explain the relationships between the 5 factors (QTS, SLS, SI, OI, and RE) and student satisfaction:

***H1: Perceived Service Quality of Teaching is positively related to Student Satisfaction.***

***H2: Student life and support are positively related to Student Satisfaction.***

***H3: Social Identification is positively related to Student Satisfaction.***

*H4: Organizational Identification is positively related to Student Satisfaction.*

*H5: Institution Reputation is positively related to Student Satisfaction.*

#### **6.2.3.1 The Relationship between Quality of Teaching and Student Satisfaction**

The findings of this research highlight the Perceived Service Quality Teaching (QTS) positively and not significantly to Student Satisfaction (SS) at p-value  $<.05$ ; thus, the hypothesised relationship was not supported. However, the result pointed out a marginal significance since the p-value was equal to  $(p >.204)$ . This means the finding is not consistent with the hypothesis (H1: Perceived Service Quality of Teaching is positively related to Student Satisfaction). This finding suggests that Perceived Service Quality Teaching might influence the level of Student Satisfaction with minimal impact, and the presence of this service only might not be adequate to improve such type of satisfaction or even reach a high score. The research results highlight the need to investigate other services that might explain or moderate the relation between Quality Teaching and Student Satisfaction.

The particular research paper of Myers et al., (2016) reinforces the relationship between the students and the universities that they study by using the method of organizational identification which showed the importance of organizational identification in the university setting and the positive effect on students, administrators, and faculty.

The results of Muhsin et al., (2020) displayed student satisfaction that was influenced by the teaching choice of lecturers as well as learning facilities. It can be reasonable if

students enjoy decent learning facilities. The cognition of lecturers over teaching affects student satisfaction. It was seen that students have greater anticipation over the choice of teaching lecturers such that can progress learning outcome. Lecturers develop optimum on creating improved learning process where facilities in classroom and laboratory were of higher quality or satisfactory data.

The research findings of Appuhamilage and Torii (2019) showed implication of quality of teaching on students' contentment, level of their studying, in addition loyalty in Danish universities; where university reputation and the quality of student services besides student satisfaction are important. Furthermore, the findings discovered student satisfaction at advanced education influenced by professed value and the service provided the universities.

As mentioned earlier, the reputation of the universities depends on a range of factors which start from the employer reputation, faculty per student ratio, papers per faculty ratio, citations per paper, web effects, and proportion of the employees with PhD (Plewa et al., 2016). There is a monumental chance that the universities which have a substantial reputation in a particular aspect of the above-mentioned aspects, lacks in the other aspects. Considering the example, a particular university may have a monumental reputation of being a technologically equipped university and extremely well-functioning with their digital efforts; however, the quality of the educational services can be a massive challenge for the organization. In case such a university experiences a poor employer reputation, it will certainly face massive difficulty in recruiting and retaining skillful and educated professors and educators. At the same

time, it will be a challenge for the university in ensuring the smooth management of its workforce when it faces a poor reputation as an employer.

On the other hand, the incapability of the university in retaining a sufficient number of professors will certainly lead the university towards facing an extremely poor faculty per student ratio. As a result of the same, the quality of the teaching services or the educational services will start to face a massive decline. Moreover, it is clear that the currently functional professors and educators will be responsible to take the additional pressure which will not only negatively affect their work-life balance and ability to take work pressure but also will detrimentally affect their quality of teaching. In such a situation, the students are on the verge of receiving poor educational services and the reputation of the respective professors and educators as an educational service provider will be at stake as well. In case such universities also face the effects of the poor proportion of the employees with a PhD, it can be said that the quality of the educational services offered by the universities will start to be average and will certainly become a point of dissatisfaction for the students. Moreover, if such universities lack the desired control over the environment in the form of the absence of an anti-ragging committee, committees for tackling the causes of discrimination, and the safety of the students within the university, it will be a major menace for the university.

In such cases, the students start to feel insecure within the university and it creates monumental levels of mental stress. The students are required to be provided with an environment that promotes safety and security and inspires them for continuous learning; however, the incompetency of the universities in managing the same leads

them towards such a situation where the employees feel massively dissatisfied even when their universities have a high reputation.

Furthermore, the study of Wolniak and Engberg (2010) was examining the impact of the quality of the infrastructure and the quality of academic support and teaching. The finding was that the quality of teaching did not have a significant influence on students' performance but improving the other quality services such as the library and computers labs can affect positively students.

The conclusion of this part is supporting this relationship as the perceived service quality of teaching influences student satisfaction in higher education positively.

#### **6.2.3.2 The Relationship between Student Life and Support and Student Satisfaction**

The propose of this finding is to understand the relationship between Student Life & Support and Student Satisfaction. This relationship was investigated in Chapter 5 and the findings highlight that Student Life and Support (SLS) is positively and significantly to Student Satisfaction (SS) at  $p\text{-value} < .002$ ; thus, its consistent with the hypothesis (H2: Student Life & Support is positively related to Student Satisfaction). The finding suggests that Student Life & Support influence the level of Student Satisfaction with highly impact to student. The thesis results highlight the important of having high level of quality on student services (Library, accommodation, restaurants, clubs, and so on) to increase the level of student satisfaction at the institutions.

As noted by Appuhamilage and Torii (2019) that evolving nature of the higher education-based sector is an impact on the loyalty of students. The impact of activities of the students on policymaking in Japan is a major part that has been addressed as well. The analysis has been based on the interrelationship that is formed between satisfaction and the other factors. The results have provided strategic information for university academics and administrators about the importance of different aspects that have been taken into consideration which include loyalty, image, and the perceived value. The competitive structure of the market has an impact on the facilities that are provided to students by the universities. This result is consistent with the thesis finding, which implies that loyalty of students is influenced by the levels of their satisfaction.

Chandra et al. (2019) developed two different hypotheses trying to establish that the university service quality contains a positive influence on student satisfaction. The researchers provided ample evidence to support the established hypotheses. They have tested the hypotheses and mentioned that the universities of Riau need to make improvements to their service quality to assure student satisfaction. The researchers also mentioned that the universities need to enhance their services. As a result, student intention cannot be achieved by quality service only, rather it is closely connected with the notion of student satisfaction and there is no doubt that there is a significant as well as positive impact of service quality on student satisfaction and student loyalty to stay in their university. Thus, this finding is consistent with the thesis result.

Subrahmanyam (2017) founding was consistent with the thesis result. The service quality provided by the institutions can grow the level of student satisfaction and encourage them to continue their study. The result of the study displayed a direct outcome of service quality over students' satisfaction. Moreover, the service quality



developed a positive impact on contentment having potential importance of students' inspiration. The poor services provided scholarly person, administrators, in addition, encouraging staff lead to pupil feeling alienated, that eventually outcome over poor academic performance. Therefore, the institution should keep improving its services to have a happy environment.

As a conclusion of the above works of literature that also supporting the result of this thesis, the student life and support influences student satisfaction in higher education positively.

#### **6.2.3.3 The Relationship between Social Identification and Student Satisfaction.**

The findings of this research highlight the Social Identification (SI) relates positively and not significantly to Student Satisfaction (SS) at  $p\text{-value} < .05$ ; thus, the hypothesised relationship was not supported. However, the result pointed out a marginal significance since the  $p\text{-value}$  was equal to ( $p > .349$ ) which is not consistent with the hypothesis (H3: Social Identification is positively related to Student Satisfaction). This finding suggests that Social Identification might influence the level of Student Satisfaction with minimal impact, and the presence only on these activities might not be adequate to improve such type of satisfaction or even reach a high score of satisfaction. Furthermore, it may need to investigate other services or activities that could explain or can moderate the relationship between Social Identification and Student Satisfaction in a better way.

Smyth, et al., (2015) proves the relationship between social identity and education models on students. The investigation of a more nuanced link between the social identity of discipline-related and learning norms, as well as the influence this could have on the studying strategy selected, was the most significant novelty presented. Learning styles have long been thought to be a result of environmental variables and individual variations. proposed social identity as a viable element in determining students' learning styles in education. The new study confirms the importance of social identity. but goes even further by demonstrating the and moderating effects of social norms on learning strategies. Those who also added to the past efforts in two significant methods people recorded a large number of disciplines across an entire university and regulated for a lot of significant people and studying context factors. The interacting impact of identifying and norms for deep learning, though, altered these main impact correlations between identity, norms, and learning strategy. The perceived substance of group norms modulated the positive link between disciplinary social identity and deep learning method, such that seeing advanced learning norms increased the association. These perceived standards had little influence on individuals who were not highly associated with individuals in their subject. To put it another way, the effect of seeing the group's norms as supporting deep learning techniques was mitigated by the degree of identification, with only high identifiers being impacted by these norms and reporting greater levels of deep learning. Thus, involving student into institution activities that linked to social identity and their learning will increase the satisfaction level that led to a happy journey in the institution.

Viljoen and Deacon (2013) analysed the factors influencing first-year students and they found that there are many factors that influence the students to stay with the

institution include social support. The researchers more stress on the notion of social support that encourages the students to stay with the university because they confirmed that social support is the meaningful means to ensure student satisfaction and engagement to increase retention. This is supporting the thesis result as its also have positive relationship between social identity and student satisfaction.

The final result of Wilkins et al., (2016b) paper found that there are effects from social identification on student commitment, achievement, and satisfaction in higher education. This direct correlation was found between social identification and student satisfaction. Thus, Social identification can significantly influence the dedication of students, their motivation levels, their achievements as well as their satisfaction levels in higher education.

As a conclusion of the above works of literature that also support the result of this thesis, the social identification influences student satisfaction in higher education positively.

#### **6.2.3.4 The Relationship between Organizational Identification and Student Satisfaction.**

The findings of the relationship between Organizational Identification and Student Satisfaction have been investigated in Chapter 5. It was positive and significant relationship at p-value <.001; thus, its consistent with the hypothesis (H4: Organizational Identification is positively related to Student Satisfaction). The finding

suggests that Organizational Identification influence the level of Student Satisfaction with highly impact to students at the institutions.

The research of Muhsin et al. (2020) supported the thesis result on the relationship that is formed between the satisfaction of the students and good governance in the university. The article has stated that the major priorities of universities are currently related to providing better levels of services and managing the levels of student satisfaction. The concept based on student satisfaction has been selected for analysing the happiness and dissatisfaction of the employees. Moreover, provided details regarding the impact of good governance of the university on the teaching quality of the lecturers that further leads to the increase in satisfaction of students. The lecturers in the university are able to play a major role in ensuring high levels of satisfaction for the students. The learning facilities have also been considered an important part of the teaching-related activities and this has the ability to increase the satisfaction of the students as well.

Chapman et al. (2014) stated the importance of the expansion of higher education systems in different countries that are mainly fuelled by the aspirations of the students with the consideration of other aspects that impact higher education-related systems include the expansion of basic education and the interests that governments have based on developing a position of the countries for national competitiveness as many pieces of research have depicted that workplace policies and employment practices can affect the satisfaction of the faculty which will affect the satisfaction of students.

The article of Alves and Raposo (2007) was about to analysing the factors that is responsible for the satisfaction of students and about the consequences of these factors. This was presented by the example of the field of Higher Education in Portugal that has seen substantial improvements in the previous two decades, comparable to what has occurred in the United States and the rest of Europe. If there be a growth in the number of institutions working in this sector until 1996, and, as a result, growth in the number of students so the governments placing a premium on quality and enforcing it. However, according to the mentioned article, some researchers believe that all the students do not have high expectations and conclude that performance is the most significant element for the satisfaction of students. Moreover, it has been also seen that the intellectual environment does not have the maximum impact on the happiness of students. Furthermore, in the article, it has been proven that construct image is the factor that is responsible for influencing most of the students.

The article of Kim, Chang and Jae Ko (2010) found that Identification permits a person to participate in achievements and Organizational identification is a kind of social identification that is distinct from other types. People consider themselves mentally stronger when they associate with a group. Connected with the organization's fate, having its shared destiny, and going through its trials and tribulations. There have been triumphs and failures. People that are passionate about their company put in more effort. and time and they remain with the organization for the maximum period of time. The studies of Individuals who identify with a company have also been shown by organizational psychology to be more productive. Their company has more job happiness and motivation, as well as improved job performance. Performance, less willingness to seek, and real turnover. In terms of university perspectives, research

shows that affiliation with sports programs is considered a pleasurable activity. As a result, students who participate in this activity are more likely to have a favourable attitude about school. In terms of integration, it was thought that involvement in sports programs would boost students' interaction and camaraderie with one another. Thus, they must feel more connected and linked to the institution and student body which corroborates the thesis result.

