

Exploring the impact of socio-cultural adaptation and information literacy skills challenges on the academic self-efficacy of Nigerian students in Higher Education institutions in Scotland.

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Exploring the impact of socio-cultural adaptation and
information literacy skills challenges on the academic self-
efficacy of Nigerian students in Higher Education institutions in
Scotland

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Abstract

This research aims to investigate the socio-cultural adaptation and the information literacy (IL) skills challenges of higher education (HE) Nigerian students in Scotland and how these may impact their academic self-efficacy. The study explores mechanisms for supporting the process of how Nigerian students search, retrieve and use information in their academic and everyday life contexts.

The research adopted a mixed methods research design, combining quantitative and qualitative approaches. Two instruments were used for data collection: an online questionnaire survey of a representative sample of 304 Nigerian students studying in Scottish HE Institutions and semi-structured interviews with twenty Nigerian full-time (undergraduate and postgraduate) students, from fifteen out of the total population of nineteen HE institutions in Scotland.

The questionnaire survey explored students' academic and everyday life IL, socio-cultural adaptation and language and communication challenges, and examined how they impact their academic self-efficacy. The semi-structured interviews explored the thoughts, feelings and beliefs of Nigerian students, delving into personal perspectives, exploring individual issues and challenges they encountered, and offering a deeper understanding of how these were likely to influence their academic self-efficacy, while studying in Scotland. Quantitative data obtained from the questionnaire surveys were analysed on the basis of mean values, standard deviations and linear regression analysis, while the semi-structured interview qualitative data were analysed using thematic coding, employing template analysis.

The research findings indicated that Nigerian students encountered IL skills challenges, encompassing difficulties in language and communication, critical thinking, articulating information needs, conducting efficient information searches, referencing, paraphrasing and presenting ideas coherently, as well as becoming independent learners. Ultimately, these challenges significantly affected students' self-perceived academic self-efficacy in a way that could have a negative overall

impact on their academic performance. The study suggests support mechanisms to help students develop effective, step-by-step information searches and proposes socio-cultural interventions, such as 'cultural bridge networks,' to enhance the transition process.

Using previous established IL models/frameworks, the study proposes key practical recommendations that reinforce the notion that an individual's societal and cultural orientation influences processes, source selection, and level of commitment when engaging in IL activities. The research recommends educating academic librarians on socio-cultural differences, especially for Nigerian students whose educational backgrounds may differ from Western norms, to aid their development of IL skills and smoother academic adjustment.

Dedication

This work is dedicated to God Almighty for His guidance through every stage of my academic journey. I express gratitude to Him for the wisdom, knowledge, and resilience granted to me throughout my academic pursuits.

To my beloved husband, Engineer Mobolaji Olawoye Ayodeji, your unwavering support and encouragement have been my rock. Your steadfast belief in my abilities has propelled me forward, even in the face of challenges. Words cannot adequately express the depth of my gratitude for your uplifting words and moral support. Your love, patience, and steadfast belief in me have been a source of strength and inspiration. To my adorable children, Adeola, Oluwafolakemi, and Opeoluwa, your patience and understanding have been a constant source of strength and motivation throughout this academic journey. I cherish each of you dearly.

Declaration

I declare that this thesis:

“Exploring the impact of socio-cultural adaptation and information literacy skills challenges on the academic self-efficacy of Nigerian students in Higher Education institutions in Scotland”

To the best of my knowledge, is my own research. This thesis has not been submitted to this university or any other academic or professional institution for any other degree. Any materials or data sourced from external sources have been duly cited and referenced.

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CHAPTER 1 - INTRODUCTION

1.1 Background to the Study and Rationale

Scottish institutions are seen as a hub for academic research and innovation, and a welcoming place for talented and ambitious students from all over the world (Somerville 2018). Scotland is an increasingly popular destination for international students, especially those interested in postgraduate research (Scottish Government 2018). Data from HESA for the 2016-17 academic session indicates a higher percentage (22%) of international students at Scottish higher education institutions (HEIs) than in other parts of the UK (e.g., Wales and Northern Ireland) (Scottish Government 2018). In the academic years 2015/16 to 2019/20, there was also a steady increase of international students into Scotland from around the world, with an estimated 58% of full-time master's and PhD students in Scotland being international students (Murphy 2021).

Every year, the UK overall, attracts a large number of African people, particularly Nigerians. For example, in 2021, there was an estimated one hundred and seventy-eight thousand Nigerian nationals residing in the UK, which is the highest number recorded in the UK when compared to previous years (Clark 2021).

Nigerians are also one of the most popular African students enrolled in British universities (Kazeem 2019). According to the UK Government, the number of Nigerian students rose from 9,066 in June 2020 to 20,427 in June 2021, making them the third largest nationality group with a percentage increase of 125%. Nigerians are also the third largest number of nationalities on sponsored visa grants (Shibayan 2021).

Further data reveals that postgraduate degrees, specifically, are more popular among Nigerian students, with Nigeria predicted to be the most important sender of postgraduate students in the world (ICEF Monitor 2021). For instance, there were 5,925 postgraduate students and 4,615 undergraduate Nigerian students studying in the UK in the 2017/2018 academic year (Kazeem 2019).

In Scotland, education statistics indicate that Nigerian students were in the top five non-EU students in Scotland for the 2016-17 academic year (Scottish Government, 2018). Furthermore, international students make up almost a quarter of all students at the different universities in Scotland (Scottish Government 2018).

Experiencing education outside one's own country is one of the exciting chapters of a student's life, as it provides an opportunity to travel, learn a new language, and experience a new culture. However, it also predisposes students to a catalogue of new challenges, such as the difficulties of adapting to the socio-cultural differences of the new environment. International students face everyday life, socio-cultural, academic language, communication, and academic skills challenges that mount pressure on their academic self-efficacy, as they struggle to meet academic and everyday life demands (Apply Board 2020). Research evidence has indicated that despite the increasing multiculturalism in the UK, international students' experience continues to demonstrate that adapting to a new culture remains a multifaceted journey, often marked by confusion and distress (Newsome and Cooper 2016). The challenges that international students experience are commonly accompanied by increased stress, frustration, anger, and fear, which greatly impact their academic self-efficacy (Jiang 2018).

Nigerian students share common experiences and challenges with other international students. In navigating the requirements of academic and everyday life in an unfamiliar setting, international students experience several intercultural challenges and difficulties during their adaptation, which affect their academic self-efficacy (Jiang 2018). Adapting to a new socio-cultural environment poses major challenges for all international students, who may experience 'culture shock', the degree of which varies according to the level of their previous exposure to the new culture (Carroll and Ryan 2005). In addition, departing from their home country compels international students to engage in cross-cultural adaptation as they navigate their transition to the host country (Jeong 2004, Khawaja et al 2011, Mclachiam et al 2009, and Shafaei et al 2016). Universities need to recognise this challenge of international students' cultural backgrounds in order to assist them in overcoming

obstacles and frustrations in adapting to cross-cultural differences (Jiang 2018). For example, McLachlan et al (2009 p.4) noted that in some international students' home cultures, "academic underachievement and failure bring shame to both student and family, thereby creating extreme pressure to perform well, and this makes a fertile breeding ground for anxiety."

Beyond socio-cultural challenges, Nigerian students, like other international students, experience academic challenges, and previous research has extensively reported on some of these. For example, an earlier exploration of Asian international students found that they experience study-related gaps, which are caused by unfamiliarity with written assignments and group work requirements that are very common in European and North American universities (Stillman 2011). International students may also be unfamiliar with the expectation of critical thinking (Hughes 2013). Previous research by Hughes (2013), Liao et al (2007), Mehra and Bilal (2007), and Song (2005) has, for example, found that international students face multiple challenges with adjusting to a foreign educational system in terms of the curriculum, the teaching approach followed, and the expected norms for student behaviour.

Language proficiency and communication skills are other critical factors that influence the overall adaptation experiences of international students, exerting a significant impact on both their academic pursuits and social interactions (Schutz and Richard 2003). Communication may include written, verbal, nonverbal, and visual formats, and a lack of communication ability can lead to difficulty in understanding lectures, participating in discussions, and interacting with others in order to achieve good results (Spencer-Oatey 2010). Research on the impact of language proficiency on international students has found that "low competence in language has been one of the biggest barriers to their academic success" (Andrade 2006, Zhang and Mi 2010). In addition, international students may not be acquainted with the informal manner in which domestic students communicate with the teaching staff (Smith and Khawaja 2011), which may cause confusion about expected codes of conduct and communication. These challenges connected to language and communication ability

are equally shared with Nigerian students. Previous research, for example, has found that Nigerian international students not only encounter difficulties but also use different adaptation tactics to address language and communication barriers, such as using translation apps and social media for language development (Elega and Ozad 2017).

Another academic-related challenge that international students have been found to encounter in previous research (and which may also be connected to language proficiency) is the lack of sophisticated information literacy (IL) skills that are needed to exploit university libraries and information resources, both print and online. IL is a set of abilities requiring individuals to “recognise when information is needed and have the ability to locate, evaluate, and effectively use the needed information” (Naimpally, Ramanchandra, and Smith 2012). IL skills are very important in the academic lives of students, especially when assessing the quality and credibility of academic information, properly crediting sources, acquiring new knowledge, resolving issues, or making decisions that are necessary for effective functioning within an academic learning environment.

Previous research has investigated the IL challenges and opportunities that students encounter in Nigerian universities with a focus on IL development and lifelong learning, identifying a need for incorporating library and IL programmes in the context of Nigerian HE (Anunobi and Ukwoma 2016). Although the ability to use information effectively to accomplish a task and recognise, access, and evaluate the needed information effectively, efficiently, and critically are IL skills possessed by some Nigerian students, further IL skills development is needed to attain academic self-efficacy. In line with this direction, other research has similarly noted that information literate HE students should be able and independent individuals who identify their information needs and engage proactively with information sources to fulfil not only their academic requirements but also their everyday life needs (Okon et al 2014 p. 6). They should have confidence in their ability to overcome challenges, identify relevant information, and utilise technology to access information and communicate effectively in their daily lives.

Further, to the need to develop IL skills to achieve academic self-efficacy and address everyday life information needs, research with international students overall also reports that students who study in foreign countries face additional IL challenges. For example, a systematic review of studies conducted over a period of 25 years found that international students experienced language and research difficulties around using library and non-library resources and had challenges following library instructions. (Houlihan, Wiley, and Click 2017). Similar challenges among international students were also noted in other research on the basis of English language use, library systems and technology use, research and writing, as well as adjusting to Western academic culture (Badke 2002). Song (2005) observed other differences as well, for example, how international students might view the library primarily as a study space rather than a place for accessing resources, while Catalano (2013) revealed that international students may refrain from seeking direct assistance from librarians.

Although the lack of information literacy skills has been previously reported in research with Nigerian students studying in their home country (Baro et al 2009) and generally with international students studying abroad, Nigerian students studying in the UK have not been the focus of previous information literacy research. Nigerian students may share similar challenges as other international students; however, they also have unique socio-cultural characteristics, previous educational experiences, as well as culture-dependent and “authentic cultural belief systems,” which may impact their understanding of academic requirements and their everyday life learning experiences (Szilagyi 2014). In addition, Nigerian students have different communication patterns that may make it difficult for them to navigate through their new information and communication environments when studying in a different country (Scholars Hub Africa 2021).

Furthermore, unlike the experiences of other international students, for example, those growing up in Western countries, Nigerian students’ IL skills development is more likely to have been hampered by contextual factors experienced in their home country, including erratic internet services, a lack of information technology in

academic libraries, and problems associated with the availability of international academic material (Bappah 2016). This prevents many academic libraries from obtaining up-to-date and relevant information material to support academic programmes offered by Nigerian universities and creates fewer opportunities for Nigerian students to develop information literacy, technology, and critical evaluation skills.

It is important to recognise that international students' experiences and academic performance are influenced not only by their current environment at universities or institutions but also by their previous educational experiences. This perspective has been supported by previous research, such as the study by Sin et al. (2011).

However, the characteristics of the previous experiences of different international students are not the same. For example, COVID-19 posed a serious problem in the education industry in Nigeria in a way that did not necessarily impact other countries. The absence of needed technological and internet accessibility requirements to cope with remote education during the global lockdown hindered teaching and learning, as most students lacked necessary resources (Ugochukwu and Ibek 2021). Research conducted by Egielewa et al, (2021) also revealed that Nigerian university students exhibited low levels of acceptance toward online learning technology. They expressed dissatisfaction with the virtual learning platforms provided by numerous higher education institutions throughout the country during the lockdown and would not like online learning to continue after the pandemic.

Although some of these experiences may also represent those of students studying in other, less technologically developed countries, not all experiences would be similar. Therefore, there is a need to recognise international students' diversity of experiences and the socio-cultural differences that may have an impact on how they interact with their information and learning environment rather than approach them as a homogeneous group.

This study therefore examines the socio-cultural adaptation and the information literacy, communication, and language challenges that Nigerian university students experience in their academic and everyday life environment in Scotland. These

challenges are explored in relation to students' overall socio-cultural adaptation to their new country and to their perceived academic self-efficacy. These concepts are briefly explained below, although a more detailed discussion is provided in the literature review chapter.

1.1.1 Socio-cultural Adaptation

Adaptation is a big problem for those who move to a new society. Because the old culture and the new environment are different, newcomers may take longer to adjust their perceptions, attitudes, and expectations (Chaney and Martine 2005; Krapels and Davis 2005). The daily lives of people who move to a new country may be impacted by this process of social and cultural adaptation. Newcomers face a variety of hurdles, from issues with basic communication and language to adjusting to new everyday life situations and conditions, such as a different climate or an unfamiliar cuisine. The following is how Chaney and Martin explained the intercultural phenomenon:

"When people spend a long time in a different culture, they have to decide how much of the new culture they will embrace and how much the new culture will replace, complement, or be rejected based on the beliefs and customs of the home culture." (Chaney and Martin 2005 p.103-104).

Poor basic communication or social relations can sometimes be blamed for the socio-cultural issues that international students face. Zhang and Goodson (2011), for example, observed that the socio-cultural challenges faced by overseas students were the outcome of inadequate social connection and contact with host country citizens. In a related study conducted by Ramsay, Jones, and Barker (2007) of local and foreign first-year students at an Australian university, it was discovered that inadequate interactions with host country students were a source of fear and anguish for international students. However, the challenges associated with preserving these relationships due to differences in cultural awareness could also be a cause for concern on their own.