As a conclusion of the above works of literature that also supporting the result of this thesis, the organization identification influences student satisfaction in higher education positively.

#### **6.2.3.5 The Relationship between Reputation and Student Satisfaction**

The findings of the relationship between Institution Reputation and Student Satisfaction have been investigated in Chapter 5. It was positive and significant relationship at  $p\text{-value} < .001$ ; thus, it is consistent with the hypothesis (H5: Institution Reputation is positively related to Student Satisfaction). The finding suggests that Institution Reputation influence the level of Student Satisfaction with highly impact to students at the institutions.

According to Masserini, Bini and Pratesi (2019) research study, it is very important to understand the impact of the image of the institution and educational service providing organization on the overall satisfaction of the students. The influence that image of the university has on relationships with the students and their levels of loyalty is also a major part of the environment of higher education so the discussion has been done

mainly based on the relationship that is formed between the satisfaction of students and the reputation of the educational institution or organization. The educational environment is considered to be highly competitive in nature and the universities mainly aim at fulfilling the expectations of the students. The analysis in this article has been able to depict that the reputation of the educational institution can have an influence on the choice of students and their levels of satisfaction as well. Thus, this supports the result of this thesis about the relationship.

The study of Alkhawaldeh et al. (2020), stated that the impact of the brand image of the university on the feelings and beliefs of the students. The brand familiarity-related aspect has also been taken into consideration for the purpose of understanding the experiences that are provided to the customers to know the satisfaction levels of the customers. Furthermore, the competitive advantage that can be gained by the organizations in the industry is also influenced by the brand image. Thus, the finding of Alkhawaldeh et al. (2020) research supports the thesis finding as it has stated that the image of a brand and the levels of brand familiarity have a huge impact on levels of satisfaction that are provided to the students and their satisfaction in the higher education settings as well.

Furthermore, the findings revealed that there is a link between the ethical reputation of any organization, customer happiness, and profitability as shown by the considerable impact of the research model influence. This sentence demonstrates that the organizational culture's reputation has a significant impact on the level of customer loyalty that requires a high level of satisfaction. As a result, the key to client retention is to keep them happy. The level is one of the most well-known aspects. in terms of

serving the public with honesty and fairness Customer service is important (Sunaryo & Bahari, 2012). The findings of this research reveal the significance of a company's ethical reputation. One of the most important factors is organization and pleasure customer determinants tactics for customer retention.

Another research that has a similar result is the study of (Masserini et al., 2018). The main aim of the study was to examine if the eminence of educational services, as well as the university's organization image, determine scholars' global contentment with university involvement and possible significances of relations on students' constancy. At specific, in a progressively modest educational environment, like notions to develop of planned concern over both public or private academies. The obtained data result showed that the attribute of service develops key director for Students' gratification. Amongst educational services appraised, Teaching or address, as well as Teaching and course society, discovered to be almost significant. It was also seen that the students believing they were registered in prestigious, modern, or well-known university probable to assess skill satisfactorily. This happened through conciliation of teaching or lecture action, and University image demonstrates to be a significant component affecting Teaching or lectures. This supports the theory of the reputation of the institution's impact on service and student satisfaction.

As a conclusion of the above works of literature that also supporting the result of this thesis, the institution reputation influences student satisfaction in higher education positively.



#### **6.2.4 The Mediation effect of Student Satisfaction on students' intended behaviors**

This section will summarize first the mediate effect of Student Satisfaction on the relationship between Intention to stay and the five independent variables (QTS, SLS, SI, OI, and RE) which present the hypothesis 6 (**H6**: *Student Satisfaction is positively related to Intention to Stay*). Secondly, will summarize the mediate effect of Student Satisfaction on the relationship between Supportive Intentions and the five independent variables (QTS, SLS, SI, OI, and RE) which present hypothesis 7 (**H7**: *Student Satisfaction is positively related to Supportive Intentions*).

##### **6.2.4.1 The Relationship between Student Satisfaction and Intention to Stay**

This part presenting the mediation of Student Satisfaction between Intention to stay and the five independent variables (QTS, SLS, SI, OI, and RE) as the following:

##### **6.2.4.1.1 Mediation of SS on the relationship between OTS and IS**

The result highlights that Perceived Service Quality Teaching (QTS) relate significantly direct and indirect effects to Intention to Stay (IS), and Student Satisfaction (SS) fully mediate this relationship.

Sung and Yang (2009) identified the link between the student and the university through the research that intends to investigate the communication behaviour of the students with the university, the perceived experience and perceived quality, the

relationship among the university and students and the role of university reputation as there are certain factors that determine the relationship among the students and university including behavioural intentions (both the students and university), and educational experiences of the students. By using the structural conceptual model, the researcher introduced the relationship-based model regarding the student's supportive behavioural intentions and based on that, the study established that the communication procedure among the students and university contains a direct impact on educational experience. The cultivating relationship between the students along with the university is responsible to develop student satisfaction and student loyalty. The final research outcome displays that universities are always trying to build a long-term relationship with the students to build a good relationship and encourage students to stay and continue their education.

Wattjatrakul (2014) mentioned that the students are appearing as consumers for the higher education institutions and quality of services is considered an indicator to measure satisfaction. The finding of the study helps to understand that the interaction between universities and students is becoming powerful relationship universities are constantly aiming at making the best constantly effective teaching and making the future of the students better in the work market. Universities need to enhance the service quality to build a strong relationship with the students and motivate the students to stay with the institution for a longer run. Thus, delivering services to the students can measure the positive as well as the negative intentions of the universities on students.

In other study that reported similar results to this thesis study, Subrahmanyam (2017) studied the relationship that has been formed between the levels of satisfaction of the students, service quality, loyalty and motivation. The discussion in the article has proved that service quality has a huge impact on the loyalty of the students through the levels of student motivation.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Perceived Service Quality Teaching and Intention to Stay is mediate by student satisfaction in higher education.

#### ***6.2.4.1.2 Mediation of SS on the relationship between SLS and IS***

The result highlights that Student Life and Support (SLS) relate significantly direct and indirect effects to Intention to Stay (IS), and Student Satisfaction (SS) partially mediate this relationship.

According to Appuhamilage and Torii (2019) findings on student satisfaction and intention to stay show the impact of activities and having different facilities that are provided to them in the university on the levels of satisfaction. Moreover, the primary objective of Chandra et al., (2019) study was to highlight the influence of quality along with university reputation on the satisfaction as well as the loyalty of students. It should be noted that reputation has an effective influence on the satisfaction of individuals, where the reputation of the university along with its service quality leads to greater satisfaction among them. The paper clearly highlights the importance of service quality which has a strong implication on the perception of the individual and

a failure to deliver effectively as well as efficient service quality leads to immense dissatisfaction among the customers especially students, studying in universities. The results of the article clearly state the existence of positive as well as the significant influence of service quality on student's satisfaction which thereby helps in facilitating their loyalty towards the institution. It has also been concluded that the reputation pertaining to the university too have a positive and direct influence on the loyalty satisfaction and of the students.

The research of Subrahmanyam (2017) helped in identifying factors that help in contributing towards service quality along with the shortfalls that are associated with it. Furthermore, this also highlights that service quality is a primary component for student satisfaction, loyalty as well as motivation. The findings of the research were recommending focusing on service quality as it has a significant impact on the satisfaction of the students and also has an indirect impact on the loyalty of the students. At the same time, the quality service has a direct impact on the student's loyalty through the aspect of motivation which is highly related to the behavioural intention of the customers towards repeated purchasing regarding the specific brand. The higher education students' motivation leads to effective educational outcomes which helps in creating positive intentions pertaining to the institution that is known as satisfaction on students. This supports the thesis result of the impact of satisfaction on student where satisfied and motivated students are likely to attract new students to the educational institution and reverse of this will lead to opposite consequences.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Student Life & Support and Intention to Stay is mediate by student satisfaction in higher education.

#### ***6.2.4.1.3 Mediation of SS on the relationship between SI and IS***

The result highlights that Social Identification (SI) relate significantly direct and indirect effects to Intention to Stay (IS), and Student Satisfaction (SS) partially mediate this relationship.

The study of Vázquez et al. (2015) has effectively helped in highlighting the educational, cognitive, organizational as well as social impact and how these factors lead to forming effective as well as efficient perceptions of students regarding the social responsibility and support of the university that helps in facilitating welfare of students and at the same time also helps in offering effective and positive service quality. The finding has concluded that the impact-based model is not able to effectively identify the vision of the student of university social responsibility. It should be noted that the respondents who participated in the article were satisfied with the performances of the university that is related to the internal university social responsibility as other aspects regarding the USR are outside the daily lives of students.

In a related study, Viljoen and Deacon (2013) discussed to identify the factors that influence the students of the first year to stay within a learning institution and some of these influential factors include social support where students face less stress which helps them to cope with stressful situations like the transition from high school to

university. Similarly, the academic fit is also linked with higher retention rates of students because choosing the wrong field might lead to dissatisfaction which might compel them to leave the institution. Additionally, psychological influence like safety and availability leads to their engagement along with academic and non-academic social aspects that students experience in their first year which leads to their engagement.

Hence, the research clearly highlights that if students feel supported during their first year, then it helps in motivating them to stay within the institution. The results also showed that there is a close link between the social support as well as the academic fit that leads to their intention to retain themselves. Social support and academic fit have a strong influence on the intention of the students to stay within the educational institution, where students who experience social support are likely to retain themselves within the educational institution.

The common values and feelings of the social group contribute to the formation of a common identity. As a result, people attempt to have a favourable opinion of their own groups since it affects the self-concept of that person. The paper of Edwards and Harwood (2003) conclude that social identity has an impact on students as well as teachers in and out of the classroom of colleges. This impact of social identity is the key determinant in institutions to measure the level of student satisfaction.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Social Identification and Intention to Stay is mediate by student satisfaction in higher education.

#### ***6.2.4.1.4 Mediation of SS on the relationship between OI and IS***

The result highlights that Organizational Identification (OI) relate significantly direct and indirect effects to Intention to Stay (IS), and Student Satisfaction (SS) partially mediate this relationship.

The Organizational identity result of this study supports the claim of Kim et al. (2010) that organizational identity helps in influencing the level of identification and the attraction towards organizational image depends on the context that helps in enabling self-distinctiveness, self-enhancement as well as self-continuity. Furthermore, the research successful in highlighting that student identification regarding both activity programs as well as academic development has a strong influence on the identification within the university as a whole and also has a strong effect on their intentions to support the university. Though there are many factors that help in influencing the contribution of individuals in their university, the findings suggest that an identification of the activity's programs along with the academic department helps in translating strong supportive intentions. Thus, this helps the institutions in evaluating the identification of students with an intention to support the university that helps in improving and enhancing college experience which results in beneficial attachment and increases the level of student satisfaction as well.

The research and results in Wilkins et al., (2016b) study clearly indicate that organizational identification is considered to be a strong predictor to measure student satisfaction which is followed by both commitments as well as achievement. This presents the impact of social and organizational identifications on student satisfaction.

Organizational identification is considered to be a form of social identification where individuals get a sense of belonging as well as oneness within the organization, its members and activities. Learning is associated with social identification since learning is considered to be a source of identity that helps in transforming individuals. Similarly, organizational identification is associated with the psychological attachment of individuals to the organization that helps in enriching their own social identity.

The research of Özgür and Işık (2017) looked at the link between instructors' degrees of organizational identification and students' success, as well as the function of perceived organizational prestige as a moderator in this connection. These actions might be considered the “basics” of effective leadership. Rarely are such methods adequate for leaders who want to make a major difference in students' lives? they are studying in their schools but there wouldn't be anything to happen if they weren't there. This essential core of good leadership behaviours is made up of three sets of practices: Setting goals, developing employees, and reorganizing the company are all things that need to be done. Furthermore, they found that perceived organizational prestige is responsible to moderated the relationship between organizational identification and student performance, implying that when perceived prestige was high, the relationship between organizational recognition and academic performance of any student was optimistic, and when perceived influence was low, the relationship was negative.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Organizational Identification and Intention to Stay is mediate by student satisfaction in higher education.



#### ***6.2.4.1.5 Mediation of SS on the relationship between RE and IS***

The result highlights that Institution Reputation (RE) relates significantly direct and indirect effects to Intention to Stay (IS), and Student Satisfaction (SS) partially mediates this relationship.

According to several authors such as Ogunsade et al. (2021), institutional behavior is a human activity that adapts, changes, and implements processes and rules in both political and social spheres. The authors also stated that these behaviors can affect the interactive behaviors of the students. The authors used a qualitative exploratory research approach to analyzing the entrepreneurial attitudes of the students and the finding of this research conclude that societal norms and values have significant influences on the entrepreneurial mindset of the students. On the other hand, Borde, Arora and Kakoty (2022) stated that institutional behaviors include support requirements or programs that institutions set as practices, criteria, and standards for student participation. The authors applied social identity and social learning theory for conducting this research and the findings of this research reveal that transformational leadership contributes to an equitable and inclusive quality education system for the students. According to Bakkar, Durst and Gerstlberger (2021), institutional analysis creates several explanations for change and the emergence of related behaviors and rule configurations with regard to social and political outcomes. In culture-matter explanation embeddedness of norms and values and their influences on political and social relations can be noticed as constitutive of the institutionalization process. In a cultural approach, mutual trust depends on justification and acceptance of

perseverance and acceptance. Institutional behaviors help to provide several learning spaces and learning environments where the students can achieve quality education.

The institution reputation is one of the important factors in higher education and in the marketplace as it is an effective indicator of success. Most institutions are starting to understand that and become aware of developing the services to achieve a high level of satisfaction. Moreover, many scholars define the reputation of an institute as the combined effect of a variety of individual processes, activities, or services (Khalifa & Mahmoud, 2016; Alves & Raposo, 2010; Sung & Yang, 2008). In turn, the performance of HEIs is influenced by their reputation, whether positive or negative. There is a strong correlation between reputation and excellence because every service provided by an institute is linked to the image held by the students and therefore, this can lead to the intention to stay decision.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Institution Reputation and Intention to Stay is mediate by student satisfaction in higher education.

#### **6.2.4.2 The Relationship between Student Satisfaction and Supportive Intentions**

This section will present the mediation of Student Satisfaction between Intention to stay and the five independent variables (QTS, SLS, SI, OI and RE).

#### ***6.2.4.2.1 Mediation of SS on the relationship between OTS and SP***

The result highlights that Perceived Service Quality Teaching (QTS) relate significantly direct and indirect effects to Supportive Intentions (SP), and Student Satisfaction (SS) partially mediate this relationship.

According to Chapman et al. (2014), the aspects related to faculty members work responsibilities and the focus that they have developed are considered to be a major part of the study as the respondents have provided the information that most of their time had been spent mainly on teaching-related activities and they have also been dedicated towards the students. Furthermore, the incentivizing of the work has been able to play a major role in ensuring that they are able to provide the best support to students. Thus, the academic activities are influenced by many other factors including the incentives that are provided to the teachers and the interest of faculty members in providing their services to the students. This is supporting the thesis finding.

Based on the information provided by the article of Watjatrakul (2014), the importance of dealing with the student as a customer in their higher education where the institutions of higher education have gone on to follow the management practice of the business sector and have also been successful in embracing the perspective of customer satisfaction embedded in total quality management TQM that helps in surviving higher sector of education due to the pressure of competition. Hence, this might help in improving the educational process by improving the service quality while taking the needs of students into account. The institutions of education become the producers as well as deliverers regarding services as they require to manage their operations and

monitor their efficiency. Furthermore, understanding the student's needs helps in evaluating the positive and negative intentions of students. Universities, therefore, need to enhance their quality of service since this is the sole aspect that students accept that helps in resulting positive intentions. Similarly, they should also improve their teaching quality and facilities along with the proficiencies of staff. This article also supports the thesis result as states that social influence has more impact on the intentions of students. Hence, when universities are encouraged to adopt student as the concept of the customer under the pressure of the market for higher education then it is essential for them to adopt the term customer for students so that students can be retained and provide them with all needs during their studies.

The research paper of Kang (2014) discusses the importance of building relationships between students and their institutions to understand the factors that determine this healthy and motivate relationship whilst studying. The summary result is that the institution should put a significant amount of effort in order to enhance the relationship between the student and institution by providing high-quality services because these will support the current student to continue their education in the same university as well as it will encourage more individuals (potential students) to study in these institutions.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Perceived Service Quality Teaching and Supportive Intentions is mediate by student satisfaction in higher education.

#### ***6.2.4.2.2 Mediation of SS on the relationship between SLS and SP***

The result highlights that Student Life and Support (SLS) relate significantly direct and indirect effects to Supportive Intentions (SP), and Student Satisfaction (SS) partially mediate this relationship.

Subrahmanyam (2017) identifies the relationship between loyalty, satisfaction, motivation, as well as service quality. The finding of the study states that service quality, loyalty, and satisfaction have dominated the hospitality and customer service aspects. However, these aspects are also quite effective when it comes to satisfaction of students. For students to become satisfied academic knowledge should align with quality services that will help in making them satisfied which leads to student satisfaction.

Muhsin et al. (2020) suggest that institutions are now focusing on improving services and controlling student happiness as major concerns. Many protests took place as a result of poor service quality in higher education, as well as low student satisfaction. According to experts, the application of education should supply clients with high-quality services. As a result, the level of service at the university reflects the educational quality management. Student happiness has become a key notion in education because the result of satisfaction contentment is often employed as a sign of success. Quality is determined by quality assurance organizations and those who construct standings and league tables in order to realize the university's vision and goal that mainly focus on increasing the level of student happiness which become critical and competitive between the institutions. Satisfaction of the students represents

the emotional state of students as they experience the services given on campus throughout their education. Students are the primary clients at university and they should be referred to as major consumers and partners. Their satisfaction is a fleeting emotion brought on by a variety of factors and having this expertise obtained from already established educational services to promote the university as the best in the region.

The study of Appuhamilage and Torii (2019) discussed the impact of some factors such as environment, institution, student expectation, and facilities on student satisfaction. The selected population of students belongs to the University of Japan and the department of social science. The final result that researchers concluded was the satisfaction of students is threatened by different challenges existing within the learning environment of the university. The more support from the university to keep the student, the more impact on student satisfaction will appear.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Student Life & Support and Supportive Intentions is mediate by student satisfaction in higher education.

#### ***6.2.4.2.3 Mediation of SS on the relationship between SI and SP***

The result highlights that Social Identification (SI) relate significantly direct and indirect effects to Supportive Intentions (SP), and Student Satisfaction (SS) partially mediate this relationship.

The purpose of the research was to look at the impacts of social support, academic fit, psychiatric states of meaning and importance and availability, and involvement on first-year students' intentions to continue their education. Previous research has shown the significance of metric aggregate, but no one has looked at the influence of engagement and its influencing elements on the higher education environment. May provided a model to illustrate the effects of involvement and the emotional circumstances that go along with it in the job, and this approach will be adopted and implemented in the present research to look at first-year students' intentions to remain at an educational institution. The report's results highlight the importance of social support and academics fit in determining a student's decision to continue their education. Students who get social support and those who fit better in their area of study, are much more likely to continue in university (Viljoen & Deacon, 2013).

The study of Pinna et al. (2018) provided a proper understanding of different consequences of identification of the university about the value co-creation by the students. To describe the notion of university identity, the author mentioned the theory of social identity that helps to understand that – a part of a person's self-concept is established on the ground of membership and knowledge related to a social group. Student-university identification is the factor that is responsible for the proper well-being of the institutional members. The researchers established that the procedure of university identification contains a positive effect on the intentions of advocacy as well as different suggestions for improvement. Along with this, university identification also contains a positive impact on university affiliation and also student participation in future activities. The study mentioned that the notion of university identification can be considered as the strategic management of the entire organization. The branding

and marketing of universities indirectly advertise the identities of the students who belong to these institutions.

Furthermore, Wilkins et al. (2016b) support the result of this thesis as well. The finding showed that social identification has a positive impact on student satisfaction. Moreover, concluded the impacts of social and organizational identity on students of higher education commitment, success, and satisfaction. Educationalists and academics have long sought to understand what strongly influences commitment, success, and happiness. Commitment levels determine a student's attitude to studying, which in turn determines academic achievement. Students who meet their academic objectives are more likely to be happy with their program and school. The paper focuses on seeing how various components of identification influence college students' educational commitment, accomplishment, and eventual happiness with their course and institution. In addition, this research makes a significant addition by demonstrating that organizational identity may impact the attitudes and actions of undergraduates, just as it has been demonstrated to impact workers and customers.

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Social Identification and Supportive Intentions is mediate by student satisfaction in higher education.



#### ***6.2.4.2.4 Mediation of SS on the relationship between OI and SP***

The result highlights that Organizational Identification (OI) relate significantly direct and indirect effects to Supportive Intentions (SP), and Student Satisfaction (SS) partially mediate this relationship.

The article of Kim et al. (2010) helps in highlighting the importance of organizational identification as well as supportive intentions. Identification is considered to have strong implications that help in offering a sense of satisfaction as well as belonging to employees that lead to organizational effectiveness. The literature review provided in the article clearly states that organizations always prefer truthfulness along with the commitment of employees which comes from identification. Social identity theory helps in evaluating an individual's identification. Furthermore, it clearly states that the self-concept of people is made up of several social identities that are linked to different social groups. All of this will help to improve the satisfaction on students in the institution as well.

The work of Myers et al. (2016) adds to the body of Organizational recognition research by providing a theoretical breakthrough and expanding on studies that relate organizational communication with Organizational recognition. It also has ramifications for university and departmental administrators, development officers, advisers, and teachers. Organizational recognition and perceived exterior image were shown to have one of the strongest connections in the research. This is consistent with prior study that demonstrated a link between Organizational recognition and uniqueness and status, and it backs up the idea that people gravitate toward

organizations that they feel will help them build their personal identity. Organizational recognition and contentment have a significant link, whereas Organizational recognition and trustworthiness have a moderate association. Students felt more associated with the institution when they thought the organization treated them fairly and made choices with their best interests in mind, and when they considered the organization was essential in helping them reach their own objectives. These results have ramifications for how to think about students' relationships with their universities. If the link is strong, it has the potential to benefit both the learners and the institution's vitality and durability. Several of these practical ramification's stem from the results' theoretical implications.

Because learning is an identifying event that alters a person and how much they can achieve, it is inextricably linked to social identification. When a person has a similar quality or behavior with other members of the in-group, they are said to be socially identified. Students enter at university with the self-concept of academic, or their assessment of their own ability. Undergraduate students who take admission into business schools with high school grade they point averages will have a better educational self-construct, which is linked to high goal setting, academic involvement, and student performance (Smyth et al., 2015). The goal of high school pupils to continue studying was discovered to be focused on ego rather than real academic success. Although social identity is a significant notion, they feel that when looking at characteristics that influence student commitment, learning, and accomplishment the organizational identity of college student should be observed as well, since it has several parallels with student interpersonal relations. Though, it has been seen that organizational identity and social identity are theoretically similar, they believe the

two notions are different and act like both are independent. For instance, the executive who can hardly find the time they may feel they do not have enough time to form significant social ties, but they may experience a sense of belonging to the institution if they believe the school's identity supports or supports their own social identity (Wilkins et al., 2016b).

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Organizational Identification and Supportive Intentions is mediate by student satisfaction in higher education.

#### ***6.2.4.2.5 Mediation of SS on the relationship between RE and SP***

The result highlights that Institution Reputation (RE) relate significant direct and indirect effect to Supportive Intentions (SP), and Student Satisfaction (SS) partially mediate this relationship.

According to different authors such as Egeberg and Stigen (2021), institutional behaviors can be determined as one of the most important factors for structural poverty reduction and sustainable development. Institutional behaviors help the students to understand how to communicate and behave in a certain situation and institution is critical to establishing trust in society. An institution is the major source of growth and institutions also aid investments in research and development, technology, and human capital. According to Khalifa et al. (2021), learning institutional behaviors can help to provide a deep insight into how people react and interact with each other and these behaviors are significantly useful for preparing for a better career in the business

world. Institutional behaviors help to regulate the social behaviours of the students. Institutionalization also reflects shared values within the society and several practical rules or regulations are created into the institutional behaviours that remain less or more stable over time. Administrative support has considered one of the most important institutional factors and it facilitates the renovation and adoption of technologies. Harris (2021) stated that institutional factors are those that affect the persistence of the students that the institutions are able to change. Another important institutional factor is motivation and this factor refers to the determination or desire to complete a course and work through influence or stimulus that helps to encourage an individual to act. Therefore, motivation is a useful analytical component that develops success in learning outcomes. Hence, institutional behaviors bring several benefits to the students.