Other studies have also found that international students experience socio-cultural challenges because of the different social and cultural norms of the host culture (Schweinfurt and Gu 2009), as they do not have as many social ties to their host country as domestic students do (Zhang and Goodson 2011, Ramsay, Jones, and Baker 2007), and some find it challenging to interact with local people (Schweinfurt and Gu 2009). Cultural distance is one of the reasons why international students' social engagement needs in the host country are not met, which could cause a variety of difficulties for them while studying abroad (Ward, Bochner and Furnham (2001), which Chaney and Martin (2005) identify as "culture shock.". These experiences contribute to socio-cultural problems leading to an inability to adjust socially, which could result in encountering difficulties on a societal level overall. On the other hand, when international students interact socially with both nationals and other international students and participate in social networks, this can restore a sense of place and can promote a sense of belonging and social fulfilment (Ward, Bochner, and Furnham 2001; Montgomery 2010, and Duarte 2005), although making space in their new culture for retaining aspects of culture and identity also helps people to feel a connection to their original country (Duarte 2005).

1.1.2 Self Efficacy

Maddux (2002) defines self-efficacy as an individual's assessment of their capability to organise and carry out the tasks required to achieve optimal performance. This belief is pivotal in shaping how individuals feel, think, motivate themselves, and behave.

Self-efficacy is a multifaceted construct encompassing different dimensions that impact various aspects of an individual's life. In the academic realm, academic self-efficacy reflects a student's belief in their capacity to organise, execute, and succeed in academic tasks (Zimmerman 2000).

In addition, self-efficacy is a core concept in social cognitive theory, defined as an individual's belief in their ability to execute specific actions necessary to achieve desired outcomes (Bandura, 1997). This construct is not merely a reflection of one's

skills but rather a belief in one's capability to organise and apply these skills effectively in varied situations. In the academic context, academic self-efficacy specifically refers to a student's belief in their competence to successfully engage with and master academic tasks, which significantly influences their motivation, learning strategies, and overall academic performance (Bandura 1997; Zimmerman 2000).

Critically, self-efficacy is dynamic and context-specific, meaning it can vary depending on the task at hand and the environmental factors surrounding it. This variability highlights the importance of fostering a strong sense of self-efficacy in students, as it directly impacts their resilience, persistence, and approach to challenges (Schunk and Pajares 2002). Research has shown that higher levels of self-efficacy are correlated with greater academic achievement, as students with strong self-efficacy beliefs are more likely to set challenging goals, employ effective learning strategies, and persist through difficulties (Pajares 1996; Usher and Pajares 2008).

Self-efficacy pertains to an individual's confidence in their capacity to conduct behaviour that is essential for ensuring specific performance goals (Bandura 1977, 1986). Self-efficacy plays a pivotal role in human competence and significantly influences learning, academic motivation, and achievement (Pajares and Schunk 2002). In the same vein, Bandura (2006) refers to academic self-efficacy as a "student's belief in their efficacy in regulating their learning activities and mastering academic subjects" (p. 10).

Research has shown that academic self-efficacy is a "key internal motivational process that can be affected by personal and environmental variables" (Schunk et al 2021). Academic self-efficacy is a very critical determinant of academic success. For example, a previous study by Jiang (2018) demonstrated that students' academic self-efficacy is greatly influenced by academic stress, academic support, and proficiency in the English language.

Nigerian students, just like every other international student, experience gaps that necessitate academic information literacy, socio-cultural adaptation, language and communication ability, and academic socio-cultural adaptation to adjust to day-to-day encounters in academic life. These challenges relate to cultural and academic life adaptation experiences, which are critical and difficult (Spencer-Oatey 2006) and can be accompanied by increased distress, frustration, and fear, which could hamper students' overall academic self-efficacy. It has been observed that a considerable number of international students experience depression during their studies abroad (Carroll and Ryan, cited in Jiang 2018).

Although research with international students has previously explored these issues in different contexts and with students from diverse countries, research with Nigerian students in particular is a less explored area, and an emphasis on the educational experiences of Nigerian students in Scotland is lacking. The academic gap between international students of diverse backgrounds and domestic students has been expressed as a cause of growing concern in education by researchers (Song 2005), with a plethora of studies (as the literature review will later demonstrate) on international students across the globe, in the US and other English-speaking countries. However, no particular attention has been given to Nigerian students in HE institutions in Scotland, particularly with regard to the impact of socio-cultural adaptation, language and communication, and information literacy skills challenges they experience, as well as how these may impact their overall academic self-efficacy.

1.2 Aim and Objectives of the Study

The primary aim of the study is to investigate the impact of socio-cultural adaptation and information literacy skills challenges on the academic self-efficacy of Nigerian students in Scottish HE institutions. The specific objectives to achieve this aim include:

1. To investigate the information literacy challenges of Nigerian students in Scottish Universities by means of exploring their capabilities for sourcing,

evaluating, ethically sharing, and using information for their academic study and everyday life needs.

2. To identify the different levels of academic self-efficacy challenges they experience that can hinder their academic progress or success.
3. To examine the nature of socio-cultural adaptation and language and communication challenges they encounter both in their academic and everyday life environments.
4. To explore whether there is a relationship between academic self-efficacy, information literacy, and socio-cultural challenges experienced by Nigerian students.
5. To propose support mechanisms by which educational institutions can assist students in addressing information literacy, socio-cultural adaptation, everyday life challenges, and language and communication challenges.

1.3 Value of the Study

The study results are expected to be valuable for Nigerian students in Scotland, international students in the UK, decision-makers in higher education in Scotland, academics, and researchers. Specifically, the results will enable Nigerian students in Scottish higher education to identify and relate to various socio-cultural adaptation challenges affecting their academic progression and identify support mechanisms. In addition, the findings will enable Nigerian students to explore potential barriers in searching and evaluating academic information and seek support to improve their information literacy skills further. The findings will enable decision-makers in universities and other educational institutions in Scotland to understand the challenges faced by Nigerian students and implement recommendations that can lead to effective policy development.

CHAPTER 2 - LITERATURE REVIEW

2.1 Introduction

The literature reviewed in this chapter covers the main thematic areas of the study and sets the context for this research. It starts with an overview of the socio-cultural educational background of Nigerian students and the importance of information literacy within that context to then discuss the socio-cultural perspective to information literacy and the main directions of the study, which include the concepts of academic self-efficacy, academic information literacy, academic and everyday life socio-cultural adaptation, language, and communication. These directions are explained and discussed with reference to established theoretical frameworks and definitions. The chapter also offers an overview of empirical studies of international students, identifying gaps in previous research and helping to develop a conceptual framework that incorporates the central aspects of the present research study. The review, therefore, serves as a “guide and as an integrating ecosystem that will bring all the aspects of the study together through a process that explicates thematic connections, overlaps, tensions, and the arguments that shape this research” (Ravitch and Riggan 2016 p.1).

2.2 The cultural dynamics of Nigerian education and its impact on studying abroad in Scotland

Education serves as a cornerstone of Nigerian culture, deeply rooted in societal values and beliefs. The pursuit of knowledge is not merely a personal endeavour but a communal aspiration, shaping identities and futures. Within this cultural context, academic expectations are high, success is often equated with educational achievement, and the value of being educated extends beyond personal fulfilment to societal progress.

Education in Nigeria is more than just a system of instruction; it is a deeply ingrained cultural value that shapes societal dynamics and individual aspirations. Rooted in traditional Nigerian values, education has historically been viewed as a pathway to personal development and societal advancement. This perspective emphasises the importance of knowledge and learning as critical tools for achieving success and contributing to community well-being (Osokoya 2008).

The cultural emphasis on education within Nigerian society is evident in various facets. Firstly, education is seen as a crucial instrument for upward social mobility and economic stability. It holds immense value and is considered fundamental for both personal and national development. This cultural emphasis often translates into high academic expectations from parents, who view education as essential for success in a competitive global environment. For example, McLachian et al (2009 p.4) noted that in international students' home cultures, "academic underachievement and failure bring shame to both student and family, thereby creating extreme pressure to perform well, and this makes a fertile breeding ground for anxiety.". This also applies to expectations created within a Nigerian educational context, which is characterised by the social expectation that family status within the community will be elevated because of educational achievement. For example, research by Ayling (2015) underscores how educational qualifications, especially those from higher education institutions, are pivotal in preserving social class identity and social advantages.

However, Nigerian public universities are not always considered to be of the best quality. For example, Ekankum and Kemebaradikumo (2014) state that the quality of higher education in Nigeria has drastically declined due to inadequate funding and financial resources in higher institutions. This lack of financial support hinders their ability to maintain educational standards and produce quality graduates.

Therefore, this emphasis on the importance of good quality education underpinned by expectations of academic rigour and recognition often drives Nigerian families to pursue the advantages of studying abroad, based on the perception that it will offer access to quality education and resources that may be limited in their home country.

Nigerian parents often make significant financial sacrifices to send their children abroad for education and seek overseas degrees for their children (Aladegbola and Jaiyeola; Njoku 2016; Ibrahim, Arshad, and Salleh 2017). This explains the high demand of Nigerian families for study abroad (ICEF Monitor 2021).

In summary, the cultural emphasis on education within Nigerian society, coupled with the collective efforts of parents to ensure quality education, including sending children abroad, is deeply rooted in cultural values and social norms. These dynamics reflect the overarching importance placed on education as a means of achieving personal success, family honour, and social mobility.

2.3 The Education System in Nigeria

The Nigerian education system is predominantly teacher-centred, putting a strong emphasis on rote learning and memorisation. This educational approach places different expectations around critical thinking, independent learning, and academic skills required, creating a stark contrast with more progressive educational expectations of Western education systems, where independent learning and critical inquiry are heavily emphasised. The following discussion explores the key aspects of the Nigerian education system, which include different approaches to memorisation, independent learning, assessment types, in-class participation and the role of the teacher, critical thinking and writing, the use of academic evidence, and time management.

One prominent feature of the Nigerian education system is its reliance on memorisation. Students are accustomed to this method due to the emphasis on passing standardised exams, such as the Unified Tertiary Matriculation Examination (UTME) (Okebukola 2012). These exams often require students to recall large amounts of information verbatim, leading to a focus on rote learning rather than understanding and applying knowledge. This reliance on memorisation can be attributed to several factors, including the curriculum design, which prioritises factual recall over critical thinking, and the limited availability of teaching resources that support more interactive and exploratory learning methods (Obanya 2010). The

implications of this approach are significant. Students may excel in exams through memorisation but often struggle with applying their knowledge in real-world contexts. This method limits the development of higher-order thinking skills, such as analysis, synthesis, and evaluation, which are crucial for problem-solving and innovation (Aduwa-Ogiegbaen and Iyamu 2005). Furthermore, the emphasis on memorisation can lead to superficial learning, where students forget information shortly after exams, undermining long-term educational goals.

Linked closely to this issue is the minimal emphasis on independent learning within the Nigerian education system. The prevalent teacher-centered approach results in students relying heavily on instructors by latently receiving information from the teacher as the focal point (Tabulawa 2006), and "the teacher merely focuses on dispensing rules, definitions, and procedures for students to memorise without actively engaging the students" (Eze, Ezenwafor, and Molokwu 2015 p. 103). This dependency hinders the development of independent learning skills, which are essential for academic success and lifelong learning. The lack of emphasis on independent learning significantly impacts students' academic performance, particularly when they transition to higher education environments like those in Scotland, where independent learning is a core component. In Western higher education, encouraging students to critically appraise knowledge and values is considered very important (Hammersley-Fletcher and Hanley 2016). Postgraduate students in particular are required to learn critical thinking and employ these skills in their learning and writing practices in order to acquire a higher education qualification in the UK (Quality Assurance Agency 2014).

Assessment types in Nigeria predominantly consist of written examinations and multiple-choice questions, reflecting a focus on memorisation and factual recall. While some institutions are beginning to incorporate continuous assessment methods, such as essays and projects, the high-stakes nature of terminal exams and multiple-choice questions remains predominant (Akolokwu 2017). These assessment types have significant implications for the development of critical thinking skills. Written exams and multiple-choice questions often assess lower-order thinking skills,

such as recall and comprehension, rather than higher-order skills like analysis and evaluation (Abosalem 2016). This limitation hampers students' ability to engage in deep learning and develop critical thinking abilities, which are essential for academic and professional success.

In-class participation and communication in Nigerian education are generally limited. The teacher-centered education, also referred to as traditional education, is a teaching method where the teacher is the main source of knowledge and authority in the classroom. In this approach, the teacher sets the classroom rules, delivers lectures, and provides information, which students are expected to absorb and memorize. A significant critique of this approach is that it does not promote the development of critical thinking and problem-solving skills, lacks inclusiveness, and fails to encourage student interaction. As a result, students often remain passive recipients of information and are not motivated to explore, discover, or develop their own understanding of the material (Altun 2023). This lack of interaction can stifle the development of communication skills and critical inquiry. The reluctance to participate is also influenced by cultural norms that emphasise respect for authority (Shaheen 2012). As a result, students may feel intimidated or uncomfortable speaking up in class, further limiting opportunities for active learning and engagement. Research indicates that increased student participation and interaction in class contribute greatly to the development of critical thinking skills; the more students participate and interact in class, the more their critical thinking skills and learning outcomes are enhanced (Lv, Chen, Zheng, and Zhu 2015).

Furthermore, in Nigeria, students frequently receive notes directly from their lecturers and are seldom encouraged to source academic evidence independently. This approach restricts their access to a variety of academic resources and impedes the development of their inquiry and critical evaluation skills (Fodter 1972, as cited in Higher Education Academy 2014). The reliance on provided notes can result in a narrow perspective on subjects and inadequate preparation for higher academic pursuits. The limited use of academic evidence also impacts the quality of students' work, as they may lack the skills to critically evaluate sources, synthesise

information, and present well-supported arguments. Therefore, encouraging independent research and the use of a wide range of academic sources is essential for developing these skills and enhancing the overall quality of education.

Time management is another significant challenge for many Nigerian students. Time management is a skill that perhaps impacts students' academic performance. Being unable to manage time and prioritise tasks can make studying and schoolwork more overwhelming and less enjoyable. Academic stress occurs when students feel the pressure of cramming for exams, rushing through homework, and getting minimal sleep because of disorganisation of their time. Effective time management techniques should not only be applied to the students' academic lives but also to their overall schedules to achieve success and peace of mind (Aduke 2015). Several studies have highlighted the benefits of time management. In particular, studies have shown that proficiency in time management enhances student learning and academic achievements (Kearns and Gardiner 2007, Kelly 2002, McKenzie, Gow, and Schweitzer 2004).

In conclusion, the education system in Nigeria faces several challenges that impact the overall quality of education. The reliance on memorisation, lack of independent learning, limited in-class participation, and inadequate development of critical thinking and time management skills are significant issues that need to be addressed. Nigerian students studying abroad require support to encourage more interactive and student-centered learning practices, to deal with more diversifying assessment types, and to effectively learn within an environment that promotes independent research and critical inquiry.