According to the comments of Elsharnouby (2015), the satisfaction of the students depends on a variety of factors at the institution and reputation is one of these factors. Considering the factors of satisfaction, it can be said that the delivery of top-quality educational services is one of the most important factors that enhance the level of the satisfaction of the students, and that includes services such as the library, accommodation, clubs, experience of the teachers, and the equipment in the classes. These support services can lead to an increase in the level of satisfaction and retention.

Moreover, with the excellent quality educational services, the satisfaction level of the students increases in a rapid manner and that certainly boosts the reputation of the universities as eminent educational service providers. Thus, the scope of delivering a

higher quality of educational services increases in a monumental manner, and satisfaction levels increase too (Braunack-Mayer et al., 2020).

As a conclusion of the previous literature mentioned above which also supporting the result of this thesis, the relationship between Institution Reputation and Supportive Intentions is mediate by student satisfaction in higher education.

## **Chapter 7: Conclusion and Contributions**

### **7.1 Introduction**

This chapter presents the conclusion of this research study and how can this thesis contribute to both theoretical and practical areas related to the effect of the five antecedents of Satisfaction on Student Satisfaction in Higher Education and especially focusing on the effect of Organizational Identification and Institution Reputation on Student Satisfaction and Behaviors. Moreover, the chapter will include concluding remarks showing how the key findings have achieved the main aims and objectives of the research. The theoretical contributions of the thesis to the existing literature and the related implications are demonstrated as well as the practical contributions and implications of the research findings are also presented. Finally, the chapter will highlight the research limitations, recommend extensions, and suggestions for possible future research studies

### **7.2 Conclusion**

Higher education is the stage of education that takes place in universities, academies, institutes, and colleges in all its forms, and that grants professional certificates and academic degrees. It is also a means of human development, as it provides learners with an opportunity to improve their reality in many aspects of their lives as education works to expand the mental perceptions of the individual.

Higher education institutions are considered an essential element of the advancement of states because of their effective and influential role in the development of the

cultural and industrial life of any country, as well as the primary role in producing specialized knowledge and striving towards the development and sustainability in various aspects of society, where higher education must be able to provide outputs with high efficiency and capabilities.

This thesis is about the effect of the five antecedents of Satisfaction on Student Satisfaction in Higher Education and especially focusing on the effect of Organizational Identification and Institution Reputation on Student Satisfaction and Behaviors. The results conclude positive relationships between the eight main constructs which was presented through testing the hypotheses in result and discussion chapters. Moreover, the study is focusing on three main pillars that addressed and investigate as follows:

- The important to knowing the factors that support the retention in higher education.
- The important of student satisfaction on student decision in term of continuing their degree.
- The important of Organizational Identification and Institution Reputation on student decision in term of continuing their degree.

There are many studies involved the many reports about why student's withdrawal had taken place. The study involved the perception of many educators and administrators about the causes of dropout and elucidated the many differences within the perceptions of dropout between representatives of school that many researchers have particularly utilized as the important guide in relation to comparing the groups of respondents.

Furthermore, many studies from the time period of 1950s to 1980s was specific that primarily reported dropout students' elements particularly linked to being particularly pulled away mainly schools. It took place in within every student focused study. Impact of withdrawal elements has mainly shifted to push elements mainly by querying many new push factors and through substantial improvements within the cloud not get along with educators as well as cloud not get along with learners (Jones, 1977).

This thesis has two main research questions and the concluding answers for them are the following:

The first question was "What are the factors that influence student retention from degree programs?" and the answer is there are many factors that influence positively or negatively on student decisions during their study at the institution. This study has been only addressed the factors that related to antecedents of satisfaction at the institution and founds that the antecedents of satisfaction (QTS, SLS, SI, OI and RE) have a significant impact on student decision and satisfaction. The first-year experience at the university is very important for student journey because it is considered a sensitive and transitional stage from the school education system to a different and higher education system. Students face many obstacles and factors that affect their studies, and therefore the better the place environment, the longer the student will stay at the university.

The thesis result indicates that the direct effect of antecedents of satisfaction (QTS, SLS, SI, OI and RE) on the satisfaction of students as well as the indirect effect of the



same on gaining the trust of the students. In both cases a direct co-relation was identified, meaning negative impact on one variable impacted the other one negatively. The significance of the five antecedents of satisfaction on student motivation to stay in the institution was also established. This indicates that the higher quality of the antecedents of satisfaction provided by the institution, the more student satisfaction level will be achieved so the conclusion is that the variables have a direct co-relation meaning that a positive impact on one, influences the other one positively. Thus, students will definitely decide to stay and continue their education in this high-quality learning environment.

Moreover, the thesis discovers the strong relationship between organizational identification and student satisfaction. The result was high and its means focusing on improving this factor can support the institution and raise the predictor of satisfaction among students. From an organizational perspective, the effect that organizational identification has on undergraduate students lies in the importance of having a good environment to support the student journey that leads to continuing their education even if some students came from their home countries or from different cities in the same country. Organizational identification is a procedure by way of which people originate into defining the communicating with one another about navigating individual lives within the organization. Thus, Organizational prestige influences the way in which new undergraduate students are able to influence the ways for setting memberships in university-level learning. Students are the main element in the institution and they can play a major change in the education system.

The second question was “What are the factors that influence students becoming supportive of the HEI and getting involved in HEI activities?” and the answer is this research showed that the result of the data investigation established the positive as well as important power of the institution reputation over student support and satisfaction fulfillment during their study and after graduation by involving in HEI activities and loyalty by good words of mouth. By adding the institution reputation factor (RE) as an independent factor with the other four antecedents of satisfaction (QTS, SLS, SI, and OI) to investigate the relationship between them on student satisfaction, the final result of the study concludes that the impact of the five antecedents of satisfaction has a significant impact on both student satisfaction, and student intention to stay which in turn impacts student motivation. In other words, poor service by academicians, administrators, and other supporting staff directly invalidates the chances of a good relationship of the students with their educational facilities. Thus, improving the services can increase the level of satisfaction and lead to the intention to stay.

Finally, the thesis result has been achieved the research objectives by highlighting the main factors that influence university student retention rates during the first year of study and identifying the factors that affect students in terms of supporting their HEI and the factors that persuade students to participate in HEIs activities. Furthermore, the thesis created a new conceptual model for higher education institutions that identify influences on a student’s intention to stay at an HEI. This model can be used to support the HEI by focusing more on improving the level of antecedents of satisfaction and the reputation of the institution. Moreover, the result can provide higher education institutions with guidelines and recommendations to avoid student withdrawal and increase supportive intentions among students. The Ministry of Higher Education and

the managerial level in the institutions can work together on developing a new education system or improve the current system as well as focusing on evaluating the quality level of services provided to students and keep improving it to ensure the student's intention to stay to complete the degree.

### **7.3 Contributions of this Research Study**

#### **7.3.1 Theoretical contributions and Implications**

The thesis makes an important theoretical contribution to the quality services literature, satisfaction, and reputation in higher education. This section will explain the theoretical contribution and implications in three main topics as the following:

##### **7.3.1.1 The Originality of The Conceptual Model**

The originality of the study exists as it is the first to explore the reputation of the institution in higher education and organizational identification impact on student satisfaction more than other factors. It contributes to the existing literature that studied reputation on institutions effects on students and the retention rate. Moreover, the thesis used a new conceptual model that is more comprehensive and stronger in term of the selected variables. The model includes eight variables (five main independent variables, one mediation and two dependent variables). Many existing literatures discussed the impact of organization image, student satisfaction, quality of services and other variables that are in this thesis model and some literatures include two or three variables to investigate them in their research study. However, this thesis

includes all the important variables that are related to the topic in one place which give the thesis model more value for the researchers.

The study contains a practical as well as a theoretical implication to investigate the Effect of Institution Reputation on Student Satisfaction in Higher Education. The institution's reputation helped the higher education to measure the positive as well as the negative intentions of the students. The study helps to understand that there are many factors that influence student satisfaction and the reputation of the institution plays a big role in student decisions to continue their education and/or their intention to stay at the same institution.

#### **7.3.1.2 The New Contribution Added to Previous Studies**

This thesis makes an important theoretical contribution in that the findings help to articulate that reputation of the institution has not been sufficiently examined in the literature related to higher education or to the marketing of international institutions and quality services. The thesis has also developed a new concept by pay attention to the role of the institution reputation on students or even into society and its influence on students' journey during the study or after graduation.

The influence of brand image in the higher education setting is considered to be a major part of many previous research studies discussions. Most exited studies results have been able to depict that brand familiarity has a positive relationship with the image of the brand. On the other hand, the quality of the services can help in the enhancement of the satisfaction levels of students. The brand image of a university is

affected by the familiarity of students with the brand and the levels of satisfaction that are gained by them as well (Alkhawaldeh et al., 2020).

The thesis has been successful in highlighting the theoretical contribution towards understanding the importance of reputation for the institution and its impact on student satisfaction within the higher education sector. Hence, it is expected that universities develop and collaborate with other institutions that will help in enhancing the quality of their academic sector which will thereby help in enhancing the competitive advantage of the university. It should also be noted that cooperation, as well as the partnership between universities, has become a common trend. At the same time, if the institution understands the influence of reputation for competition and uses all the opportunities to improve the quality of their services, then they will achieve a high level of student satisfaction.

Furthermore, this thesis investigated the mediation analysis for the five antecedents of satisfaction on staying and supporting (ten separate tests, each assessing direct and indirect effects). The findings showed that the student satisfaction has a significant positive impact especially when it was a mediation variable on five antecedents of satisfaction (QTS, SLS, IS, IO, and RE). This indicates that the higher quality services provided, the more student satisfaction level will be achieved so the conclusion is that the variables have a direct co-relation meaning that a positive impact on one, influences the other one positively. Thus, this new contribution becomes known now by this thesis, which was not known by previous literature.

### **7.3.1.3 Benefit of the Study for Other Researchers**

The benefit of using this research outcome is to understand the role and the power of the institution reputation which add more value-added to the field that will help many institutions in higher education to improve the level of quality services and provide the students with all the needs and support so keep them till they hold the degree.

HEIs usage numerous strategies, like providing high-quality services, several facilities and activities, linking with other establishments and industries. This helps in developing an important factor that can influence students' fulfillment. Hence, it was seen that HEIs are interested in spending time in addition effort the notion of student satisfaction to win or survive in context. This study tested student satisfaction along with services that have been provided in the institution by the usage of SEM analysis. Here, the student gratification was appraised from diverse characteristics, such as the reputation of the university, teaching quality, student life and support, social identity, organizational identity and students' satisfaction. All of these variables have a significant effect on students.

Because the main result of this thesis is new and unique, many researchers have not yet addressed it for its important role, especially with regard to the positive impact the study has on undergraduate students. The model constitutes an integrated formation of the students' academic journey and their satisfaction with the services provided by the institutions. The great impact of the institution reputation and organizational identification contributes to the development of services and assures students that this university is distinguished and has important specializations programs and, in some cases, it is an international degree, which leads to obtaining good jobs when the student

graduates and starts looking for work. Most organizations and companies want to hire graduates who have graduated from these recognized universities.

### **7.3.2 Practical contributions and Implications**

The thesis makes an important practical contribution to the quality services literature, satisfaction, and reputation in higher education. This section will explain the practical contribution and implications in 3 main topics as the following:

#### **7.3.2.1 The Useful Finding for the Institutions**

The finding of the thesis provides the higher education sector, federal and private institutions with insights and new information on how they can improve their strategy to keep the students continuing their education. By improving the gap of the low rate of students retention from the institutions and improving the level of student satisfaction, the result will reflect on student education as well as improve the quality of these students on the employee market. On the other hand, the finding of the thesis is highlighting on the power of institution reputation and organizational identification in higher education and on student satisfaction. This has been evaluated and explained with other popular factors that may impact student retention from their institutions and completing the degree. The findings of this study would benefit both practitioners and academics, especially from the perspective of higher education.