2.4 Cultural Influences on Support Structures for Nigerian Students

Based on the above discussion, it is imperative to consider the socio-cultural context and how it influences the educational expectations and experiences of Nigerian students. Hofstede's cultural dimensions theory offers a framework for understanding these differences, particularly in terms of individualism versus collectivism, which can significantly impact the support mechanisms available within family systems

(Hofstede 1980). Hofstede's (2005) individualist-collectivism dichotomy stresses the differences between (Western) cultures that place less emphasis on family ties and collectivist cultures (e.g., Eastern and African) that rely heavily on familial and community support structures within their home country. In Nigerian culture, family connections are paramount, and familial support plays a crucial role in enhancing the academic performance of students (Adetutu and Adebayo 2021). These findings align with previous research, which has highlighted the positive impact of high family cohesion on academic performance (Jeynes (2007).

This emphasis on collectivism fosters a sense of belonging and security, providing students with a robust support network to navigate academic challenges. Family connection and support are very important in Nigerian culture, and the lack of them may adversely affect students' academic achievements. Support from family members is an important resource to help students overcome personal and academic difficulties (Jabbar et al. 2019). Also, research indicates that students who have a higher level of family support are bound to accomplish academic objectives (Vanegas et al 2018).

However, when Nigerian students venture abroad, such as to Scotland, they may encounter a different educational landscape characterised by greater individualism. In Scotland, educational structures often prioritise individualist characteristics and favour personal learning and decision-making, as opposed to Nigeria, where the structure is characterised by a culture that is high on collectivism, which means that students may have a higher tendency to be in groups and learn together as a way of communal learning (Hofstede, 2005). This shift from a collectivist to an individualistic framework may pose challenges for Nigerian students who are accustomed to relying on familial and community support.

Additionally, within the Nigerian educational system, a community-based dependent approach to learning emphasises collaboration and communal learning experiences (Maranzu and Maranzu 2019). This communal approach not only enhances academic learning but also provides a diverse array of learning opportunities for individuals and the community as a whole, often contributing to national development.

Furthermore, Nigerian students in their home country experience different social rules regarding the class system, with gender roles, networking, respect between elders and children, and friendships being at the centre of everyday life. In light of these cultural differences, Newsome and Cooper (2016) suggest that there is a profound need for cultural understanding to bridge this form of socio-cultural dichotomy.

In conclusion, the support structures available to Nigerian students in their home country and in Scotland are influenced by different socio-cultural factors, the understanding of which is essential for providing effective support services that address the unique needs and expectations of Nigerian students studying abroad. By recognising the importance of familial and communal support within Nigerian culture and adapting educational practices accordingly, institutions can better facilitate the academic success and well-being of Nigerian students in Scotland.

2.5 Information Literacy within Nigerian Higher Education

Information literacy (IL) is a critical aspect of academic success and lifelong learning. It involves the ability to recognise when information is needed and the skills to locate, evaluate, and use the needed information effectively (American Library Association 2018). Literature highlights that the goal of IL is to cultivate lifelong learners capable of adapting to evolving information landscapes by critically evaluating and effectively using information while being conscious of its impact. The primary focus of IL initiatives is to empower students to find and analyse the information needed to solve specific problems.

Academic libraries in Nigeria play a pivotal role in fostering information literacy among students as repositories of knowledge and essential resources for academic research (Amusan, Issa, and Daura 2014). However, the extent to which students utilise them effectively varies significantly, as many Nigerian students lack IL skills to maximise the benefits offered by their libraries. Without these skills, students often struggle to incorporate evidence they independently source into their academic work, leading to a reliance on readily available information, which may not always

be credible or relevant (Baro and Zuokemefa 2011). Previous research has also found that the lack of effective IL skills can hinder students' academic performance (Ilogho and Nkiko 2014).

Internet access is a critical issue that affects the development of IL in Nigeria. Many students experience inconsistent or limited internet connectivity, which hampers their ability to access online resources, including academic databases. The use of academic databases is a crucial component of information literacy. Ideally, students should be proficient in searching for information using these databases, which provide access to peer-reviewed articles, books, and other scholarly materials. However, not all Nigerian universities have access to academic databases, limiting students' access to high-quality academic resources (Baro and Zuokemefa 2011). This lack of access creates a significant barrier to developing robust IL skills. Even in institutions where access to academic databases is available, students often face challenges in effectively using these resources due to a lack of training and low awareness (Osinulu 2020). Furthermore, there is a notable scarcity of academic materials in Nigerian libraries, largely due to the insufficient funds needed to develop libraries. This financial shortfall is often exacerbated by the misappropriation of funds by university administrators intended for library development, further hindering the ability of libraries to provide comprehensive academic resources (Bappah 2016). The digital divide between urban and rural areas further exacerbates this issue, with students in rural areas often facing greater difficulties in accessing reliable internet services (Olanrewaju et al 2021). This digital divide highlights the need for improved infrastructure and investment in technology to support equitable access to information.

Even when overcoming the issues of connectivity, only some Nigerian universities have begun to integrate IL into their academic programmes, while the development of IL is not yet a widespread practice (Baro and Zuokemefa 2011). Effective incorporation of IL involves not only teaching students how to access and evaluate information but also encouraging critical thinking and the ethical use of information.

In conclusion, information literacy is a vital skill for Nigerian students, but its development is hindered by several challenges, including limited access to academic databases, inconsistent internet connectivity, and insufficient integration of IL into university curricula. Therefore, when Nigerian students move to a new education system that has expectations of information literacy skills that involve accessing and critically evaluating information, they may experience multiple challenges in navigating the complexities of their information landscape.

2.6 The Socio-cultural Perspective of Information Literacy

This study is firmly grounded in the socio-cultural perspective of information literacy and further builds upon it. Considering the varied socio-cultural backgrounds of Nigerian students studying in Scotland, it is logical to infer that these students will engage with the information literacy environment in different ways. Given that the socio-cultural perspective recognises the distinctive learning environments of students, it can provide them with assistance in transitioning into and navigating the unfamiliar information literacy landscapes they encounter. Nigerian students' transition is not only an academic but also a socio-cultural shift, as they move from a familiar educational system in Nigeria, where they can view themselves as confident and competent learners, to a distinctively different environment in Scotland, in which they may no longer see themselves in the same light.

For example, in Nigeria, students may have developed a sense of academic self-efficacy based on familiar pedagogical practices, cultural expectations, and specific information literacy skills suited to their local context. They likely feel confident and competent within their home educational setting because they have internalised the norms and practices that define success in that environment. However, when these students transition to the Scottish higher education system, they encounter a new set of academic and cultural expectations that challenge their established identities as competent learners (Briggs Clark and Hall 2012). This new setting may superficially resemble their previous educational experiences, such as using English as the main language of instruction or engaging in research-based tasks, but the

differences in the underlying pedagogical approaches they encounter in that new environment, the critical thinking expectations and the independent learning requirements create a dissonance between their previous and current academic identities (Goode, Radovic-Fanta, and Cipra 2021). This dissonance is crucial because it can lead to a loss of confidence and a re-evaluation of their academic self-efficacy (Bandura 1997). The psychological impact of this transition is significant; students may experience a sense of inadequacy or failure as they struggle to adapt to new academic norms and expectations.

In this context, this study, therefore, not only examines the shift in information literacy practices, but also explores how these shifts are intertwined with the broader psychological adjustment process that international students undergo (Smith and Khawaja 2011). This focus on psychological adjustment is vital because it highlights how students' lack of information skills affects their overall adaptation to a new educational and cultural environment (Brown and Holloway 2008).

Highlighting the concept of psychological adjustment enables a comprehensive evaluation of the transition that international students undergo (Andrade 2006). The challenges faced are not just academic but also encompass social and emotional dimensions, which can significantly impact students' ability to succeed in their new environment. For instance, the stress of adjusting to a different academic culture can exacerbate feelings of anxiety, further hindering students' ability to effectively engage with the academic tasks expected of them (Misra et al 2004). This holistic view of transition considers the full range of factors influencing students' adaptation, recognising that success in a new academic setting depends on more than just academic skills; it also requires psychological resilience, cultural understanding, and the ability to navigate new social contexts (Ward, Bochner, and Furnham 2001).

By framing the study through this lens, we can better understand how Nigerian students' transitions are not merely about acquiring new information literacy skills but about transforming their academic identities to align with the expectations of a different educational culture (Ecochard and Fotheringham 2017). This approach highlights the importance of supporting international students in both their academic

and psychological adjustment processes, ensuring they have the tools to rebuild their confidence and competence in a new academic environment (Zhao 2021).

The socio-cultural perspective to information literacy, according to Hicks (2017), means a "perspective that centres upon communities and how information literacy "shows itself in the different collective practices and activities of each group rather than trying to fit a group's information actions and understanding to a previously established model of information literacy," or simply put, "the use of a socio-cultural lens emphasises that people use information for different purposes in their lives, or that information literacy looks distinctive for different people, at different times, and within different contexts" (Lundh and Lindberg 2012 pp.155-164). This theory draws its roots from learning theories and investigations within the realm of information literacy, workplace studies, and various other fields. These concepts have established information, competence, and literacy as contextual and collective, suggesting that they emerge from and are shaped by a community's situated experiences (Harris 2008).

As Street (1987 pp.55-72) asserts, "a socio-cultural model explores the social nature and implications of information literacy rather than assuming that its positive consequences are given, and all that remains to be addressed is how it is to be imparted." Considering the aforementioned points, adopting a socio-cultural perspective carries significant implications for both our conceptualisation and instructional approaches to information literacy. Papen (2005) underscores that employing literacy metaphors and embracing a particular theory reflect a distinct perspective on literacy, which shapes our perceptions of learners, their learning objectives, and the methods to achieve them.

Dwelling on these concepts, socio-cultural factors have led to new attempts to define information literacy in less rigid terms, including as a "way of knowing" (Lloyd 2010), as a form of communication "in relation to the information used in the research practice" (Pilerot 2016), and as an interaction between "people, artefacts, and policies" (Sundin & Carlsson 2016 p.994). These notions will help us to recognise the

fact that the nature of information work can vary significantly when studied through ethnographic exploration rather than evaluated against predefined models.

The change from the information literacy competency standards for higher education standards to the ACRL Framework does, in fact, constitute the adoption of a socio-cultural perspective on information literacy for some practitioners and scholars (Association of College and Research Librarians N.d.). Foasberg (2015) illustrated this concept by explaining that transitioning from a list of specific competencies to a more conceptual approach signifies the framework's adoption of a socio-cultural perspective. In this approach, scholarship is viewed as a conversation, authority is constructed, and contextual frames underscore the disciplinary, societal, and community-orientated nature of information literacy.

The threshold concept theory is a framework of characteristics for learning portals within a subject area or discipline. The theory defines a learning portal as representing "a transformed way of understanding, interpreting, or viewing something that opens up previously inaccessible ways of thinking" (Meyer and Land 2003, p.1). Moreover, because these "new ways of thinking cannot be accessed until the student has moved through the portal, a threshold concept is an obstacle for the learner who is unable to pass through it" (Tucker et al 2014 p.152). The learner's mastery of a threshold concept "involves learning to see some aspect of the world in a totally new, transformative, and often counterintuitive manner." Following such transformed understanding, continued and profound learning associated with the concept becomes possible." (Tucker et al 2014 p.150).

Furthermore, while frameworks have laudable intentions, it is equally important to acknowledge that using threshold concept theory to codify the so-called "foundational" and "essential" tenets of information literacy may contradict the framework's newfound emphasis on subjectivity and community-based knowledge (Association of College and Research Libraries 2016). In essence, by aligning information literacy with an educational theory explicitly designed to identify the fundamental and bounded concepts within a field of study (Meyer and Land 2003) or

the distinct "way of thinking and practising" within a research domain (Townsend, Brunetti, and Hofer 2011), this places all disciplinary philosophies under the same umbrella of overarching information literacy concepts. This stands in contrast to a socio-cultural perspective, which recognises the uniqueness and individuality of each discipline.

This implies that information literacy is often perceived as a skill that lacks specific context and is viewed in a generic manner, rather than being recognised as a practice rooted in specific disciplines or socio-cultural contexts that arise from and relate to diverse experiences and values within a community. Thresholds should always serve as an entry point to a particular context, and dispositions are only meaningful within the practices they are a part of (Kemmis et al 2014). In essence, this means that threshold concept theory does not contribute to the development of disciplinary information literacy or the production of course and subject-based educational strategies. Instead, it defines information literacy as a distinct discipline, one that creates a comprehensive model of what constitutes an information-literate individual (Webber and Johnston 2017). This stance contradicts the socio-cultural viewpoint that information literacy is influenced and comprehended within its particular context.

The socio-cultural viewpoint on information literacy has enriched the field by challenging conventional notions of information literacy, especially beyond its traditional academic context. In particular, if we regard information literacy as a social practice that arises from the information interactions within a community, a socio-cultural perspective prompts us to scrutinise and delve into the concealed values and assumptions that arise when we define information literacy in a standardised or uniform manner (Hicks 2018).

Once more, recognising that many academic institutions impose particular forms of information literacy on students, adopting a socio-cultural perspective can broaden students' understanding of what constitutes information literacy practices. This approach can also address the rise of non-traditional learning opportunities within

higher education, as well as marginalised groups of learners. For instance, unlike other research on information literacy, the majority of socio-cultural studies have focused on topics that are not conventionally associated with academia, such as the workplace, health, and refugees (Lloyd 2017).

The socio-cultural perspective directs our focus towards the concealed or unexpected aspects of practice, highlighting concepts that may have been overlooked in traditional models of academic information literacy, yet these concepts have the potential to significantly enrich teaching and learning activities (Hicks 2018).

Finally, a socio-cultural perspective broadens professional discourse within the field, as evidenced by the differences in opinions between proponents of the framework and defenders of the standard, as discussed earlier (Hicks 2018).

2. 7 Lloyd's Model of Information Literacy and a Critique of the currently accepted IL Models

Lloyd (2017) has previously discussed information literacy, influenced by socio-cultural theory, drawing on empirical research on information literacy from that perspective with a wide range of groups in everyday settings and diverse contexts (Lloyd 2012, 2014, 2017; Lloyd et al 2016). More recently, a practice perspective was also added, which emphasises elements such as specific situations, interconnectedness, negotiation, embodiment, and collective involvement, all of which contribute to the distinctiveness of the practice within a particular setting (Lloyd 2017). While Lloyd's work offers a comprehensive socio-cultural approach, it is essential to critically evaluate how this model compares to other widely accepted IL models, such as the ACRL framework or the Big6 model, and consider the limitations and applicability of Lloyd's approach in diverse educational settings. This perspective conveys IL as connected not only to text-based information but also perceives it as a practice that is present in a physical and social sense. It not only links us to epistemic or instrumental modes of understanding but also to contextual, nuanced, contingent, and embodied forms (Lloyd 2010).

The ACRL Framework for Information Literacy emphasises the role of "frames" such as authority, inquiry, and scholarly conversation, aiming to foster critical thinking and higher-order cognitive skills in students (Association of College and Research Libraries 2016). However, this framework has been critiqued for being too abstract and not easily applicable in varied socio-cultural contexts (Foasberg 2015). In contrast, Lloyd's socio-cultural theory is highly contextualised, focusing on the embodied and socially situated practices of information literacy, making it potentially more applicable in diverse settings (Lloyd 2017). Nevertheless, the ACRL Framework's conceptual approach allows for a broader interpretation that could accommodate various disciplinary contexts, whereas Lloyd's model might struggle to generalise across different educational environments (Lloyd 2016).