These results show how this data can add more value to the higher education in term of development on the strategic plan to develop their sector and to understanding what kinds of solutions and recommendations that can be used to reduce the high rate of

withdrawal or to improve the institution reputation level. With a thoughtful consideration towards the concept of student satisfaction and the reputation of the universities, it is important to mention that there is positively effect on the students when the reputation of the university is high, the satisfaction level will increase as well. The reputation of the universities depends on a series of factors according to the higher education in each country. For example, this thesis addresses the factors that related to quality and satisfaction such as quality of teaching, student life and support, organizational identity and social identity.

Furthermore, the institutions should take care of improving the five antecedents of satisfaction (QTS, SLS, SI, OI and RE). These five factors are very important if the institutions plan to increase the retention rate and have a good reputation. Inculcating a culture of learning and life skills is one of the priority strategies in the higher education sector to ensure a stimulating educational environment to achieve sustainable education, in addition to providing a variety of activities and events for all students. The teacher has a role in transferring knowledge and information to the student, so quality standards and practices focused on developing the teacher's capabilities in dealing with the Internet and knowledge sources, such as the library, professional training, and expanding the circle of knowledge, with regard to information related to the curriculum provided to learners, as well as developing teacher's skills in preparing procedural research related to With its problems and the problems of the educational process, presenting these problems, clarifying them and providing solutions to them, in proportion to the cultural aspect of the society of the educational institution and benefiting from its results, as these researches contribute to transforming the personality of the teacher into a knowledge-producing one.



Furthermore, providing various student services and appropriate university facilities, such as the library equipped with the latest educational materials, healthy restaurants, comfortable housing area, in addition to student clubs with various sports, social and scientific activities that contribute to motivating the students to stay at the university. Likewise, the study found that the relationship between organizational and social identification prevalent among students satisfaction is significantly high. The study has been essentially shed light on the various ways students face difficulties in identifying themselves with their organization. This essentially causes them hindrances in regards to their education and overall experience in the university. In addition to this, the study sheds light on this identification barrier as it has been a common cause in the student experience at universities. Organizational identification and social identification are playing a vital role in students' education life in the institution and it elucidated the difficulty faced by students in becoming one with their universities or organizations.

Organizational identification is in the procedure of social identification in which individuals have a perception on a sense of understanding for its member activities. For instance, students at the university level need to have a commitment to work in an effective manner. The possible effect that organizational implication has on student commitment and satisfaction levels is attributed to social and organizational identification (Wilkins et al., 2016b). Although organizational identification has similarities with social constructs, they might be operant in a distinguishable manner. Therefore, it can be claimed that identification in university learning for students has an integral role to play in high motivation and superior work performance.

By sharing values and goals within an organization, the key motives are in aligning shared values and idioms. The identification of significant influences is determined from employee attitudes and how they engage in behaviors at prestigious and reputable business schools. Following on aligning to drive students for achieving superior work performance lies in how their performance helps to attain individual benefits (Myers et al., 2016). Learning through students' achievement levels are attained by way of establishing higher levels of identification between students turn to deliver better outcomes. Students are identified with being highly motivated in order to achieve significant levels of performances. Organizational effectiveness is determined from university learning of the students in influencing the growth patterns. In order to determine the knowledge of student level assurance, attainment and fulfilment levels is in explaining student achievement for better levels of fulfilment. The key influence of the investigation is in seeing employees to achieve effective satisfaction at desirable results (Fritz & Van Knippenberg, 2017). Therefore, provision of support is seen in the respect of how identification of employees and customers. At university level, students are approached with for deriving better organizational benefits in delivering substantial organizational learning.

This research outlines affiliation between positive student life and support along with honour over the stage of student satisfaction. It was seen that the study was essential as this can offers road map for universities towards detail differentiate themselves from peers along with evolve sustainable agonistical advantage. Student life and support have a significant impact on student satisfaction by focusing and paying attention to the aspects that support students, whether it is by developing the university campus

and providing the appropriate facilities for them, or by providing the right guidance in their path.

Moreover, the research of Lock (2016) mentioned that the mismatch between the aspects for which a university is awarded and the aspects that contribute to the satisfaction of the students leads to the low satisfaction level of the students even when the university is getting rewarded. Considering the example, it can be said that a university is getting recognized for having a strong infrastructural presence whereas the same university lacks the number of faculty members for sustainable delivery of top-quality educational services in different subjects and topics. In such a situation, the university may enjoy a massive reputation of strong infrastructural presence, however, there will certainly be challenges for the university in increasing the level of satisfaction of the students as there is an absence of sufficient faculty. Considering the same case, the quality of the educational services will also decrease in a monumental manner as well. With the absence of a sufficient number of faculty members, there is a high possibility that the existing professors or educators will be required to manage added work pressure and at the same time, there might be a case where the professors lacking the desired level of competency in delivering their educational services.

Along with that, the inappropriate environment is also a massive threat to such an award-winning university and that is certainly a major point of dissatisfaction for the general students. Hence, it is clearly understood that there might be differences between the aspects where a university holds a massively good reputation and the aspects which contribute to the satisfaction level of the students. Such differences are

humungous challenges for the universities as they decrease the satisfaction level of the students to a low even while maintaining an extremely high reputation.

On the other hand, the thesis finding can be considered from the perspective of quality assurance agencies and regulators, and publishers of rankings. The global community has come to view comprehensive quality and educational reform as two sides of the same coin. Among its distinctive characteristics in the educational process are continuous improvement of the educational process outcomes, optimum use of the available material and human resources, and providing services to satisfy the needs of the internal and external beneficiary. Quality assurance is a process that aims to improve the educational process through the application of a package of educational procedures and systems and documentation of the various educational programs. Quality assurance in higher education originated in the late 19th century when accreditation organizations started in the United States and later on, the higher education institutions start following the criteria of quality assurance. (Jarvis, 2014)

University education institutions are based on the increasing growth in the number of applicants to join universities and the need to align the outputs of university education institutions with the needs of sustainable development and the labor market, and the need to achieve a great deal of balance between the activities of education, research and development, community service, and knowledge dissemination. This is achieved by activating the use of the necessary criteria and indicators to assess the quality of the educational process with all its inputs and outputs; which enables a clear picture of the reality of the quality of university education and ways to develop and improve it. Recently, university rankings have emerged that seek to identify the best universities

in terms of the quality of services provided, such as teaching, reputation, student satisfaction, advanced educational curricula, various programs, and others. The issue exposed by this thesis research is that institutions having stronger reputations may benefit from a kind of halo effect whereby students rate these institutions over-generously on other criteria, such as teaching and services. An example would be the Guardian University Ranking in the United Kingdom (<https://www.theguardian.com/education/ng-interactive/2020/sep/05/the-best-uk-universities-2021-league-table>), which is one of the best-known and most used rankings in the UK, that helps to assess and compare different universities based on a number of factors such as teaching quality, graduate outcomes, and it is heavily biased toward satisfaction scores driven from the National Student Survey (NSS). Another famous example for ranking is the QS World University Rankings (<https://www.topuniversities.com>), which also compare the reputation of different universities in the world.

The university ranking in the websites/agencies like the Guardian University Ranking, or the QS ranking benefits the students, and the institution mutually. QS ranking helps students to compare universities logically. It helps the university to highlight its strength in many diverse areas and also helps the university plan in areas related to positioning, and branding. Moreover, it also helps universities to focus on things, that will enhance their level. Many universities like UNSW and RMIT who are star-rated are provided with certain roadmaps for development by the QS Unit of Intelligence (Dobrota et al., 2016). It helps in in-depth comparison with other universities with good ranking and creates scope to improve their ranking more in the future. This comparison about the international ranking helps universities to get a framework for

benchmarking. Agencies like QS stars help universities to check their data so that further miscommunication about data is not created, it creates a scope for the university to collect accurate information and also create awareness amongst the students about the importance of getting the right information. It also helps to create a similar experience that other top-ranking universities provide (Brankovic, Ringel, & Werron, 2018). Data capturing proves beneficial for universities as it helps students to make a decision and also creates independent rating as a key branding tool, helping universities to add different elements making them avail themselves of a lot of benefits.

There are a variety of reasons why universities are seeking a high-ranking score, the first is to secure a good position. A good ranking/position helps universities to get better external and internal funding, which would help the university get favor in terms of academic programs or research units that would also leverage the dynamics of the researching and publishing of the universities. The next reason behind seeking for high-ranking score is to measure the reputation a university has gained by collecting opinions of the stakeholders associated with them. Most of the students prefer universities having fame and proper recognition, regardless of the quality of the program offered. Some universities may provide better program facilities but do not have a name/fame may stand out of the competition, and hence universities try and seek high rank/scoring for better advantages (Sohail et al., 2020).

The quality of universities has become important because of competition, as competition will increase between educational institutions to attract students to the institution that is in the world rankings of universities, the most prepared and the most high-quality, and therefore you will find a variety of sources of funding as the

educational environment becomes a key driver of competition for survival, and in such a case, educational institutions must pay attention to the quality of its operations and outputs. Moreover, the quality of education is not limited to students only, but also includes various aspects such as the teacher, the curriculum, the institution community, and the environment. If a higher education institution can adhere to quality standards permanently and continuously, and not once upon request, this will entail achieving credibility and high prestige, increasing prestige and competitive position, and this will, in turn, attract better support from all stakeholders, such as: obtaining donations and increasing Educational and research grants and obtaining a better status and recognition for graduates in the community: local, regional and international.

Finally, users of the ranking may assume that institutions with high rankings will have high-quality teaching and services, but this may not be the case if satisfaction scores were inflated because of student's influence by reputation – because students are rewarded with better opportunities in the labor market, and higher salaries, etc. from attending prestigious universities. Furthermore, most of the institutions that are looking for international rankings that will make their reputation prestigious will seek to apply all classification criteria to recruit more national and international students.

#### **7.3.2.2 Advantage of the Study**

The new students prefer to choose a university having well-structured courses and well thought out. At the undergraduate level, things are slightly different and the reputation of an institution is quite significant. The department of the university having good amenities and assistance can make a difference. The undergraduate students prefer to

study in the university having a social, friendly, and exhilarating place to work (Heffernan et al., 2018).

The universities worldwide have such a reputation that by just taking stating their name, individuals are cognizant of the way good they are. The reputation of the university has a great role in appealing to the students. Reputation is an important part of the decision-making procedure. The high-ranked institution has the qualifications to back up its astonishing reputation. Although a significant faculty is substantial for the university and it is vital for the new undergraduate students. Because undergraduate students are more common in nature and graduate studies are all about specialization. Attending a top degree at a repudiated university sets students on the path to accomplishment. The undergraduate students at the repudiated university are eligible for communions, assistantships, and stipends which can lately balance the cost of the graduate studies at the university. A student looking for a job from the well-known schools may be provided a vital inside edge (Brennan & Cochrane, 2019).

On the other hand, the alumni from a high reputation university assists students in the higher professional integration of the students. The students share communal values with the education. The senior alumni in the universities are anticipated to retrain and change career. The execution of mentor/mentee association management tool assist junior Alumni to be in touch with the experienced Alumni anticipated to share their skills and expertise in the provided concern. Senior alumni are also anticipated to learn new expertise from the junior alumni. The universities form persona maps for each alumni group. By viewing at the alumni preferences, the universities are able to link with the audience preferences through the Instagram account for the visual content and



highlight other notable alumni. The tools are also used by the universities to monitor alumni engagement strategies. Sustaining a social media campaign has been a critical experience for the university. No single strategy fits delighted students and the alumni. One it is known by the universities where the audience is spending time and the type of content enjoyed by them, the university can start to adjust its alumni engagement strategy (Al-salhi, El Damanhoury & Alawadly, 2021).

### **7.3.2.3 The Recommendations and Suggestions for Institutions**

The universities that looking for reputation are focusing on organizational and management reforms to assist boost rankings and apparent prestige. also, they pursue enrolment strategies and accurately recruitment and promotion processes, pursue research capacity constructing and brilliance initiatives and regionalization and global integration that are diverse than earlier. moreover, offers the kind of exclusive prospects, classes, and resources that is anticipated from the world-class establishment. The students come from worldwide to shape the comprehension of the cultures at the university. There are wide resources and prospects convoyed with the element that the university is situated near the financial and entertainment region (Haleblian, Pfarrer & Kiley, 2017).

Most countries place the education sector as one of their strategic priorities because they understand the importance of developing university education for their economic renaissance. Therefore, countries used financial and human resources for the development of education and its curricula. The HEI should use its resources to develop the five important antecedents of satisfaction (QTS, SLS, SI, OI, and RE) to

provide the students with better services during their studies. Universities can attract academic faculty members with expertise in the field to impart knowledge to students while providing the necessary materials for teaching. Furthermore, the institutions should have classrooms and lecture halls equipped with modern educational technology equipment, libraries with a wide range of resources, and laboratories to support research. Moreover, the university is keen on diversifying in extra-curricular and social activities among students, and employees can participate with students in these activities to strengthen the relationship between them and the institution. All of these with high-quality services put together to support the learning and lead to satisfaction in the HEIs.

The alumnus is a significant constituent of the institution's community engagement activities. The alumni are occupying major positions in government and non-governmental establishments across the nation and beyond. The institutions are also proud of their accomplishments and seek to construct a robust link with all the alumni. The aim of the institution is to make sure that the alumni have a stand to stay linked with each other and with the university. The alumni individuals are permitted a variety of professional and social networking assistance. For example, the institutions also provide their alumni with several offers and services comprising lifetime email account, alumni ID card, access to e-library, access to on-campus library services and sports amenities, discounts and offers on various stores around the counties, an invitation to several events, activities, and conferences and many other services. (Saad, 2020).

Institutions are also having cultural prospects with the robust global language program. It is a culturally different study body with a successful track record of study abroad exchanges. Other than reputation, financial assistance and cost are the major factors that influence the undergraduate students at the university. The institution that has a high reputation is the best choice that can be made by the students. The students have exposed those undergraduate students are more concerned about learning, well-being, and future job satisfaction (Qasim et al., 2021). The rankings do not have a much role in offering any guarantee that the students will attain something just going to the university. The students from the foreign nation alleged that they experience college life in the entire diverse setting from their home nation. The undergraduate students are impressed by the high academic standards of the peers and professors. This is also deliberated to be best for teaching and for research. The experience of the students has been coupled with the interactions with the exchange students. (Ansoglenang et al., 2018).

The thesis recommended the managers in the higher education sector as well as the managers in the institutions to develop their services and focus on reputation. The reputation of the institutions is the key to attract more students to apply in university and encourage them to continue the degree. This is a strong point that can be used to understand the students' needs and improve their satisfaction during their journey as well as improving the level of quality and services. The positive impact from reputation on the antecedents of satisfaction that been addressed in this thesis will help the higher education in general to implement the criteria of reputation for all federal and private institutions in the country.

#### **7.4 Limitations of The Study**

The thesis contributes to the quality of institutions in higher education marketing literature by investigating the effect of reputation of the intuitions and organizational identification on student satisfaction, and it relates to federal intuitions in higher education sector. The theoretical assumptions of resources-based and dynamic capabilities provide a solid background for the causal relationships between the resources, capabilities, and performance. However, and as with all research, there are some limitations in this thesis. First is the sample size which was planned to includes three federal institutions but due the situation of COVID 19 all the insulation has been closed for students' safety and even the online survey was not possible at that time. Thus, this unanticipated obstacle limited the thesis with 2 federal institutions only to be studies in UAE. Secondly, the approval procedures to enter the institutions, meet the students face to face to explain the main purpose of the study and distribute the questionnaire in the classes took long time in some institutions. Thirdly, the research focused on reputation and student satisfaction at federal institutions only. There are also many other public and private universities can be addressed as future studies for researchers.

This study is constrained to student satisfaction among only undergraduate students in their first year. However, adding postgraduate students as a future study could add balance view as well as add more contribution int the research. Furthermore, it could be improved for researcher if group of undergraduate and postgraduate can be compared to understand the different between the two levels of students. Future research is thus recommended to collect data to have postgraduate students and may

also include the private institutions as well. Moreover, psychological pressure's part view can be added to the model as a new factor and as a second mediator.

Based on the thesis results that have been presented and discussed can conclude that the research objectives have been achieved regardless of the above limitations.

### **7.5 Recommendations and Future studies**

There are various opinions regarding the impact of the university's reputation on the general students and there is a substantial amount of agreement and disagreement on the criteria of the university's reputation as well. According to the esteemed opinion of Weerasinghe and Fernando (2017), the university reputation depends on a series of factors starting from the graduation rates, quality of research, the internationality of the students and the faculty of the universities, employer reputation, student to faculty ratio, accomplished awards, funding offered to the students along with the industry income. Moreover, the quality of the activities in the student journey from the part of the universities is also an important factor that highlights the reputation of the universities (Moores, Birdi & Higson, 2019).

The future studies that can be suggested are having a sample of students who already withdrawal from their institutions and communicate with them. Each institution has its own data record that includes all contacting information related to this group of students. By interviewing this group of students, a lot of information can be collecting from them to understand exactly the reasons for the dropout and also any other related data. The motivation in relation to finding the student that dropout remains at a particular level to understand dropout challenge for students of every society and

groups of language and with the knowledge thereby learn about how to easily combat and resolve the challenge.

In addition, future work can build on this thesis result by include different methods or samples. For example, using the thesis result with new samples to investigate the employment rate between two groups of students from two different institutions. The means, samples of two groups of alumni students to measure the employment rate. The first group graduated from well-known institutions that have a good reputation to investigate and the second group graduated from universities that are unknown or have a low level of reputation. In this case, the employment rate can be a new factor to be tested and will be helpful for industry market.

The conclusion is based on the fact that the scope of future research on this topic is possible and the studies, in this case, can focus on the identification and possible measurement of the service quality, satisfaction of students, motivation, and employment rate as well.

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## Appendices

### 1. Appendix: Graduation Rates of UG programs at UAEU

Graduation Rates in Undergraduate Programs at 1.5 Times the Nominal Length of the Program.								
Cohort	College	Graduated		Continuing		Dropped		Total Count
		Count	Percent	Count	Percent	Count	Percent	
2012-2013	BE	398	72.9%	12	2.2%	136	24.9%	546
	ED	72	75.8%	3	3.2%	20	21.1%	95
	EN	325	67.3%	8	1.7%	150	31.1%	483
	FA	103	79.2%	3	2.3%	24	18.5%	130
	HS	591	76.4%	38	4.9%	145	18.7%	774
	IT	62	67.4%	3	3.3%	27	29.3%	92
	LW	113	69.8%	2	1.2%	47	29.0%	162
	MD	61	83.6%	2	2.7%	10	13.7%	73
	SC	151	68.3%	7	3.2%	63	28.5%	221
2012-2013 Total		1876	72.8%	78	3.0%	622	24.1%	2576
2013-2014	BE	375	72.8%	5	1.0%	135	26.2%	515
	ED	65	79.3%	6	7.3%	11	13.4%	82
	EN	331	68.7%	5	1.0%	146	30.3%	482
	FA	100	72.5%	9	6.5%	29	21.0%	138
	HS	666	77.2%	41	4.8%	156	18.1%	863
	IT	93	59.6%	9	5.8%	54	34.6%	156
	LW	148	68.5%	10	4.6%	58	26.9%	216
	MD	60	67.4%	14	15.7%	15	16.9%	89
	SC	182	72.8%	7	2.8%	61	24.4%	250
2013-2014 Total		2020	72.4%	106	3.8%	665	23.8%	2791
2014-2015	BE	413	73.6%	10	1.8%	138	24.6%	561
	ED	101	72.7%	8	5.8%	30	21.6%	139
	EN	411	75.4%		0.0%	134	24.6%	545
	FA	97	68.3%	10	7.0%	35	24.6%	142
	HS	781	78.6%	52	5.2%	161	16.2%	994
	IT	117	75.5%	5	3.2%	33	21.3%	155
	LW	138	66.0%	3	1.4%	68	32.5%	209
	MD	94	74.0%	19	15.0%	14	11.0%	127
	SC	230	71.0%	6	1.9%	88	27.2%	324
2014-2015 Total		2382	74.5%	113	3.5%	701	21.9%	3196
2015-2016	BE	304	74.9%	5	1.2%	97	23.9%	406
	ED	126	79.7%	7	4.4%	25	15.8%	158
	EN	308	69.5%	24	5.4%	111	25.1%	443
	FA	90	74.4%	11	9.1%	20	16.5%	121
	HS	666	72.5%	60	6.5%	193	21.0%	919
	IT	84	63.6%	5	3.8%	43	32.6%	132
	LW	124	67.4%	6	3.3%	54	29.3%	184
	SC	140	72.5%	9	4.7%	44	22.8%	193
2015-2016 Total		1905	72.0%	143	5.4%	597	22.6%	2645
Four-year programs, graduation rates are computed at 6 years, that is 1.5 times the nominal duration of the program.								
Five-year programs, graduation rates are computed at 7 years, that is about 1.5 times the nominal duration of the program.								
Six-year programs (MD program), graduation rates are computed at 8 years.								

## 2. Appendix: Research Questionnaire

### SURVEY ON STUDENT EXPERIENCES AND INTENTIONS

Every year, students withdraw from university programmes and fail to achieve their intended degree. This survey investigates student experiences and intentions. The survey is part of a PhD thesis in Business Management at The British University in Dubai.

Thank you for participating in this survey. Please answer all questions. You are guaranteed anonymity, and your answers will remain confidential, and they will be used only for the purposes of the thesis.

1. Teaching Quality							
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
The teaching staff motivates me to do my best work	1	2	3	4	5	6	7
The teaching staff are extremely good at explaining things	1	2	3	4	5	6	7
The teaching staff work hard to make their subject interesting	1	2	3	4	5	6	7

2. Service Quality							
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
The library meets all of my learning needs	1	2	3	4	5	6	7
The course materials satisfy all of my learning needs	1	2	3	4	5	6	7
Technology is used to provide learning resources outside of lessons	1	2	3	4	5	6	7
I can always find a computer to work on when needed	1	2	3	4	5	6	7

3. Extra-Curricular Activities							
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
My university/college has lots of clubs and societies for students	1	2	3	4	5	6	7
My university/college provides accommodation for students	1	2	3	4	5	6	7
My university/college has a good range of facilities, e.g., a refectory, sports and leisure provision	1	2	3	4	5	6	7
My university/college has a good careers advice and internships service	1	2	3	4	5	6	7
A lot of leisure activities and entertainment are provided for students	1	2	3	4	5	6	7
There is a lively social scene on my university/college	1	2	3	4	5	6	7

<b>4. Other Students</b>							
	<b>Strongly disagree</b>	<b>Moderately disagree</b>	<b>Slightly disagree</b>	<b>Neutral</b>	<b>Slightly agree</b>	<b>Moderately agree</b>	<b>Strongly agree</b>
I feel a bond with the other students in my university/college	1	2	3	4	5	6	7
It is pleasant to be a member of the student cohort in my university/college	1	2	3	4	5	6	7
Being a member of student cohort in my university/college give me a good feeling	1	2	3	4	5	6	7
Fellow students are a source of friendship for me	1	2	3	4	5	6	7
Fellow students are a source of future networking for me	1	2	3	4	5	6	7

<b>5. University Relationship</b>							
	<b>Strongly disagree</b>	<b>Moderately disagree</b>	<b>Slightly disagree</b>	<b>Neutral</b>	<b>Slightly agree</b>	<b>Moderately agree</b>	<b>Strongly agree</b>
I feel strong ties with my university/college	1	2	3	4	5	6	7
I feel proud to be a student at my university	1	2	3	4	5	6	7
I feel a strong sense of belonging with my university/college	1	2	3	4	5	6	7
I am glad to be a student at this university/college	1	2	3	4	5	6	7

<b>6. Evaluation of my decision to study at this university</b>							
	<b>Strongly disagree</b>	<b>Moderately disagree</b>	<b>Slightly disagree</b>	<b>Neutral</b>	<b>Slightly agree</b>	<b>Moderately agree</b>	<b>Strongly agree</b>
I have felt disappointed with myself (because I'm enrolled in this university/college)	1	2	3	4	5	6	7
I have felt uneasy (because I'm enrolled in this university/college)	1	2	3	4	5	6	7
I have felt annoyed (because I'm enrolled in this university/college)	1	2	3	4	5	6	7
I have felt that I let myself down (because I'm enrolled in this university/college)	1	2	3	4	5	6	7
I wonder if I made the right choice (when I enrolled in this university/college)	1	2	3	4	5	6	7
I wonder if I have been fooled (because I'm enrolled in this university/college)	1	2	3	4	5	6	7