Similarly, the Big6 Model, developed by Eisenberg and Berkowitz (1990), offers a practical, step-by-step approach to information literacy, breaking it down into six manageable steps: Task Definition, Information Seeking Strategies, Location and Access, Use of Information, Synthesis, and Evaluation (Eisenberg and Berkowitz 1990). While effective in providing clear guidance, the Big6 model has been critiqued for promoting a "tick the box" approach to information literacy, where complex, interconnected skills are reduced to overly simplistic, isolated tasks. This mechanistic method can lead to a superficial understanding, as it emphasises completing steps rather than fostering deep, critical engagement with the material. Critics argue that this reductionist approach fails to capture the nuanced and iterative nature of real-world research and problem-solving (Johnston and Webber 2003). In comparison, Lloyd's socio-cultural perspective embraces the non-linear, recursive nature of information literacy practices, better reflecting the dynamic and interconnected ways in which individuals engage with information in real-life settings (Lloyd 2010, 2017). However, Lloyd's model may require more nuanced and context-specific implementations, which can be challenging to standards across different educational systems.

A key area where Lloyd's socio-cultural model could be improved is in its integration with digital literacy, particularly in the context of today's rapidly evolving information

landscapes. While Lloyd's model effectively addresses the social and embodied dimensions of information literacy, it could be expanded to include more explicit strategies for fostering critical digital literacy skills, which are essential for navigating the complexities of the modern information landscape, and that high digital literacy can improve self-efficacy (Tang and Chaw 2016).

Empirical research has shown that the socio-cultural perspective is particularly effective in understanding how marginalised groups, such as refugees or non-traditional students, engage with information in ways that differ significantly from mainstream academic practices (Lloyd 2017; Lloyd 2010). Lloyd's studies with refugees demonstrate that information literacy practices are deeply embedded in social and cultural contexts (Lloyd 2017). This challenges the one-size-fits-all approach of traditional models like the ACRL Framework or the Big6, which might not address the socio-cultural needs of diverse learners. Lloyd's socio-cultural approach is particularly relevant for understanding the transition of Nigerian students to the Scottish academic environment, as it highlights the need to consider the specific socio-cultural backgrounds of these students.

However, the highly contextual nature of Lloyd's work could make it difficult to implement in environments where a more standardised information literacy approach may be required, as it does not offer a sequence of steps, model or framework that could be followed for curriculum development. Moreover, the focus on the socio-cultural dimensions of information literacy might downplay the importance of individual cognitive skills, which are also crucial for academic success (Shi and Qu 2022).

Further, while the socio-cultural and practice-based perspectives offer valuable insights, they may not fully account for the challenges faced by students who transition between different educational systems. Nigerian students in Scotland, for example, may find that the practices they were accustomed to in their home country do not translate easily to their new academic environment. This disjunction can lead to difficulties in developing the types of information literacy that are valued in

Scottish higher education, potentially impacting their academic self-efficacy and overall success.

A number of inferences can be drawn from this:

- Information literacy practice is influenced by the social context.
- The enactment of information literacy arises from the social, physical, and epistemic/instrumental dimensions that define the environment.
- Information literacy is practiced through various forms of literacy that are contextualised.
- The development of information literacy involves a process of transition and iteration as individuals navigate between novice, expert, and novice positions (Lloyd 2017).

This position is based on the belief that the fundamental goal of information literacy (IL) is to cultivate an understanding of the various sources of information within an information landscape, along with the activities, competencies, and skills inherent to it. It also aims to derive meaning from these sources through active engagement and experiential learning with information (Lloyd 2017). The practice of information literacy (IL) is characterised by its personal, embodied, material, meaningful, and iterative nature. This highlights three key components crucial to an information practice: context, methods, and implementation. These components can be expanded upon to incorporate the distinct characteristics of individual settings from which IL practices emerge.

Nonetheless, the socio-cultural approach could benefit from integrating a more explicit focus on the cognitive dimensions of information literacy, which are crucial for students adapting to new academic environments (Click 20016). While socio-cultural factors undoubtedly shape information literacy practices, the ability to

critically evaluate and apply information across different contexts is also vital for academic success, particularly in disciplines that require strong analytical and research skills (Tahira and Haider2019).

Information literacy is influenced by the different dimensions of information, such as the social, physical, and epistemic/instrumental aspects. These dimensions represent the various ways of understanding collective knowledge that, in turn, shape the broader information environment as a social context (Lloyd 2006). Extracting significance from these dimensions empowers individuals to adopt information literacies and shape their information landscapes, thereby impacting the social context (Lloyd 2005). These dimensions are interconnected, and the practice of information literacy depends on the consensus regarding shared meanings within a project or collective endeavour, as well as the types of activities and actions involved. This underlines the significance of implementing information literacy in a manner that is meaningful within a specific context. Essentially, this underscores the idea that individuals have multiple information landscapes in their lives.

However, one critique of the socio-cultural approach is that it may not sufficiently address the need for a common framework that can be applied across diverse educational settings. The focus on context-specific practices could lead to challenges in creating a cohesive approach to information literacy that can be universally applied, particularly in standardised educational systems (Johnston and Webber 2003). Additionally, the emphasis on the social and physical dimensions of information literacy may overlook the importance of digital literacy, which is increasingly critical in today's technology-driven academic and professional environments (Gilster 1997).

Researchers with sociological or dialogical interests can engage with this conceptualisation of information literacy, with a specific focus on comprehending how the social structures within a particular context influence the composition and depictions of that context. The enquiries a researcher might explore therefore revolve around the processes through which information literacy emerges, as well as the

relationships that elucidate the dynamics of the context concerning the development of practices (Lloyd 2017).

In contrast, practitioners may approach the information literacy landscape by concentrating on the practical aspects of information literacies at an empirical level. They describe the constituent elements of the practice, which include activities and skills that signify the applications of the norms and actions within a specific context. This perspective places a strong emphasis on information literacies and activities, as well as the epistemic dimensions of information that reflect the normative conditions of IL instruction.

In addition, Lloyd aligns with the belief that the primary purpose of information literacy is to develop a means of understanding the sources of information within an information landscape and extracting meaning from these sources through active engagement and experiential learning (Lloyd 2017). This direction was particularly suitable for this study as it encompasses personal, individualised, materialistic, significant, and recursive elements.

For Nigerian students transitioning to academic life in Scotland, the multifaceted concept of information literacy as articulated by Lloyd (2017) is particularly relevant. These students face unique challenges such as Information literacy challenges, socio-cultural adaptation challenges, everyday life challenges, and language and communication challenges. The results from this study demonstrated that these factors significantly impact their academic self-efficacy.

Firstly, the personal elements of information literacy highlight the importance of recognising each student's unique background. Nigerian students bring diverse experiences and perspectives that influence how they perceive and engage with information. Understanding this personal context is crucial for educators in Scotland, who should acknowledge and incorporate these diverse backgrounds into their teaching methods. This approach helps Nigerian students feel valued and understood, thereby boosting their confidence and engagement with academic content.

The individualised aspect of information literacy becomes particularly important in this context. Nigerian students may not be familiar with the academic standards and expectations in Scotland, which can be vastly different from those in Nigeria. Providing tailored support that addresses these specific needs can help bridge this gap. For instance, individualised tutoring or mentoring sessions that focus on the distinct academic requirements and research methodologies in Scotland can equip these students with the necessary skills and knowledge to succeed.

The materialistic elements refer to the tangible resources and tools required for information literacy. Nigerian students might not be accustomed to the digital and physical resources available in Scottish universities. They need orientation and ongoing support to navigate these resources effectively. This includes training on using academic databases, understanding the library system, and accessing online journals and other digital tools. Familiarity with these material resources can significantly enhance their ability to perform research and complete assignments, thereby improving their academic performance.

Significant elements of information literacy stress the need for information to be meaningful and relevant. For Nigerian students, the relevance of information can be enhanced by linking it to their previous knowledge and experiences. Educators can draw connections between the curriculum and the students' backgrounds, making the learning process more relatable and impactful. This approach not only aids comprehension but also helps students see the value and application of their studies in real-world contexts, thereby enhancing their motivation and academic self-efficacy.

The recursive nature of information literacy underscores the importance of continuous learning and adaptation. Nigerian students in Scotland are in a constant state of adjustment, facing new challenges and learning opportunities daily. Encouraging a recursive approach to learning, where they continuously seek, evaluate, and integrate new information, can help them adapt more effectively to their new academic environment. This iterative process supports ongoing

improvement and helps students build resilience in the face of academic and socio-cultural challenges.

In summary, Lloyd's (2017) comprehensive perspective on information literacy acknowledges the varied entry points of researchers and practitioners into the field, resulting in disparities and varying areas of focus. However, Lloyd emphasises that without a collective shift towards integrating these diverse perspectives into a more holistic understanding, IL research may remain ensnared in discord and divergence, inhibiting its growth (Lloyd 2017). While Lloyd's socio-cultural approach provides a robust framework for understanding the unique challenges faced by Nigerian students transitioning to academic life in Scotland, there is room to enhance this model by incorporating elements from other IL frameworks that emphasise digital literacy and critical thinking skills (Hicks 2018; Vezzosi 20220). This comprehensive approach, which encompasses personal, individualised, materialistic, significant, and recursive elements, provides a robust framework for supporting Nigerian students in Scotland. By offering tailored and meaningful information literacy programs that address the unique challenges encountered by Nigerian students, educators in higher education institutions in Scotland can significantly enhance the academic self-efficacy of Nigerian students. Also, by fostering an inclusive and supportive learning environment, educators can help Nigerian students navigate the complexities of their new academic landscape and achieve their full potential. This demonstrates the practical applicability and value of a holistic approach to information literacy.

This chapter has offered a critical consideration of key information literacy models, frameworks, and perspectives', offering a detailed explanation and an evaluation of the benefits and limitations present and their relevance to this study. The following chapter will provide an explanation of the methodology adopted in this study.

2.8 Self-efficacy and academic self-efficacy

One of the central concepts of this study is academic self-efficacy. Academic self-efficacy is rooted in self-efficacy theory (Bandura 1997) and refers to individuals' opinions of their capabilities to systematise and carry out courses of action needed

to accomplish a desired performance (Bandura 1997). Self-efficacy is concerned with a person's belief that they have the capability to accomplish a given task successfully. Self-efficacy is a critical psychological construct that influences various aspects of human behaviour and performance, particularly in academic settings. As defined by Pajares and Schunk (2002), academic self-efficacy refers to "an individual's confidence in their ability to successfully achieve academic tasks at a designated level" (p. 17). This concept is inherently multidimensional, encompassing various facets of confidence related to specific tasks, domains, and overall general capabilities.

Academic self-efficacy, therefore, relates to the faith or confidence a student has in their capacity to accomplish an academic task or target successfully (Bandura 1997). For example, drawing concepts from Bandura's definition, Elias and MacDonald (2007) describe academic self-efficacy as students' assessment of their capabilities to effectively obtain their academic goals. Similarly, Hemant and Gunjan (2014) define academic self-efficacy as students' perceptions of their competency to accomplish their classwork.

Academic self-efficacy is perceived to be a very important moderator of behaviour and also a factor that can change behaviour (Cheng et al 2015). Academic self-efficacy beliefs are pertinent for achieving academic outcomes because self-efficacy results in certain behaviours and motivations that can stimulate or discourage effective performance. Self-efficacy, in general, can impact the course of action pursued by an individual, the degree of effort they make, their resilience, as well as their determination in situations that impinge upon their ability to perform the tasks (Bandura 1977). Self-efficacy can also have an impact on the ways people think and feel. Bandura (1977) notes that students with academic self-efficacy have five approaches to academic challenges:

- i. They view academic difficulties as challenges that need to be surmounted instead of threats and set goals to meet these challenges.
- ii. They are devoted to the academic goals they set.

- iii. They have a task-diagnostic orientation, which gives important feedback to improve academic achievement, rather than a self-diagnostic orientation, which reinforces the student's low expectations about what he or she can achieve.
- iv. They view failures as a result of inadequate effort or lack of knowledge, not as a deficiency of aptitude.
- v. They increase their efforts in case of failure to attain their academic goals.

2.9 Measuring academic self-efficacy

Self-efficacy has been measured through various constructs, focusing on different aspects of confidence and ability to perform particular tasks. Research has shown that self-efficacy can be measured in numerous ways, reflecting its complex and multifaceted nature. Bandura (1997) categorises self-efficacy into different levels, such as low, medium, and high, to examine how these varying levels influence behaviour and performance. This hierarchical approach helps to understand the gradations of confidence and their impact on academic and other outcomes. For example, Galyon et al (2012) examined the relationship of academic self-efficacy to engagement in class discussion and performance on major course exams among 165 students in an undergraduate human development course. The study used an independently validated survey that consisted of seven-point Likert scale items (1 = strongly disagree, 5 = strongly agree) that addressed agreement with particular statements that assessed students' abilities in relation to course-specific tasks. The scale was an adaptation of a measure of academic self-efficacy originally developed by Wood and Locke (1987) and later modified by Choi (2005). Although the academic self-efficacy items used were related most strongly to exam taking, there were also constructs connected to participation in class discussions. For example, an item included "I can explain the facts, concepts, and arguments covered in this course to others in my own words."

Gafoor and Ashraf (2006) developed an academic self-efficacy scale that also measured self-efficacy based on the degree of agreement with statements related to

academic tasks and focused on several constructs such as competence, ability, and problem-solving skills. The participants indicated their level of agreement with statements such as "Irrespective of the subject, I am competent in learning" and "I can usually find out quite a few solutions when I confront problems in my study, employing a Likert scale ranging from "exactly true" to "exactly false."

Another approach to measuring self-efficacy involves assessing the degree of confidence that students have with various academic tasks. For example, Hitches, Woodcock, and Ehrich (2022) measured the academic self-efficacy among 305 teacher education students in Australia. This instrument has been widely used in various higher education studies, highlighting its relevance and adaptability for the purposes of different academic research. The academic self-efficacy scale assesses students' confidence in successfully completing 27 specific tasks related to academic performance both inside and outside the classroom. Examples of these tasks include 'asking questions in class,' 'participating in class discussions,' 'doing well in my toughest class,' and 'preparing for exams'. Students rate their confidence in performing these tasks on an 11-point Likert-type scale, ranging from 'not at all confident' (0) to 'extremely confident' (10).

Similarly, a study by Sachitra and Bandara (2017) measured the levels of academic self-efficacy among undergraduate students enrolled in a Bachelor of Commerce degree program at the University of Sri Jayewardenepura on the basis of students' confidence in performing academic tasks. The study was conducted by means of a survey, which contained 20 items that were presented in the form of statements, such as "I respond to questions asked in lectures," "I ask for help from my lecturers," and "I make sense of feedback on my assignments". Students rated their confidence in performing these tasks on a 5-point Likert-type scale, ranging from strongly disagree to strongly agree.