7. My Satisfaction							
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
So far, my university/college has met all of my expectations.	1	2	3	4	5	6	7
I am very satisfied with my university/college and would definitely choose it again	1	2	3	4	5	6	7
My choice of this university/college was a wise decision	1	2	3	4	5	6	7
I would recommend my university/college to friends	1	2	3	4	5	6	7

8. Intention to Stay							
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I <i>intend</i> to graduate within four to six years after I enrolled in my university/college	1	2	3	4	5	6	7
I <i>plan</i> to graduate within four to six years after I enrolled in my university/college	1	2	3	4	5	6	7
I will <i>make an effort</i> to graduate within four to six years after I enrolled in my university/college	1	2	3	4	5	6	7
I <i>expect</i> to graduate within four to six years after I enrolled in my university/college	1	2	3	4	5	6	7

9. Supportive Intentions							
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I will recommend my university/college to others	1	2	3	4	5	6	7
I will recommend my university/college to those who ask or seek my advice	1	2	3	4	5	6	7
I will recommend others on my university/college social media (e.g., Facebook or twitter)	1	2	3	4	5	6	7
I will post positive comments about my university/college on my social media (e.g., Facebook)	1	2	3	4	5	6	7
I would make suggestions to my university/college as to how it can be improved	1	2	3	4	5	6	7
I would let my university/college know of ways that could make it better serve my needs	1	2	3	4	5	6	7

I would share my opinions with my university/college if I felt they might be of benefit	1	2	3	4	5	6	7
I would contribute ideas to my university/college that could help it improve service	1	2	3	4	5	6	7
I would wear clothes (apparel) with my university/college logo	1	2	3	4	5	6	7
I would display a sticker (e.g., car or self) with my university/college	1	2	3	4	5	6	7
I would display merchandize (e.g., umbrella, mug) with my university/college	1	2	3	4	5	6	7
I would attend future events being sponsored by my university/college	1	2	3	4	5	6	7
I would attend future functions held by my university/college	1	2	3	4	5	6	7

10. Reputation							
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
The academic programme run by my university/college is reputable	1	2	3	4	5	6	7
My university/college has a professional image	1	2	3	4	5	6	7
My university/college has a good image	1	2	3	4	5	6	7
My university's/college's graduates are easily employable	1	2	3	4	5	6	7

**PLEASE PROVIDE DETAILS ABOUT YOURSELF (FOR STATISTICAL PURPOSES ONLY; YOU WILL BE ANONYMOUS)**

11. About you						
Gender	Male	Female				
I am enrolled as	Full-time student	Part-time student				
Currently, this semester is my	First semester	Second Semester				
I am student in	Institution A	Institution B	Institution C			
Degree Subject	Business/ Management	Medicine/ Health Science	Education/ Art	IT/Computer Science	Engineering	Other

**<<<<<< THANK YOU FOR YOUR PARTICIPATION >>>>>>**



### 3. Appendix: Skewness and Kurtosis

Statistics									
		QTS	SLS	SI	OI	SS	IS	SP	RE
N	Valid	419	419	419	419	419	419	419	419
	Missing	0	0	0	0	0	0	0	0
Skewness		-.755	-.760	-.567	-.870	-.613	-.617	-.873	-.744
Std. Error of Skewness		.119	.119	.119	.119	.119	.119	.119	.119
Kurtosis		.349	.271	.190	.257	-.164	-.068	.746	.511
Std. Error of Kurtosis		.238	.238	.238	.238	.238	.238	.238	.238

#### 4. Appendix: Cook's Distance Statistics

Residuals Statistics <sup>a</sup>					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.71	6.65	5.27	.780	419
Std. Predicted Value	-3.289	1.762	.000	1.000	419
Standard Error of Predicted Value	.052	.252	.109	.039	419
Adjusted Predicted Value	2.68	6.65	5.27	.782	419
Residual	-4.684	3.811	.000	.963	419
Std. Residual	-4.837	3.936	.000	.994	419
Stud. Residual	-4.860	4.013	.000	1.004	419
Deleted Residual	-4.729	3.963	.001	.982	419
Stud. Deleted Residual	-4.999	4.089	.000	1.009	419
Mahal. Distance	.226	27.300	4.988	4.798	419
Cook's Distance	.000	.107	.003	.010	419
Centered Leverage Value	.001	.065	.012	.011	419
a. Dependent Variable: Reputation					

Residuals Statistics <sup>a</sup>					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.53	6.42	4.93	.958	419
Std. Predicted Value	-3.551	1.551	.000	1.000	419
Standard Error of Predicted Value	.048	.264	.106	.039	419
Adjusted Predicted Value	1.56	6.42	4.94	.957	419
Residual	-4.013	2.354	.000	.939	419
Std. Residual	-4.250	2.493	.000	.994	419
Stud. Residual	-4.266	2.519	-.001	1.003	419
Deleted Residual	-4.043	2.403	-.002	.955	419
Stud. Deleted Residual	-4.358	2.535	-.002	1.007	419
Mahal. Distance	.096	31.712	4.988	5.045	419
Cook's Distance	.000	.080	.003	.007	419
Centered Leverage Value	.000	.076	.012	.012	419
a. Dependent Variable: Student Satisfaction					

Residuals Statistics <sup>a</sup>					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.60	6.91	5.11	.880	419
Std. Predicted Value	-3.994	2.039	.000	1.000	419
Standard Error of Predicted Value	.061	.314	.136	.049	419
Adjusted Predicted Value	1.65	6.90	5.11	.881	419
Residual	-3.852	3.305	.000	1.113	419
Std. Residual	-3.437	2.949	.000	.993	419
Stud. Residual	-3.455	3.033	.001	1.004	419
Deleted Residual	-3.892	3.497	.002	1.139	419
Stud. Deleted Residual	-3.502	3.064	.000	1.008	419
Mahal. Distance	.245	31.802	5.986	5.611	419
Cook's Distance	.000	.084	.003	.009	419
Centered Leverage Value	.001	.076	.014	.013	419
a. Dependent Variable: Intention to Stay					

Residuals Statistics <sup>a</sup>					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.08	6.84	5.28	.914	419
Std. Predicted Value	-3.496	1.707	.000	1.000	419
Standard Error of Predicted Value	.047	.242	.105	.038	419
Adjusted Predicted Value	2.13	6.84	5.28	.914	419
Residual	-2.872	2.872	.000	.858	419
Std. Residual	-3.322	3.323	.000	.993	419
Stud. Residual	-3.460	3.406	-.001	1.008	419
Deleted Residual	-3.114	3.017	-.001	.885	419
Stud. Deleted Residual	-3.507	3.450	-.001	1.013	419
Mahal. Distance	.245	31.802	5.986	5.611	419
Cook's Distance	.000	.144	.005	.017	419
Centered Leverage Value	.001	.076	.014	.013	419
a. Dependent Variable: Supportive Intentions					

## 5. Appendix: Multicollinearity (Coefficients):

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Quality of Teaching	.759	1.318
	Student Life and Support	.495	2.021
	Social Identification	.535	1.868
	Organizational Identification	.460	2.173
	Student Satisfaction	.499	2.003
a. Dependent Variable: Reputation			

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Quality of Teaching	.762	1.313
	Student Life and Support	.495	2.019
	Social Identification	.510	1.960
	Organizational Identification	.568	1.761
	Reputation	.616	1.625
a. Dependent Variable: Student Satisfaction			

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Quality of Teaching	.759	1.318
	Student Life and Support	.485	2.064
	Social Identification	.509	1.964
	Organizational Identification	.446	2.240
	Reputation	.603	1.657
	Student Satisfaction	.490	2.043
a. Dependent Variable: Supportive Intentions			

Coefficients <sup>a</sup>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Quality of Teaching	.759	1.318
	Student Life and Support	.485	2.064
	Social Identification	.509	1.964
	Organizational Identification	.446	2.240
	Reputation	.603	1.657
	Student Satisfaction	.490	2.043
a. Dependent Variable: Intention to Stay			

## 6. Appendix: Total Variance Explained and Communalities

Total Variance Explained							Rotation Sums of Squared Loadings <sup>a</sup> Total
Component	Total	Initial Eigenvalues % of Variance	Cumulative %	Extraction Sums of Squared Loadings Total	% of Variance	Cumulative %	
1	15.719	41.366	41.366	15.719	41.366	41.366	11.305
2	2.924	7.694	49.061	2.924	7.694	49.061	10.084
3	2.417	6.362	55.422	2.417	6.362	55.422	8.484
4	1.765	4.645	60.067	1.765	4.645	60.067	7.744
5	1.558	4.100	64.167	1.558	4.100	64.167	10.515
6	1.374	3.616	67.783	1.374	3.616	67.783	9.405
7	1.350	3.553	71.336	1.350	3.553	71.336	9.338
8	1.013	2.665	74.001	1.013	2.665	74.001	5.195
9	.897	2.361	76.362				
10	.638	1.679	78.041				
11	.621	1.634	79.675				
12	.534	1.406	81.081				
13	.526	1.384	82.465				
14	.488	1.283	83.748				
15	.464	1.221	84.969				
16	.461	1.213	86.182				
17	.389	1.024	87.206				
18	.371	.977	88.183				
19	.344	.904	89.088				
20	.331	.871	89.959				
21	.321	.844	90.803				
22	.312	.821	91.624				
23	.297	.783	92.407				
24	.293	.771	93.178				
25	.267	.703	93.881				
26	.247	.649	94.531				
27	.244	.641	95.172				
28	.229	.603	95.775				
29	.226	.595	96.370				
30	.209	.549	96.919				
31	.188	.495	97.414				
32	.181	.477	97.890				
33	.160	.421	98.311				
34	.154	.405	98.716				
35	.143	.376	99.092				
36	.130	.341	99.433				
37	.125	.328	99.761				
38	.091	.239	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Communalities		
	Initial	Extraction
QT 1	1.000	.791
QT 2	1.000	.819
QT 3	1.000	.776
SLS1	1.000	.685
SLS2	1.000	.662
SLS3	1.000	.717
SLS4	1.000	.689
SLS5	1.000	.776
SLS6	1.000	.689
SI 1	1.000	.701
SI 2	1.000	.716
SI 3	1.000	.708
SI 4	1.000	.761
SI 5	1.000	.746
OI 1	1.000	.668
OI 2	1.000	.797
OI 3	1.000	.822
OI 4	1.000	.807
SS 1	1.000	.714
SS 2	1.000	.810
SS 3	1.000	.683
SS 4	1.000	.742
IS 1	1.000	.756
IS 2	1.000	.778
IS 3	1.000	.812
IS 4	1.000	.812
SP 1	1.000	.704
SP 2	1.000	.722
SP 3	1.000	.669
SP 4	1.000	.599
SP 5	1.000	.746
SP 6	1.000	.772
SP 7	1.000	.713
SP 8	1.000	.721
RE 1	1.000	.615
RE 2	1.000	.812
RE 3	1.000	.842
RE 4	1.000	.774
Extraction Method: Principal Component Analysis.		

## 7. Appendix: Reliability Statistics

- **Both Institutions A & B:**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.880	.882	8

Item Statistics			
	Mean	Std. Deviation	N
Quality of Teaching	5.30	1.307	419
Student Life and Support	5.37	1.178	419
Social Identification	5.08	1.183	419
Organizational Identification	5.36	1.348	419
Student Satisfaction	4.93	1.341	419
Intention to Stay	5.11	1.418	419
Supportive Intentions	5.28	1.254	419
Reputation	5.27	1.239	419

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Quality of Teaching	36.40	47.884	.443	.261	.886
Student Life and Support	36.33	45.031	.707	.543	.860
Social Identification	36.63	45.581	.665	.493	.864
Organizational Identification	36.35	42.875	.731	.591	.856
Student Satisfaction	36.77	43.238	.712	.556	.858
Intention to Stay	36.59	44.842	.566	.392	.875
Supportive Intentions	36.43	44.350	.699	.537	.860
Reputation	36.43	45.043	.663	.470	.864

- **Institution A**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.851	.853	8

Item Statistics			
	Mean	Std. Deviation	N
Quality of Teaching	5.00	1.310	213
Student Life and Support	5.47	1.204	213
Social Identification	5.07	1.189	213
Organizational Identification	5.47	1.244	213
Student Satisfaction	5.08	1.269	213
Intention to Stay	5.46	1.330	213
Supportive Intentions	5.41	1.229	213
Reputation	5.37	1.192	213

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Quality of Teaching	37.35	40.108	.414	.220	.855
Student Life and Support	36.87	37.613	.653	.478	.826
Social Identification	37.27	37.721	.655	.483	.826
Organizational Identification	36.87	37.261	.651	.536	.826
Student Satisfaction	37.26	36.478	.692	.559	.820
Intention to Stay	36.88	39.158	.467	.300	.849
Supportive Intentions	36.93	37.831	.619	.439	.830
Reputation	36.97	38.460	.597	.395	.833



- **Institution B**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.910	.911	8

Item Statistics			
	Mean	Std. Deviation	N
Quality of Teaching	5.62	1.230	206
Student Life and Support	5.27	1.144	206
Social Identification	5.08	1.181	206
Organizational Identification	5.23	1.440	206
Student Satisfaction	4.78	1.399	206
Intention to Stay	4.75	1.419	206
Supportive Intentions	5.14	1.267	206
Reputation	5.18	1.282	206

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Quality of Teaching	35.43	54.268	.576	.411	.909
Student Life and Support	35.78	52.310	.762	.634	.895
Social Identification	35.96	53.056	.685	.512	.900
Organizational Identification	35.81	48.316	.791	.658	.891
Student Satisfaction	36.26	49.933	.725	.556	.897
Intention to Stay	36.29	50.762	.665	.477	.902
Supportive Intentions	35.91	50.770	.767	.639	.893
Reputation	35.87	51.444	.715	.555	.898

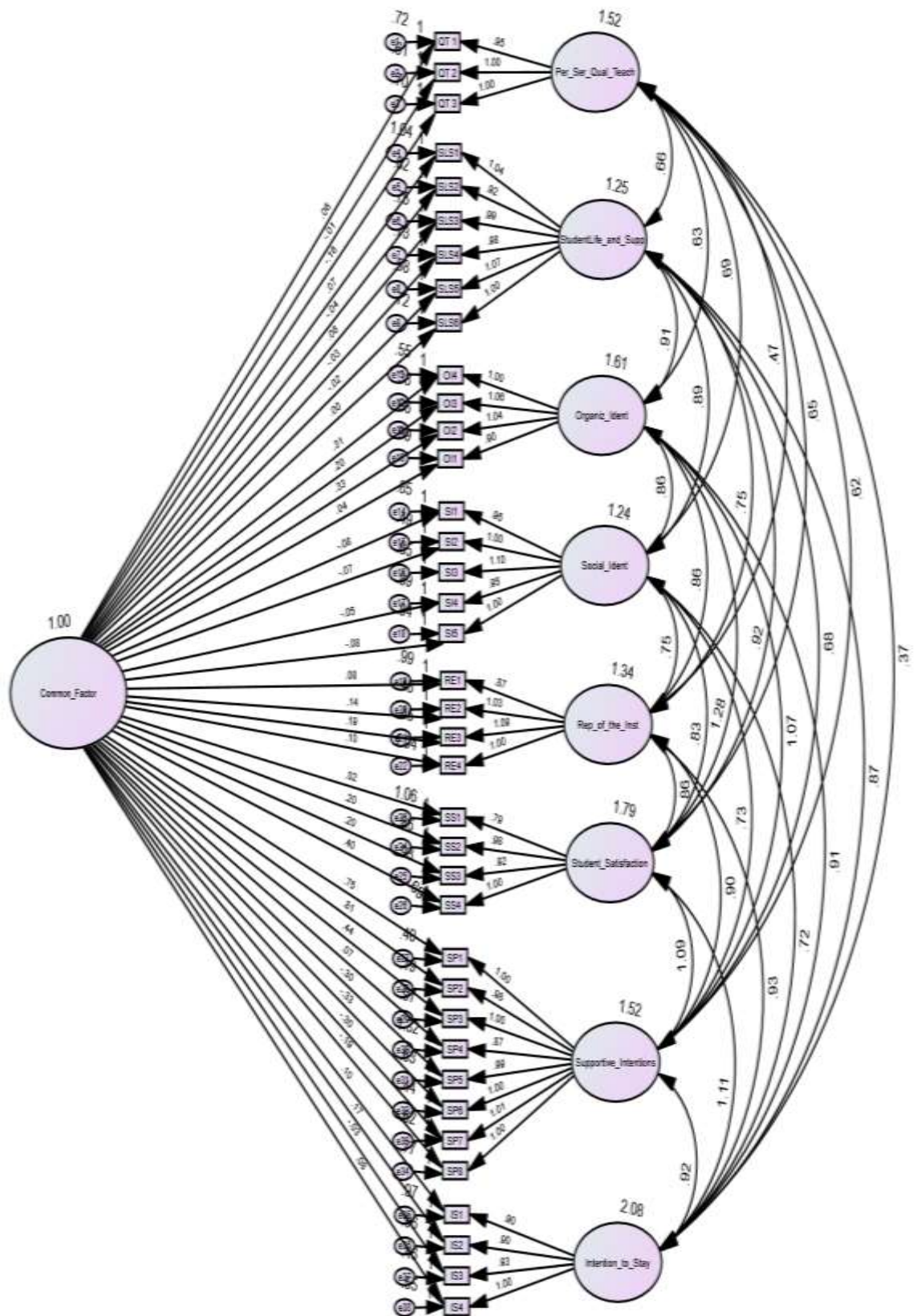
## 8. Appendix: Correlation

		Correlations							
		QTS	SLS	SI	OI	SS	IS	SP	RE
QTS	Pearson Correlation	1	.424**	.442**	.358**	.345**	.183**	.361**	.309**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	419	419	419	419	419	419	419	419
SLS	Pearson Correlation	.424**	1	.625**	.579**	.542**	.505**	.470**	.516**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	419	419	419	419	419	419	419	419
SI	Pearson Correlation	.442**	.625**	1	.531**	.483**	.389**	.483**	.527**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	419	419	419	419	419	419	419	419
OI	Pearson Correlation	.358**	.579**	.531**	1	.679**	.450**	.643**	.531**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	419	419	419	419	419	419	419	419
SS	Pearson Correlation	.345**	.542**	.483**	.679**	1	.516**	.605**	.498**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	419	419	419	419	419	419	419	419
IS	Pearson Correlation	.183**	.505**	.389**	.450**	.516**	1	.466**	.493**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	419	419	419	419	419	419	419	419
SP	Pearson Correlation	.361**	.470**	.483**	.643**	.605**	.466**	1	.583**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	419	419	419	419	419	419	419	419
RE	Pearson Correlation	.309**	.516**	.527**	.531**	.498**	.493**	.583**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	419	419	419	419	419	419	419	419
**. Correlation is significant at the 0.01 level (2-tailed).									

## 9. Appendix: Common Method Bias - SPSS

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.719	41.366	41.366	15.137	39.835	39.835
2	2.924	7.694	49.061			
3	2.417	6.362	55.422			
4	1.765	4.645	60.067			
5	1.558	4.100	64.167			
6	1.374	3.616	67.783			
7	1.350	3.553	71.336			
8	1.013	2.665	74.001			
9	.897	2.361	76.362			
10	.638	1.679	78.041			
11	.621	1.634	79.675			
12	.534	1.406	81.081			
13	.526	1.384	82.465			
14	.488	1.283	83.748			
15	.464	1.221	84.969			
16	.461	1.213	86.182			
17	.389	1.024	87.206			
18	.371	.977	88.183			
19	.344	.904	89.088			
20	.331	.871	89.959			
21	.321	.844	90.803			
22	.312	.821	91.624			
23	.297	.783	92.407			
24	.293	.771	93.178			
25	.267	.703	93.881			
26	.247	.649	94.531			
27	.244	.641	95.172			
28	.229	.603	95.775			
29	.226	.595	96.370			
30	.209	.549	96.919			
31	.188	.495	97.414			
32	.181	.477	97.890			
33	.160	.421	98.311			
34	.154	.405	98.716			
35	.143	.376	99.092			
36	.130	.341	99.433			
37	.125	.328	99.761			
38	.091	.239	100.000			
Extraction Method: Principal Axis Factoring.						

## 10. Appendix: Common Method Bias - AMOS



Variables			Standardized Regression Weights		Delta
			Estimate with CLF	Estimate without CLF	
QT3	<---	Per_Ser_Qual_Teach	0.823	0.821	-0.002
QT2	<---	Per_Ser_Qual_Teach	0.845	0.848	0.003
QT1	<---	Per_Ser_Qual_Teach	0.809	0.807	-0.002
SLS6	<---	StudentLife_and_Supp	0.796	0.797	0.001
SLS5	<---	StudentLife_and_Supp	0.844	0.843	-0.001
SLS4	<---	StudentLife_and_Supp	0.79	0.79	0
SLS3	<---	StudentLife_and_Supp	0.789	0.789	0
SLS2	<---	StudentLife_and_Supp	0.75	0.75	0
SLS1	<---	StudentLife_and_Supp	0.752	0.753	0.001
OI4	<---	Organiz_Ident	0.844	0.867	0.023
OI3	<---	Organiz_Ident	0.9	0.91	0.01
OI2	<---	Organiz_Ident	0.832	0.855	0.023
OI1	<---	Organiz_Ident	0.752	0.743	-0.009
SI5	<---	Social_Ident	0.771	0.772	0.001
SI4	<---	Social_Ident	0.745	0.747	0.002
SI3	<---	Social_Ident	0.835	0.835	0
SI2	<---	Social_Ident	0.846	0.847	0.001
SI1	<---	Social_Ident	0.754	0.754	0
SS4	<---	Student_Satisfaction	0.825	0.852	0.027
SS3	<---	Student_Satisfaction	0.781	0.793	0.012
SS2	<---	Student_Satisfaction	0.812	0.82	0.008
SS1	<---	Student_Satisfaction	0.715	0.703	-0.012
IS4	<---	Intention_to_Stay	0.888	0.89	0.002
IS3	<---	Intention_to_Stay	0.892	0.886	-0.006
IS2	<---	Intention_to_Stay	0.793	0.798	0.005
IS1	<---	Intention_to_Stay	0.796	0.8	0.004
SP8	<---	Supportive_Intentions	0.809	0.786	-0.023
SP7	<---	Supportive_Intentions	0.828	0.788	-0.04
SP6	<---	Supportive_Intentions	0.858	0.812	-0.046
SP5	<---	Supportive_Intentions	0.821	0.784	-0.037
SP4	<---	Supportive_Intentions	0.682	0.704	0.022
SP3	<---	Supportive_Intentions	0.754	0.793	0.039
SP2	<---	Supportive_Intentions	0.797	0.821	0.024
SP1	<---	Supportive_Intentions	0.781	0.811	0.03
RE4	<---	Rep_of_the_Inst	0.749	0.751	0.002
RE3	<---	Rep_of_the_Inst	0.877	0.885	0.008
RE2	<---	Rep_of_the_Inst	0.868	0.875	0.007
RE1	<---	Rep_of_the_Inst	0.71	0.712	0.002

## 11. Appendix: Communalities

Communalities		
	Initial	Extraction
QT 1	1.000	.791
QT 2	1.000	.819
QT 3	1.000	.776
SLS1	1.000	.685
SLS2	1.000	.662
SLS3	1.000	.717
SLS4	1.000	.689
SLS5	1.000	.776
SLS6	1.000	.689
SI 1	1.000	.701
SI 2	1.000	.716
SI 3	1.000	.708
SI 4	1.000	.761
SI 5	1.000	.746
OI 1	1.000	.668
OI 2	1.000	.797
OI 3	1.000	.822
OI 4	1.000	.807
SS 1	1.000	.714
SS 2	1.000	.810
SS 3	1.000	.683
SS 4	1.000	.742
IS 1	1.000	.756
IS 2	1.000	.778
IS 3	1.000	.812
IS 4	1.000	.812
SP 1	1.000	.704
SP 2	1.000	.722
SP 3	1.000	.669
SP 4	1.000	.599
SP 5	1.000	.746
SP 6	1.000	.772
SP 7	1.000	.713
SP 8	1.000	.721
RE 1	1.000	.615
RE 2	1.000	.812
RE 3	1.000	.842
RE 4	1.000	.774
Extraction Method: Principal Component Analysis.		