In addition, Byrne, Flood, and Griffin (2014) assessed the academic self-efficacy levels of first year accounting students, examining the extent to which their self-efficacy levels correlated with academic performance. The study used a questionnaire survey of students, which incorporated 26 tasks and activities based on confidence

levels. For example, students were asked if they felt confident in their ability that they could: "Explain material to a friend," "Study effectively on my own," "Follow and comprehend lecture material", "Seek help from classmates" and "Meet assignment deadlines". Students rated their confidence in performing each task based on a seven-point Likert scale, ranging from 1 (not confident at all) to 7 (completely confident). The analysis revealed that many students lacked confidence in fully engaging with the academic requirements of their accounting modules. Specifically, they were hesitant to seek assistance, lacked confidence in effective studying, and struggled with independent reading and note-taking.

A different approach to measuring self-efficacy was introduced by Putwain, Sander, and Larkin (2012), who investigated the academic self-efficacy of 206 first-year undergraduate students at Cardiff Metropolitan University in the United Kingdom. Their study aimed to examine whether academic self-efficacy, operationalised as confidence in study-related skills and behaviours, serves as a predictor of academic achievement. It used the Academic Behavioural Confidence (ABC) scale, developed by Sander and Sanders (2009), which assesses confidence in the study skills and behaviours required for undergraduate study. The difference of that study was that students were not assessed based on ability or confidence but on the academic challenges they encountered. Using a five-point scale (1 = 'not at all challenging', 5 = 'extremely challenging'), students were asked to respond to statements such as 'How challenging do you find managing your workload to meet coursework deadlines' and 'How challenging do you find writing in an appropriate academic style'. This measurement method is more suited for investigating the difficulties faced by students adapting to a new educational system and unfamiliar academic expectations. Employing a scale based on ability or confidence implies expectations of skills that international students may not yet possess.

In conclusion, the multidimensional nature of self-efficacy requires diverse measurement approaches to capture its various aspects. Studies have utilised a range of constructs and scales, ranging from task-specific confidence to degree of agreement with their ability to perform specific academic tasks. These diverse

definitions and methodologies informed the understanding of self-efficacy in this study.

Considering the above, it can be explained that students with a strong sense of academic self-efficacy or high academic self-efficacy are able to manage and plan their time in a more effective manner. More so, they can better monitor their efforts and have the ability to use their knowledge and skills in a more efficient manner (Fenollar, Román, and Cuestas 2007). They also tend to recover their confidence faster after obstacles or disappointments (Pajares and Schunk 2002). Other studies (e.g., Cheng, Barnes, Edwards, and Valyrakis 2015) have also shown that students' high level of academic self-efficacy has a significant impact on their ability to cope with academic challenges.

In contrast, students who have low academic self-efficacy will likely overestimate tasks beyond what they actually are. They perceive that their failure is a result of an innate or permanent low ability in them (Pajares and Schunk 2002). Low academic self-efficacy constitutes obstacles to academic achievement for students, as "in the long run, they can create self-fulfilling prophecies of failure and learned helplessness that can have a negative impact on one's psychological well-being" (Cheng et al 2015 p. 2).

In other words, academic self-efficacy can impact the course of action pursued by a student, the degree of effort the student makes, their resilience, as well as the student's determination in academic environments that impinge upon their ability to perform academic tasks (Bandura 1977). If a student has strong academic self-efficacy, they will make a greater effort, and the level of perseverance and flexibility expended for academic activities will be greater (Bandura 1986). Academic self-efficacy can also have an impact on the ways students think and feel. Thus, students who have low academic self-efficacy will likely overestimate academic tasks beyond what they really are. Such thoughts can lead to feelings of failure, depression, tension, and helplessness. In contrast, a high level of academic self-efficacy makes the student not panic but have peace of mind in the face of difficult academic challenges (van Dinther, Dochy and Segers 2010).

2.10 Everyday Life Socio-cultural Adaptation

Socio-cultural or intercultural adaptation forms another important direction in this research. Culture is the psychological training of an individual that makes one individual different from another (Hofstede 1984). Culture is "the unique characteristic of a social group; the values and norms shared by its members that set it apart from other social groups and are influenced by conscious beliefs" (Lebron 2013 p.2). Culture is a critical element that influences an individual to comprehend the operations of a social system due to its influence on both the norms and values of such a system as well as the actions of groups in the way they communicate with one another within the system.

Socio-cultural adaptation may be described as encompassing the various possible ways in which an individual responds to a new culture, which may be in the form of totally receiving the social values of the new environment or refusing them (Lian and Tsang 2010). It is the process by which an individual who comes in contact with a new culture learns, incorporates, and adopts the values, beliefs, language, customs, and mannerisms of the new country. Chen et al (2021) define socio-cultural adaptation as the capacity of an individual to navigate daily life within the context of the host culture, indicating the level of comfort in managing everyday affairs. Consequently, socio-cultural adaptation assumes a central role in cross-cultural adaptation, as difficulties in this aspect result in psychological withdrawal, sub optimal performance, and early return (Chen, Xiaojun, and Zongfu 2019).

Berry (2005) describes socio-cultural adaptation as "the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members" (p. 698). It is the way in which an individual changes their way of life so that it will be in line with the behaviours of people in the new environment. Socio-cultural adaptation, most times, brings about emotional pain, feelings of desperation, incongruity, lowliness, seclusion, and obvious aloofness (Podrug, Krišto, and Kovač 2014). Moreover, anxiety from intercultural adaptation challenges frequently remains for a protracted period. Being exposed to a new cultural environment can also bring about culture shock, which is

described as the tension and clash that happens in case an individual is found in a cultural environment that is different from theirs (Wilson 2011). This happens particularly when the individual has to be wholly involved in the new culture and adapt, as in the case of international students. Culture shock, most times, brings about feelings of bewilderment and nervousness as a result of changes in the way of life and rules in the society that the individual has to learn and adapt to.

It is, therefore, important to change one's personal values, beliefs, and behaviour to fit properly into the new environment, which is the main thrust of acculturation. According to Gul Raihan and Sandaran (2017), acculturation has two features, psychological adaptation and socio-cultural adaptation. Socio-cultural adaptation is viewed as relating to behavioural capabilities. It is the capability to feature successfully in a new cultural environment (Ward and Kennedy 1999). Different researchers (for example de Araujo, 2011, Furnham and Bochner 1982, Pedersen 2010 and Wilson 2011) have recognised gender, time spent in the host country, language proficiency, environmental adjustments, academic adaptation, and interpersonal adaptation as some key elements that affect the socio-cultural adaptation of international students.

2.11 Language and Communication

Language is an important aspect of culture. When an individual interacts with a language other than their own, at the same time, they have an interaction with the culture in which the language is spoken. Therefore, it is impossible for an individual to understand a particular culture if they do not understand the language of that culture. When people learn a new language, it is not only the alphabet, word arrangement, and rules of grammar that they learn but also the society's specific customs and behaviours (Sherry, Thomas, and Chui 2010).

Both language ability and communication competence are very important aspects of socio-cultural adaptation, which are necessary for successful social interaction. Studies in the area of acculturation have illustrated that communication ability in the language of the host country positively correlates with adjustment (Yang, Noels, and

Saumure 2006). The ability to communicate effectively reduces socio-cultural adaptation difficulties because it makes relations easier and also facilitates the learning of the culture (Masgoret and Ward 2006).

The most common problem faced by international students is concerned with knowledge and application of the language of the host country (Arkoudis and Tran 2010). These challenges impact international students' abilities to obtain relevant information for daily and campus life as well as communicate effectively with local students. Liao, Finn, and Lu (2007) have also observed that communication challenges may cause timidity in international students in terms of classroom participation and association with students of the host country.

Lack of language proficiency could pose serious challenges to Nigerian students. Hence, it is important for Nigerians in Scottish universities to have adequate proficiency in English because it is the only means of communication within and outside the academic environment. Without proficiency in the English language, many Nigerian students may face difficulties in terms of communication, particularly in their first year of admission into university courses. It is important for Nigerian students to demonstrate a good level of English language proficiency to study in the UK and other countries like the US, Canada, and Australia, particularly as language proficiency is recognised as a predictor of international students' academic performance (Zua 2016).

As international students, Nigerians in Scottish higher education are carrying out activities in an academic and social environment, and nearly all of the activities may seem new to them, which may require them to frequently seek new information. It can be tough for students to gain information with regard to legal services, monetary transactions, private housing offerings, cultural and logistics services, and also information about campus and university life (Singh, Kumar, and Khanchandani 2015) in a different language. Nigerian students will fulfil their information desires by interacting with new social structures to gain applicable information (Wilson 2000), which plays a critical position in their adaptability to the new institutional and everyday life environment.

2.12 Information Literacy

The concept of information literacy (IL) refers to “purposeful information practices in a society characterised by almost limitless access to information and where information practices in digital environments shape and constitute important elements in most people's lives in our part of the world” (Limberg, Sundin, and Talja 2012 p.1). Information literacy comprises those capabilities that enable an individual to recognise the type of information that is required, comprehend the way the information is structured, recognise the most appropriate sources of information for a particular problem, access these sources, appraise the sources decisively, and distribute that information (Okon, Etuk, and Akpan 2014). In the same vein, information literacy is defined "as a set of abilities requiring individuals to recognise when information is needed and have the ability to locate, evaluate, and effectively use the needed information" (American Library Association 2018).

Information is necessary in order to achieve optimal academic performance and information literacy. The capabilities that enable students to search for, find, collect, analyse, interpret and evaluate information that is relevant to their subject area (Kahan 2020) are important for all students because they enable them to identify quality academic information and enhance their knowledge around their subject area (Reddy 2021), to clarify confusion, and develop a better understanding of their discipline.

2.13 Information Literacy of Nigerian Students

The concept of information literacy refers to “purposeful information practices in a society characterised by almost limitless access to information and where information practices in digital environments shape and constitute important elements in most people's lives in our part of the world” (Limberg, Sundin, and Talja 2012 p.1). Information literacy consists of capabilities that enable an individual to recognise which information is required, comprehend how the information is structured, recognise the most appropriate sources of information for a particular problem, trace

these sources, assess the sources decisively, and distribute that information (Okon, Etuk, and Akpan 2014).

Ugwunna and Onyekweodiri (2017) define information literacy as an intricate strategic process consisting of means of searching, evaluating, using, and exchanging information. According to Okon et al (2014), information-literate students are ready and inexperienced persons who recognise their information requirements and actively interact with information sources to obtain what they want. They show self-assurance of their capacity to resolve difficulties, recognise what applicable information is, and manipulate technology equipment to gain entry to facts and to communicate well. They function simply in conditions where there is more than one solution in addition to people with no solutions. They maintain high standards for their activities and create high satisfactory outputs. Information-literate students are flexible, can adapt to variations, and are capable of functioning separately as well as with groups.

Information literacy enhances students' learning and information-seeking abilities by enabling them to search, find, locate, evaluate, use, communicate, and exchange information to achieve set objectives (Ugwunna and Onyekweodiri 2017). A skilled student will fare better with the use of different libraries and information systems to seek and use information to meet current and future needs than a student who does not possess the requisite information literacy skills. Students should be able to recognise a need for information and develop appropriate strategies, methods, or processes to get the required piece of information (Ugwunna and Onyekweodiri 2017). They need to be able to find the information required for a given task.

Although there are different ways in which Nigerian students search for information to meet their academic needs, library resources constitute the major source of information for them. However, these are not always up-to-date. Bappah (2016), for example, observed that academic libraries in Nigeria are in a poor state with limited state funding or with funding that may be misappropriated by university administrators.

Furthermore, it is important to note that within the context of the Nigerian educational system, the reading materials made available or recommended to students by lecturers are normally considered sufficient to meet their academic needs, since based on that given material, students fulfil the requirements that enable them to move from one level to another. This means that it may be difficult for students to develop independent information literacy skills.

However, challenges will arise as Nigerian students move outside the national boundaries and meet more rigorous and independent learning methods. Obviously, if students do not have sufficient information literacy skills, it would be very difficult for them to succeed academically and compete favourably with home students. However, it may be more possible for Nigerian students who have higher academic self-efficacy than others, to adapt more speedily to new and dissimilar academic environments and perform creditably in their academic lives, which may also later lead to successful professional careers. Academic success is not only defined as the accomplishment of knowledge verified by high evaluation marks but also encompasses graduates' capabilities to acquire professional roles relevant to their degrees. Academic success is therefore a multidimensional construct, which includes "engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills, and competencies, persistence, attainment of educational outcomes, and post-college performance" (Cachia, Lynam, and Stock 2018 p. 435).

Information literacy is necessary in order to achieve optimal academic performance and overall academic success. The capabilities that enable students to search for, find, collect, analyse, interpret, and evaluate information that is relevant to their subject area (Kahan 2020) are important for all students because they enable them to identify good-quality academic information and enhance their knowledge around their subject area (Reddy 2021), clarify confusion and develop a better understanding of their discipline.

Previous research has found that the lack of effective information literacy skills can hinder students' academic performance (Ilogho and Nkiko 2014). In contrast, students who are equipped with quality information literacy skills achieve better

academically, become more independent lifelong learners, learn more efficiently, and develop creative thinking (Mohd, Raja, Ahmad, and Zulkarnain 2011). A number of studies have found an association between the quality of information literacy skills and academic performance in undergraduate and postgraduate students in the context of different countries (Mohd et al 2011; Mohammad, 2014; Weber, Becker and Hillmert 2019). For example, Weber et al (2019), in their study of undergraduate students in a German university, found that using advanced online information literacy strategies significantly and robustly predicted better grades of students.

However, this may not necessarily be the situation for Nigerian students who have been through a Nigerian secondary school and university education system that follows a teacher-centred learning method, where students latently receive information from the teacher as the focal point (Tabulawa 2006), and where "the teacher merely focuses on dispensing rules, definitions, and procedures for students to memorise without actively engaging the students" (Eze, Ezenwafor, and Molokwu 2015 p. 103). When students have developed experiences of a teacher-centred learning model, which mainly encourages passive learning, it is more difficult to adjust to learning methods that are more self-directed, focusing on acquiring knowledge through developing an ability for inquiry and critical evaluation (Fodter, 1972, as cited in Higher Education Academy 2014).

2.14 Information Poverty

The comprehensive understanding of challenges faced by Nigerian students in Scottish higher education institutions, as discussed in this study, lays the groundwork for an exploration into how scholarly research on information poverty, inequality, and social justice is essential to inform comprehensive strategies aimed at addressing challenges and enhancing educational opportunities for all students, specifically Nigerian students.

Britz (2004) defines information poverty as the situations when individuals and communities do not possess the necessary skills, resources, or means to effectively obtain, assess, and utilise information within a specific context. Britz (2004) further

asserts that information poverty is a critical social justice issue that warrants attention if we aspire to establish a fair information society (Dadlani and Todd, 2015). He emphasises the vital role of information within society, stating that fair distribution and equal access to information are essential for justice. Additionally, he asserts that individuals experiencing information poverty should receive essential resources as a fundamental human right. Ultimately, this approach advocates for fair treatment and underscores the right of all individuals to access essential information.

Expanding upon this discourse, Dadlani and Todd (2005) emphasise the nature of information poverty and its detrimental effects on social justice. They promote freedom of information as a fundamental requirement for participation in a knowledge-based society, suggesting that this freedom is essential for upholding social justice while also underscoring the pivotal role of information professionals in mitigating information poverty and advancing social justice goals.

Furthermore, Dadlani and Todd (2005) underscore the critical need to address inequalities in information accessibility within society. This is particularly pertinent for Nigerian students studying in Scotland, who encounter distinct challenges arising from differences in teaching methodologies and academic expectations. These students may experience manifestations of information poverty through lack of information resources due to the poor state of libraries in Nigeria, unfamiliarity with academic expectations in the host country, and language barriers, highlighting their sense of marginalisation within the academic community.

Based on the aforementioned discussion, it becomes apparent that addressing information poverty is not only a matter of convenience but of fundamental importance for ensuring the equal engagement of all students, particularly those coming from developing countries such as Nigeria. Therefore, policymakers, educational institutions, and administrators of higher education institutions in Scotland should prioritise implementing targeted initiatives aimed at mitigating information poverty and fostering equal access to educational resources for Nigerian students. Such initiatives may include, but are not limited to, providing additional

support services, culturally responsive pedagogy, and tailored academic resources. By implementing these measures, we can strive towards the establishment of an educational environment that is truly fair and just, offering all students, regardless of their educational background or individual challenges, the opportunity to excel in their academic endeavours.

In addition, Yu (2006) highlights the interconnectedness between "information poverty" and related terms, such as "information inequality, "information divide," and similar compounds". These concepts address inequalities in access to and utilisation of information resources across different groups. Expanding on these insights, Haider and Bawden (2007) critically analyse the discourse surrounding information poverty, focusing on its historical, moral, and professional dimensions. They highlight how historical narratives, such as the emergence of public libraries during the industrial revolution, frame information poverty as a longstanding societal issue emphasising the role of libraries in addressing it. The discourse highlighted the moral importance of combating information poverty, equating it with forms of oppression, and positioning libraries as champions of societal progress and equality.

Additionally, the discourse assigns professional responsibility to librarians, framing them as agents of empowerment through education and training. Haider and Bawden's analysis draws on Foucault's concept of pastoral power to analyse libraries' role as agents of salvation within contemporary society. They reveal how notions of salvation and empowerment intersect with institutional power structures, adding a critical perspective to the discourse and prompting reflection on the implications of institutional interventions in addressing information poverty. Overall, their discourse sheds light on the complexities surrounding information poverty and underscores the need for continued reflection and engagement within the library profession.

Mathiesen (2015) explores the concept of informational justice, portraying it as complex and multifaceted and identifying three primary roles individuals may play in relation to information: seekers, sources, and subjects. In this context, having justice entails that individuals seeking information have equitable access to informational

resources. The assertion that individuals should have equitable access to information to be treated justly as seekers underscores the foundational importance of information accessibility in facilitating informed decision-making and participation in societal processes. To ensure that Nigerian students in Scotland are treated justly in terms of informational justice, it is essential to prioritise equitable access to information. This means providing equal opportunities for students to access educational materials, research resources, and academic support services. In addition, it is crucial to recognise and respect the cultural backgrounds and identities of Nigerian students, fostering an inclusive learning environment that values diverse perspectives and encourages critical thinking, even if it challenges traditional authority structures. Despite potential cultural barriers stemming from their previous educational experiences, Nigerian students should receive support in cultivating critical thinking skills. This can be achieved through teaching methods that encourage asking questions, participating in class discussions, and becoming independent learners.

In addition, policymakers and educational administrators should advocate for policies and practices that promote informational justice and equitable access to education for all students, regardless of their cultural background or identity. By addressing these factors, educational institutions in Scotland can work towards ensuring that Nigerian students have the resources and support they need to fully engage in their academic pursuits and contribute meaningfully to society.

Furthermore, from a metatheoretical standpoint, Rioux's (2014) metatheory provides valuable insights that can further enhance our understanding of how social justice principles can be applied to the context of information literacy challenges faced by Nigerian students. This theoretical framework encompasses key assumptions relevant to this study, as discussed below:

- 1. Inherent Worth and Deserving Information Services:** This assumption underscores the ethical principle that all individuals possess inherent worth and deserve access to information services that meet their needs. It aligns

with established document, such as the American Library Association's Code of Ethics. Critically, while this assumption sets a moral importance, challenges may arise in determining the scope and nature of information services deemed necessary to uphold individuals' worth. Additionally, operationalising this assumption in practice requires grappling with resource constraints. Nigerian students often face challenges accessing quality education due to socio-economic disparities, inadequate infrastructure, and limited resources. Addressing their information needs requires acknowledging their inherent value and providing accessible and relevant information services to support their educational endeavours.

2. Perception of Reality and Information in Different Ways: Recognising diverse cultural and life-role contexts in information perception and use is crucial for equitable service provision. However, implementing this assumption may pose challenges in practical application, such as determining appropriate strategies for accommodating diverse perspectives. Nigerian students come from a variety of cultural and economic backgrounds, which influence their attitudes towards education and access to information. Recognising and understanding these differences is crucial for developing educational programmes and information services that meet their unique needs.

3. Information and Knowledge as Societal Resources: This assumption advocates for promoting and maintaining widely available access to information and knowledge as a common good. While this aligns with the traditional role of libraries as repositories of knowledge, critical questions arise regarding how to address disparities in access and ensure the equal distribution of resources, especially in an era of digital information. Education and access to information are essential for the advancement of society. However, many Nigerian students lack adequate educational resources, such as textbooks, libraries, and digital materials. Advocating for accessible

information and knowledge is essential to empower Nigerian students and improve their educational opportunities.

4. Research for Positive Change: This assumption asserts that theory and research within LIS should aim to bring about positive change for service constituents. While this aligns with the field's commitment to societal impact, challenges may arise in defining and measuring "positive change," particularly given the diverse needs and priorities of communities served by LIS professionals. Nigerian students often face challenges within the education system, including limited funding, outdated curricula, and political instability. Utilising social justice metatheory in educational research can help identify these challenges and advocate for policy changes to improve educational outcomes for Nigerian students.

5. Power Dynamics in Information Provision: Acknowledging the inherent power dynamics in information provision highlights the political nature of distributing information. While this assumption calls attention to issues of access and control, its implementation may require navigating complex ethical dilemmas, such as balancing intellectual freedom with the need to address systemic inequalities. The distribution of educational resources in Nigeria is often influenced by power dynamics, leading to marginalised communities receiving fewer opportunities. Recognising and addressing these power imbalances is critical for promoting social justice in education and ensuring equal access to learning opportunities for all Nigerian students.

In conclusion, the discourse on information poverty underscores the importance of equitable access to information resources and the role of information professionals in promoting fairness and inclusivity within the information landscape. Recognising disparities in information access across different groups and advocating for tailored interventions to address these inequalities is crucial. Additionally, the concept of informational justice emphasises equitable access to information as a foundational principle, encompassing individuals' rights as seekers, sources, and subjects of information. Together, these perspectives enrich our understanding of the

multifaceted nature of information poverty and underscore the importance of addressing disparities in information access to foster societal equity and inclusivity. Finally, applying Rioux's social justice metatheory can provide a framework for understanding and addressing the challenges faced by Nigerian students in accessing quality education and information services. By acknowledging the inherent worth of all individuals, recognising diversity in different contexts, promoting access to information and knowledge as societal resources, and pursuing positive change through research and theory, educators and policymakers in higher education institutions in Scotland can play a pivotal role in aiding Nigerian students to navigate the challenges in facilitating access to quality education and information services for Nigerian students.

2.15 Justification of Information Poverty Based on Nigerian Students' Transitions to Scotland Education and Social Systems

The concept of information poverty, as elaborated in the previous section, finds substantial justification when examining the transitions of Nigerian students into Scottish education and social systems. These students undergo significant shifts from their familiar educational and cultural environments to a new and different academic landscape in Scotland. This transition underscores the critical need for understanding and addressing the lack of support they experience, which can often be misinterpreted as a lack of academic ability.

Educational and Cultural Transitions

Nigerian students typically transition from an education system that emphasises rote learning and memorisation to one that values critical thinking, independent research, and interactive learning, as practiced in the UK (Salami, 2020). This stark difference can create a challenging adjustment period where students struggle to meet new academic expectations. The lack of familiarity with the UK's pedagogical approaches can lead to misconceptions about Nigerian students' academic abilities, as their initial struggles with critical thinking, independent research, and diverse assessment methods are often misinterpreted as a lack of capability. This misunderstanding

contributes to information poverty by limiting their access to necessary academic resources and support.

Challenges Arising from Information Poverty

According to Britz (2004), information poverty occurs when individuals lack the necessary skills, resources, or means to effectively obtain, assess, and use information. For Nigerian students, this often manifests in several ways:

Resource Accessibility: Nigerian students may come from educational environments with limited access to quality libraries, digital resources, and research materials. Upon entering UK institutions, the overwhelming availability of resources can be a challenge, highlighting the gap in their previous experiences (Ifijeh et al 2020).

Language and Academic Culture Barriers: Language proficiency and understanding academic English can be significant barriers. Additionally, the participatory and critical nature of UK academic culture can be daunting for students accustomed to more authoritative and hierarchical educational systems (Dadlani and Todd 2005).

Support Systems: The lack of targeted academic support and mentorship can exacerbate feelings of isolation and inadequacy. Without proper guidance and assistance, Nigerian students may find it difficult to navigate the complexities of the new educational system (Haider and Bawden 2007).

The Role of Social Justice in Addressing Information Poverty

Addressing information poverty through the lens of social justice is vital for creating an equitable educational environment. Britz (2004) and Dadlani and Todd (2005) emphasise that equitable access to information is a fundamental human right and crucial for participation in a knowledge-based society. For Nigerian students, this means providing access to the same level of academic resources and support as their peers.

Informational Justice and Equity

Mathiesen's (2015) concept of informational justice stresses the importance of equitable access to informational resources to ensure fair treatment and participation

in academic and societal processes. For Nigerian students, achieving informational justice involves:

Equal Access to Resources: Ensuring that Nigerian students have the same access to libraries, digital materials, and research tools as their UK counterparts. This also includes providing training on how to utilise these resources effectively (Ifijeh et al., 2020).

Culturally Responsive Support: Implementing support systems that are attuned to the cultural backgrounds and educational experiences of Nigerian students. This includes language support, academic writing workshops, and mentorship programs (Bawden and Haider 2007).

Inclusive Pedagogy: Educators should adopt teaching methods that recognise and value the diverse cultural perspectives of Nigerian students, fostering an inclusive classroom environment that encourages critical thinking and active participation (Rioux 2014).

Metatheoretical Perspective

Rioux's (2014) social justice metatheory provides a comprehensive framework for understanding and addressing the challenges faced by Nigerian students. Key assumptions of this metatheory include:

Inherent Worth: Recognising the intrinsic value of all individuals and ensuring that Nigerian students receive information services that meet their specific needs.

Cultural Diversity: Acknowledging and respecting the diverse cultural and educational backgrounds of Nigerian students to provide relevant and effective information services.

Information as a Common Good: Advocating for the widespread availability of information to empower students and support their educational endeavours.

Positive Change: Using research and theory to drive policy changes that improve educational outcomes for Nigerian students.

Power Dynamics: Addressing the power imbalances that affect information access and educational opportunities for marginalised communities.

Conclusion

The transition of Nigerian students into the Scottish education system highlights the critical issues of information poverty and cultural adjustment. By addressing these challenges through targeted support services, culturally responsive teaching, and equitable access to resources, educational institutions in Scotland can help Nigerian students overcome these barriers. This approach not only fosters a more inclusive and supportive learning environment but also promotes social justice and equity within the academic community.

2.16 Empirical Research

The following review of existing empirical studies aims to identify existing gaps in current empirical research and establish the main thematic connections and arguments of the core directions that shape the thrust of the present study. It is organised according to the main facets of this research, starting with academic self-efficacy and then focusing on the relationship between information literacy (academic and everyday life) and socio-cultural adaptation (including language and communication barriers), which form the main variables of the study.

2.16.1 Socio-cultural Adaptation, Academic Performance and Self Efficacy

The concept of socio-cultural differences has been defined in diverse terms addressing “problems or barriers: language, nonverbal misunderstanding, preconceptions and stereotypes, a tendency to evaluate, high anxiety, perceptual distortion, conceptual differences, differing modes of reasoning, social organisation, roles, space, time, and in general, culture” (Swam 1983 p. 92). In general, socio-cultural differences designate different “cultural norms”, create language barriers, and determine “the nature of friendships in the host country, all of which contribute to students’ feelings of loneliness” (Smith and Khawaja 2011 p. 703).

Socio-cultural differences among Nigerian students, in the researcher's view, are the disparities that exist between Nigerian students based on their cultural grouping or inclination. Nigeria is a multi-ethnic nation divided along language, cultural, and religious lines. It is estimated by experts that Nigeria has over 250 ethnic groups, each with a rich cultural heritage peculiar to it. This accounts for her socio-cultural differences (Kennedy et al 2016).

There has been considerable research investigating the benefits of international students studying in HEIs abroad, such as in the UK, America, the Caribbean, and other parts of Europe. For example, Newsome and Cooper (2016) explored the lived social and cultural experiences of 18 international students, mainly postgraduates, from Asian and Far Eastern countries studying in the UK. They identified cultural differences as a landmark gap in socio-cultural relations with host students and communities. According to them, international students' lack of awareness of local customs and social norms, such as drinking in public and etiquette requirements, are frequent examples of cultural differences (Newsome and Cooper 2016). Also, the social rules regarding the class system, gender roles, networking, respect between elders and children, and friendships are among the socio-cultural differences experienced by these students. They discovered that, in tandem with Hofstede and Hofstede's (2005) dependence-interdependence dichotomy, students from collectivist cultures (e.g., Eastern and African) practice interdependence, while those from individualist (Western) cultures place a greater emphasis on independence. With an emphasis on the differences between UK students and Asian and Far Eastern students, Newsome and Cooper (2016) suggested there is a profound need for cultural understanding to bridge this form of socio-cultural dichotomy.

However, the socio-cultural differences of Nigerian university students studying in Scotland, which this chapter intends to explore, have not received adequate attention from scholars. Existing literature that focuses on the socio-cultural differences of African or Black and minority ethnic students in HEIs in the United Kingdom (England, Wales, Ireland, and Scotland) provides some useful insights. Previous studies have critically discussed the diversities, complexities, and intricacies of the concept of race,

ethnicity, language, culture, and religion across diverse multicultural institution environments (Ward, Bochner, and Furnham 2001, Wang and Frank 2002, Myles and Cheng 2003, Arthur 2004, Duarte 2005, and Zhou et al 2008). For example, Hillen and Levy (n.d.) examined the socio-cultural differences and experiences of Black and minority ethnic social work students from five Scottish universities in the United Kingdom. They discovered that due to certain socio-cultural differences/factors, a higher percentage of Black and minority ethnic students failed or took longer to complete social work degrees compared with the white majority student population. In the words of Hillen and Levy, there is a wide socio-cultural differences gap in terms of power, gender, and respect between Black-minority ethnic students and white students in Scotland. For example, "Female students found it difficult to question and criticise males without being perceived as disrespectful, while others struggled with their self-worth. Many students expressed a lack of confidence and felt uncomfortable taking on a position of authority" (Hillen and Levy n.d. p.8).

In relation to international students, there have been several studies in different countries that have explored socio-cultural transitions and their impact on academic outcomes. For instance, Chung-Hsien (2011) examined factors influencing international students' academic and socio-cultural transition in an increasingly globalised society. The study adopted a mixed methodology (qualitative and quantitative). One hundred and fifteen (115) international students from thirty-two different countries who enrolled for the 2009-2010 academic year in the South-eastern part of the United States participated in a survey that addressed adapting to the American academic and social cultures. Additionally, sixteen (16) volunteers, from 12 countries, took part in an interview that looked at the students' experiences of cultural transition. The study revealed that globalisation has had a substantial impact on the students' transition process in both academic and socio-cultural life. Furthermore, the study identified critical connections between the dependent variables (socio-cultural adaptation and academic adaptation) and the independent variables (comfort with spoken English, interaction, motivation, online support, and perception of instructors) examined in the study.

Vanegas et al (2018) explored the socio-cultural variables that impact migrant students' academic performance in an English language teaching programme. Data were gathered through semi-structured interviews and revelations of respondents based on personal experience. Results demonstrated that students who see a more elevated level of family support are bound to accomplish their scholastic objectives.

Brown and Holloway (2008) inspected the adjustment journey of international postgraduate students in the south of England. The examination demonstrated that pressure was at its peak at the beginning of their academic activities, occasioned by the battle to adapt to the difficulties of unknown language use and a new scholastic and socio-cultural climate when students were overpowered with the yearning to go home.

Newsome and Cooper (2016) explored cultural and social experiences international students encountered at a British university. The investigation employed a qualitative analysis procedure and gathered data through case studies and semi-structured interviews. The examination uncovered that geopolitical and social-emotional elements shape students' personal experiences and self-ideas. Students experienced culture shock, problems dealing with everyday life responsibilities, local lifestyles and social behaviours and rules.

Other studies, such as that by Eze (2014), corroborating the views of additional researchers (Zhang and Goodson 2011; Ramsey, Jones, and Barker, 2007; Harrison 2012), argue that socio-cultural differences frequently inhibit inadequate socialisation and contact with students from the host country. Misunderstandings between host and international students can typically exist due to cultural conceptual disparities (Tugba, 1984) and socio-cultural differences, which create intercultural communication problems (Eze 2014).

Lera, Makhabbast, and Narine (2021) examined the most effective technologies and practices for the linguistic and socio-cultural adaptation of international students studying in Russian and foreign universities. The study was intended to help international students overcome obstacles in academic performance, attain

proficiency in the Russian language, and achieve psychological and socio-cultural adjustment in the host nation. The socio-cultural and linguistic adaptation of international students was structured around an integrated approach, which was a combination of intercultural, humanistic, personality-oriented, and activity-based learning methods. The education and training of international students should be structured around contemporary technologies and methodologies, including the creation of online simulators in Russian, the utilisation of interactive whiteboards, the implementation of case studies, brainstorming sessions, role-playing games, and engaging discussions.

An effective tool to promote the socio-cultural and linguistic adaptation of international students is a specially organised and tolerant educational environment taking into account the psychological state of students and contributing to the levelling of emerging problems of socio-cultural adaptation, as well as the assimilation of international students in the host community. A number of diagnostics were identified that affect the mechanisms of linguistic and socio-cultural adaptation of international students, for example, the level of social isolation or depression of a student, their socio-cultural identity, their adaptation to a new socio-cultural environment, and the methodology for determining the level of knowledge of Russian as a foreign language.

Another study by Phan (2009), recognising the effects of comprehension language barriers, adaptability, and cultural barriers, investigated selected first-generation Vietnamese undergraduate students in the Puget Sound region of Washington State, using a phenomenological qualitative methodology. Before moving to the United States, the majority of Vietnamese students had limited or no knowledge of English; as such, language and cultural barriers suggestively impacted the lives and educational progress of first-generation Vietnamese students. Understanding lecture materials was challenging, and students frequently encountered confusion due to diverse communication and learning styles. This study suggests that overcoming language and cultural barriers, along with implementing effective training

programmes, is crucial for supporting the success of non-domestic college students in trans-cultural environments.

Hallberg (2010), studying students from a socio-cultural and cognitivist perspective, also found language and communication barriers in learning. The findings indicated a lack of emphasis on language and communication barriers in ICT-based learning, highlighting the necessity to acknowledge language diversity, particularly in ICT-driven educational settings.

Research undertaken in Australia among a sample of 100 Saudi international students found that language proficiency stands out as the primary barrier hindering the academic and social adaptation of Saudi students. Additionally, certain academic aspects, such as classroom activities and assessment methods, as well as social factors like homesickness and loneliness, were identified as contributing factors (Alsahafi and Chud Shin 2017).

Akinkugbe (2013) elaborated further on language as a key socio-cultural difference of international students in their new learning environment regardless of their high educational aspirations and academic skills. The author affirmed Zhai's (2002) viewpoint that the majority of language challenges experienced by students stem from differences in accents, slang, and the usage of specialised vocabulary. Besides, international students encounter social and cultural adjustments in addition to those brought on by the language barrier and issues with their studies (Akinkugbe 2013). The author maintained Sandhu's (1994) assertion that international students come from a variety of cultural origins and, as a result, create a mosaic of distinctive cultural experiences.

A narrative review of literature on self-efficacy and second language critically examined 27 studies on second language, foreign language, and self-efficacy, providing a thorough and systematic analysis of the subject matter from a theoretical perspective. The investigation unveiled various factors contributing to the enhancement of students' self-efficacy levels, emphasising that self-efficacy serves

as a strong predictor of performance across various language skills and tasks and that learners' belief in their capabilities affects performance tremendously (Raoofi, Tan, and Chan 2012).

On the other hand, Feryal (2008) examined the correlation between self-efficacy and foreign language learning anxiety among 100 participants whose location was not disclosed by the author. The outcome measure was the foreign language anxiety scale and the self-efficacy scale. Findings revealed that both aspects are uncorrelated. That is, no relationship was found between foreign language learning anxiety and self-efficacy. Also, gender played no significant role in terms of anxiety level and self-perception rating among participants.

Kim and Cha (2017) sought to ascertain the effects of experience abroad and language proficiency on self-efficacy beliefs in language learning among 259 international students in Korea who used Korean English as a foreign language. The outcome measure was the Questionnaire on English self-efficacy, which was complemented with a completed background questionnaire. The results of the study found a positive relationship between experience abroad and English proficiency. These were indeed found to be related to self-efficacy factors. Furthermore, the result revealed that students benefit most in self-efficacy formation when they must have spent four to six months abroad.

In relation to Nigerian students, there is some research discussing the impact of socio-cultural differences among Nigerian students studying abroad in connection to language, showing that it contributes to increased anxiety for students with reverberating consequences in terms of effective communication, smooth social interactions, and self-identity (Sawir et al 2008, Olagoke-Oladokun, Mokhtar and Bin Hassan 2019 pp. 17-18, Sherry, Thomas and Chui 2010). However, the relationship between socio-cultural adaptation, academic performance, and self-efficacy in Nigerian students studying abroad remains largely unexplored.

2.16.2 Academic self-efficacy and everyday life challenges

There is a plethora of literature showing the significance of academic self-efficacy to learning and academic performance (Honicke and Broadbent 2016). Studies (for example, Cheng et al 2015) have shown that students' level of academic self-efficacy has a significant impact on their ability to cope with academic challenges. Thus, academic self-efficacy can impact the academic career pursued by students, the degree of effort the students make, their resilience, as well as their determination to achieve their academic objectives.

Similarly, studies have explored the impact of academic self-efficacy on academic performance across varying degrees of specificity, such as the "relationship between self-efficacy and successful completion of subject-specific tasks like algebra, probability, and statistics problems" (Zimmerman and Martinz-Pons 1990 pp.51-53), "self-efficacy and successful performance and attainment of a specific grade in a subject" (Neuville, Frenay, and Bourgeois 2007 pp. 95-117), and "self-efficacy and general success within a university course" (Cassidy and Eachus 2002 pp. 133-153). Regardless of the educational context in which it is assessed, research has demonstrated a positive association between academic self-efficacy and academic achievement (Honicke and Broadbent 2016). For example, Linnenbrink and Pintrich (2003 pp.119-137) found in their study that "academic self-efficacy is significantly correlated with students' learning, cognitive engagement, analytical thinking, academic commitment, strategy use, persistence, susceptibility to negative emotions, and achievement".

In view of the above, if students have academic self-efficacy, they will be confident in their capacity to achieve certain academic goals, which will result in improvement of their academic performance. Hence, academic self-efficacy influences academic performance.

As noted by Mesidor and Sly (2016), students who have a high level of self-efficacy have better interpersonal relationships and academic performance. Similarly, Telbis et al (2014) also reported that students with high self-efficacy were found to

complete their programme of study and were confident in utilising their coping resources to function effectively during their cultural transition. However, students who have low self-efficacy were found to be less confident in coping with socio-cultural adaptation.

Beyond academic information literacy skills, other studies also point to the importance of everyday life information literacy as the “ability to address a range of information needs, such as financial, health, and legal needs. These relate to everyday practices as well as making informed decisions that are of significant value to individuals and communities” (Martzoukou and Sayyad 2016 p. 647). Information literacy is seen as a vital prerequisite for active involvement and participation in civil affairs, fostering well-informed citizenship, promoting health and wellness, and ultimately enhancing the overall quality of life for individuals (Leung 2010).

International students experience challenging and demanding situations (Ishimura and Bartlett 2014) that are not similar to the challenging situations that home students go through (Ishimura and Bartlett 2014). For example, international students may go through problems getting precise and applicable information because the sources of information or the method of communication they are used to are different in their new surroundings. Research has previously found, for instance, how countries that are described as collectivistic, such as Korea, the People's Republic of China, Japan, Hong Kong, Malaysia, India, and African countries (Triandis 1989), rely more on oral communication as a way of sourcing information, whereas individualistic societies, such as those of Anglo-American nations (United States and Canada) (Liberty and Johann 2000), are more likely to rely on individual searching approaches (Meratian and Chang 2012).

Different ways of sourcing information and communicating may create difficult situations that could pose emotional affliction and problems in adjustment to societal activities and to various elements of social life. Liao, Finn, and Lu (2007) have observed that other characteristics may include "different cultural body language and gestures, social class and religious differences, traditional passive roles of learners,

and shyness about approaching authority figures for assistance". These can create barriers to international students on the basis not only of academic performance but also in relation to their daily experiences and their social connectedness (Bukhari et al 2018).

Different studies have explored the challenges that international students experience in their new social environments. A study of 248 female students who were residents of various universities and private hostels in Lahore, Pakistan, by Rafiq et al (2021) found that hostel living helped to expand the social circle of students, by exposing them to diverse multicultural social groups. However, students had complex information needs beyond their academic studies, including concerns related to safety, social life, and self-help. The research revealed that everyday life information seeking (ELIS) is important for achieving competence in various aspects of life and significantly influences students' everyday problem-solving endeavours. Students primarily depended on mobile phones, the internet, social media, and interpersonal relationships for obtaining everyday information. However, cultural differences, natural hesitation, language difficulties, time constraints, and challenges in recognising credible information emerged as the primary obstacles to fulfilling everyday life information requirements.

Hertzum et al (2019) explored information seeking abroad via a study of the everyday life of international students. The purpose of the study was to find out how four international students at a Danish university managed their study-related and everyday information needs behaviourally and emotionally and how their information-seeking activities intertwined with their process of cross-cultural adaptation. The study utilised a qualitative research approach. Each participant contributed ten diaries and participated in three interviews during their first semester abroad. The results indicated that the information needs and seeking behaviours of international students were influenced by various factors, including their host university, as well as cross-cultural, personal, and situational issues. The cross-cultural issues differentiated international students from their domestic counterparts, while the personal and situational challenges called for more individually tailored

support because they created individual differences. The international students examined in the study lacked information pertinent to both studies and everyday issues. These intertwined issues were equally stressful for the students. The research established that while study-related information needs held greater significance, addressing everyday information needs proved to be more challenging.

Ch, Butler and Lee (2014) presented the findings from a study on the information acquisition process of international students as they adapt to unfamiliar geographical surroundings. The researchers employed semi-structured interviews, a questionnaire, and cognitive mapping techniques with a sample of twenty international students. The study investigated students' information needs, sources, and settlement experiences in the host nation. Findings revealed, amongst others, that students obtained basic survival-related information, actively utilised internet-based sources such as online and mobile maps, and relied significantly on social networks composed of fellow nationals as sources of information.

Naveed, Batool, and Anwar (2021) conducted a study investigating the information-seeking behaviours of postgraduate students residing in the University of Punjab's halls of residence in Lahore as part of their daily lives. Employing a qualitative approach, the researchers aimed to fulfil the study's objectives. A purposive sampling technique was employed to select a sample of twenty postgraduate students with rural backgrounds. Semi-structured interviews were utilised as the primary data collection method. The verbal data obtained was systematically organised and analysed using thematic analysis. The data was coded and categorised to identify recurring themes. The findings revealed that participants' circumstances revolved around various issues, including health, socio-economic factors, cultural aspects, technological challenges, and legal concerns. These students heavily relied on interpersonal sources of information to address their everyday challenges. However, university libraries played no role in meeting their daily information needs. Additionally, some participants expressed scepticism regarding the reliability and adequacy of information obtained from news outlets and social media platforms.

The participants were mostly unsuccessful in accessing everyday life information on time due to a lack of information sources. The study asserted that unresolved everyday life issues among resident postgraduate university students, stemming from inadequate information and institutional assistance, could potentially impact their academic performance and research productivity. On this basis, the study therefore recommends that the universities should plan on-campus consulting services within students' affairs offices to support students in overcoming difficulties in relation to their everyday information needs. Additionally, library staff should develop complementary services to augment those offered by university support services.

2.16.3 Information literacy and academic performance

A number of studies have found an association between the quality of information literacy skills and academic performance in undergraduate and postgraduate students and in the context of different countries (Mohd et al 2011, Mohammad 2014, Weber, Becker, and Hillmert 2019). For example, Weber et al (2019), in their study of undergraduate students in a German university, found that using advanced online information literacy strategies significantly and robustly predicted better grades of students. Sanaz and Shahrokh (2020) completed an appraisal of scholastic library services in Turku, Finland, from international and domestic students' perspectives. Specifically, the purpose of the examination was to review and research the information literacy skills, difficulties, and necessities of international and local students at Finnish colleges. The investigation, which was conducted via a quantitative online survey and semi-structured interviews with international and local students, uncovered that international students have a moderately low degree of information literacy abilities in comparison with local students and face different difficulties, particularly at the start of their studies.

Within the context of Nigeria more specifically, previous research has found that the lack of effective information literacy skills can hinder students' academic performance (Ilogho and Nkiko 2014). In contrast, students who are equipped with quality

information literacy skills achieve better grades academically, become more independent lifelong learners, learn more efficiently, and develop creative thinking (Mohd et al 2011).

To explore this further, Baro and Zuokemefa investigated information literacy programmes in Nigeria via a survey of 36 university libraries. The purpose was to explore diverse information literacy practices within Nigerian university libraries, identify potential barriers affecting IL programs in Nigeria, and provide recommendations for enhancing information literacy practices. The findings revealed that Nigerian university libraries implemented various information literacy initiatives, including library tours/orientation sessions, introductory information skills, database searching skills, bibliographic training, and library use. Challenges such as lack of interest by students and teachers, administrative issues, insufficient staffing for IL training, inadequate facilities, and minimal acceptance of IL policies hindered librarians' endeavours in promoting and implementing IL programs in Nigerian university libraries.

Further studies on information literacy skills in Nigeria assessed the information literacy skills of undergraduate students in Nigerian universities. The study utilised a survey design with a self-assessed questionnaire administered to final-year undergraduate students in fifteen (15) universities, comprising a sample of 1,350 students. The study revealed that the majority of the Library and Information Science (LIS) final-year undergraduate students used journal articles, followed by internet information and online databases. The final-year students acknowledged that well-known authors, up-to-date information, and reliable, precise, and relevant information were important criteria when assessing online sources of information. Students expressed confidence in their capacity to arrange and incorporate ideas from the consulted material but felt less confident in their ability to accurately rephrase ideas to prevent plagiarism and apply citation and referencing formats correctly. In general, students rated their level of information literacy skills as moderate (Okeji, Iiika, and Baro 2020).

Ilogho and Nkiko (2014) further carried out a study on the information literacy search skills of students in five selected private universities in Ogun State, Nigeria. The study used a descriptive survey method to investigate students' ability to differentiate information sources and assess the information literacy programmes involving a sample of 359 students. The research findings showed that most students possessed limited understanding of information literacy skills and struggled to distinguish between various information sources. Additionally, the study highlighted deficiencies in the participant institutions' information literacy programmes, noting a lack of practical application. It acknowledged the significance of information literacy skills for acquiring knowledge in the 21st century and suggested integrating these skills into the secondary and tertiary school curriculum in Nigeria.

Okpala, Benneh, Sefu, and Kalule (2017) investigated information literacy skills possessed by postgraduate students in a single case study of the University of Nigeria, Nsukka, making recommendations for the advancements of these skills in students. A case study research design was adopted for the study. Although the population of the study consisted of all the postgraduate students of the university, who attended orientation programmes for 2015, the study did not capture the precise number of attendees at the programme, and so it could not be ascertained by the study. A total of 300 questionnaires were distributed among the attendees, and 270 responses were received, yielding a response rate of 90%. The data, which was analysed using mean, percentages, and frequencies, revealed that the majority of the postgraduate students were proficient in basic information literacy skills, including the utilisation of search engines (98%). More than a third were familiar with the virtual research environment (31.4%), but fewer students used social media (3.70%) and online referencing tools like Zotero and Mendeley (9.2%). Conversely, it was revealed that none of the postgraduate students was conversant with research ethics, such as avoiding piracy, duplicating publication, republishing conference papers, and conflict of interest, among others. The majority of the students needed information literacy skills (84.4%), Zotero and Mendeley skills (92%), research

writing skills, skills related to the use of the library OPAC (92.5%), and knowledge about building an online community, that is, a virtual research environment (81.4%).

Adeniran and Onuoha (2018) examined the influence of information literacy skills among postgraduate students' use of electronic resources in private university libraries in Nigeria. The study population consisted of 2805 postgraduate students from five private universities in South-West Nigeria. A sample size of 550 postgraduate students was selected purposively from four faculties in the five selected universities. The research demonstrated a positive relationship between information literacy skills and electronic resource utilisation ($r=0.28$, $p< 0.05$), indicating that the adoption of electronic resources facilitated access to up-to-date information among postgraduate students at the chosen private universities in South-West Nigeria.

The above studies demonstrate that information literacy is perceived as a valuable skill in Nigerian universities, but also that there are gaps in information literacy skills across students. Nigerian students who continue their academic study abroad may, therefore, experience different levels of academic and information literacy challenges. Although academic institutions offer information literacy and academic orientation programmes that assist international students to adapt to their new information and academic environment, it is important to not approach all international students in the same way, as the complexity of different students' needs and requirements may not always be understood. From a broader international students' perspective, it's crucial to understand students' needs, provide reassurance in a new environment, and develop their ability to grasp various academic requirements (Hughes 2005). Additionally, academic institutions can further guide students by implementing targeted support mechanisms to address specific knowledge and skill gaps, particularly among Nigerian students with different previous educational backgrounds and skill levels.

2.16. 4 Information Literacy, Academic Performance and Self-Efficacy

Previous research has found that a lack of effective information literacy skills can hinder students' academic performance (Ilogho and Nkiko 2014). Conversely, students who are equipped with quality information literacy skills achieve better grades academically, become more independent lifelong learners, learn more efficiently, and develop creative thinking (Mohd et al 2011). A number of studies have found an association between the quality of information literacy skills and academic performance in undergraduate and postgraduate students and in the context of different countries (Mohd et al 2011, Mohammad 2014, Weber, Becker, and Hillmert 2019). For example, Weber et al 2019, in their study of undergraduate students in a German university, found that using advanced online information literacy strategies significantly and robustly predicted better grades for students. Good academic performance naturally leads to academic success, described as "engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills, and competencies, persistence, attainment of educational outcomes, and post-college performance" (Cachia, Lynam, and Stock 2018 p. 435). However, the connection between information literacy skills and high academic performance may not necessarily be evident for Nigerian students, who have been through a Nigerian secondary school and university education system, where they developed experiences of a teacher-centred learning model, which encourages passive learning. As discussed earlier, when learning methods are self-directed, a student can acquire knowledge through their efforts and develop the ability for inquiry and critical evaluation (Fodter 1972, as cited in Higher Education Academy 2014). On the other hand, a teacher-centred learning method is where students latently receive information from the teacher as the focal point (Tabulawa 2006) and where "the teacher merely focuses on dispensing rules, definitions, and procedures for students to memorise without actively engaging the students" (Eze, Ezenwafor, and Molokwu 2015 p. 103).

This is the case for Nigerian students within the context of the Nigerian educational system. It is a norm, for example, that the reading materials are made available or

recommended to students by lecturers, which may not trigger the need to develop independent information literacy skills. The recommended resources are simply considered sufficient to meet the students' academic needs. However, challenges arise when students move outside their national boundaries and meet more rigorous and independent learning methods.

In addition, even in situations where Nigerian students are encouraged to search independently for additional information to meet their academic needs, further barriers are presented as library resources may not always be up to date. For example, Bappah (2016) observed that academic libraries in Nigeria are in a poor state and that government funding allocated to libraries may be misappropriated by university administrators. Similarly, Okly (2005) further notes that although university libraries in Nigeria have a funding policy where 10% of the annual budget of each institution is allocated to the library, that funding may be misused (Okly 2005 and Yetunde 2008).

The situation seems not to be different in private universities, where the allocation of the university library budget is typically determined by the founder and board of trustees, which in most cases is not sufficient to meet the library's needs. This inadequate funding adversely impacts the efficiency and effectiveness of the library's operations. However, recent efforts by MTN (Mobile Telephone Network) to establish digital libraries in some universities are a step in the right direction with the provision of viable and dynamic academic library services that align with the demands of the 21st century (IT News 2010).

Several studies have also explored the relationship between self-efficacy and information literacy. Filippou (2019), which found that international students who reported low levels of academic self-efficacy also tended to have lower levels of information literacy skills. Adetoro, Simisay, and Oyefuga (2010) investigated the relationship between perceived self-efficacy and information literacy among library and information science undergraduates at Tai Solarin University of Education, Ijebu-Ode, Nigeria. The study adopted the ex-post facto research design, using the total

enumeration technique (Census sampling, that is, using the entire population for the study). Data was gathered from all 100 LIS undergraduates in the university via a self-efficacy and information literacy questionnaire (SILQ). The data collected revealed that participants demonstrated strong self-efficacy in information literacy across eight out of the fifteen indicators assessed, and perceived self-efficacy was found to be significantly associated with information literacy. Although there was also a notable difference in perceived self-efficacy based on gender, this was not the case in relation to information literacy self-efficacy outcomes. The study suggests standardised information literacy competence training and periodic orientation sessions to improve morale among undergraduate students.

Diseiye (2018) investigated self-efficacy attitudes towards information literacy skills among library and information science students drawn from four universities in South-South Nigeria offering library and information science. The study adopted a descriptive survey with a total population of 757 and a sample of 400 students. The outcome measure titled "Information Literacy Attitude and Self-Efficacy Questionnaire" was used for data collection. Copies of the questionnaire were distributed among students of the library departments of the four universities.

Results revealed that students of information and library science possess a strong proficiency in information literacy skills, enabling them to effectively share information among their peers. Additionally, a significant correlation was observed between the self-efficacy levels of library and information science students and their information literacy competencies, suggesting that improvements in information literacy skills could potentially enhance self-efficacy. The study suggested fostering a positive attitude towards information literacy skills to facilitate productive engagement in group discussions, thereby augmenting academic knowledge.

2.16.5 Summary of Reviewed Literature

The existing literature on this topic has revealed that international students face significant barriers to academic progression, not only due to socio-cultural differences

but also because of a lack of information literacy skills encountered in both academic and everyday life experiences, which may present significant barriers in their overall academic progression or performance. In addition, further exploration of the academic research literature on international students points to specific socio-cultural challenges that are created by the lack of English language skills and the need for students to adjust to new communication behaviours and codes of conduct.

Overall, however, there is a significant lack of literature that explores these directions with Nigerian international students studying in the UK and no studies in the Scottish academic context. Most of the studies were conducted on international students with no particular reference to Nigerian students specifically. Some of the studies conducted that incorporated key directions, such as information literacy development, were in the context of Nigeria. However, not many studies were found to focus on Nigerian students in particular relating to the challenges they experience when studying and living abroad on the basis of information literacy development, socio-cultural differences, and academic self-efficacy. Moreover, there is no research found yet, to the best of the researcher's knowledge, adequately exploring together the impact of socio-cultural adaptation, information literacy skills challenges, and academic self-efficacy of Nigerian students in Scottish institutions. This indicates that there is a gap in the literature necessitating the need for further research in that area.

The aims and objectives of this study are articulated in a way that allows the exploration of the relationship between socio-cultural adaptation challenges, information literacy challenges, everyday life challenges, and language and communication challenges on Nigerian students' academic self-efficacy, situated as a subset investigation within the broader domain of socio-cultural adaptation challenges. Certain demographic differences (such as study year and gender) may also impact how students adjust to their new academic and everyday life environment. These form points for additional potential exploration in the data.

2.17 Information Literacy Models

2.17.1 Introduction

This chapter offers a critical comparison of two information literacy models relevant to higher education that have been used as a conceptual framework in this study. The models are the ACRL model, developed by professional librarians, and the Big6 model, which addresses reflective practice in information literacy. Each of these models is first briefly presented and then critically evaluated for their suitability to the current study. However, before discussing the specific elements of these models, it is important first to elaborate on the different terminology used in the literature.

2.17.2 Framework vs Model

The terms “standards”, “framework”, and “model” have all been applied to describe the methods and outcomes of IL, often interchangeably. Forsberg (2015), for example, describes the efforts of the ACRL standards committee to revise the organisation’s published standards to better reflect the social and political aspects of IL. Among their revisions, this committee chose to retitle the “standards” document as a “framework” but did not provide an explicit justification as to why. Adding to this confusion, the document often refers to itself not as standards or a framework but as a “model”. Some elucidating information may be drawn, however, from Foasberg’s (2015) review of their revisions. Whereas the original “standards” document only provided one-sentence statements regarding the expectations of IL students, the revised “framework” document offers brief explanations of the expectations. When compared to the Big6 “model” (2022), the latter offers a more specific chain of operations for IL students to follow.

From these differences, clarifying definitions can be extracted. A model explains the process of appropriately assessing information, and a framework offers a guide to what is expected from the outcomes of the assessment.

Mackey and Jacobson (2013), for example, employ the “metaliteracy” framework, which adds the expectation that IL students will be able to assess the quality of

information sources in non-academic pursuits, notably using social media. Eisenberg and Berkowitz (2007), on the other hand, developed the Big6 model in a more traditional IL framework designed around the process of academic research. This is reflected in the model's emphasis on the careful comparison of multiple informational sources before selecting which is best to answer a specific research problem.

2.17.3 Evaluation and Comparison of Models

ACRL Model

The ACRL model was developed by the Association of College and Research Libraries and provides a framework for information literacy and comprehension (Jacobson and Mackey 2013). Illustrated in **Figure 2**, the framework has a number of steps but is based on the premise that these steps are interlaced with one another and form part of an overarching framework of ongoing learning throughout students' educational lifetime. In addition, the framework encourages students to think about the legitimacy of sources and their authority in order to focus on being able to differentiate between good-quality and poor-quality sources of information.

As Jacobson and Mackey (2013) explain in some detail, the ACRL has six "frames", beginning with a recognition of authority as a source of construction and context, which affords students the opportunity to contextualise their knowledge within the frame of their own experience and then move on to recognising that information creation is a process, meaning that the way in which information is delivered can and does impact the outcome of learning. The ARCL framework further recognises the multifaceted value of information, suggesting that information holds significance in various aspects, such as education, as a means to influencing and understanding the world. The perception of "value" is informed by other dimensions, such as the learners' own lived experience.

The ACRL model traces the influence of multiple factors on the value assigned to information by the recipient and has been designed to account for the new information landscape of social media. Mackey and Jacobson's (2013) original

discussion of the model's objectives made specific reference to dynamic sources of information that were open to a wide range of collaborators. Blogs, forums, comment sections, and other brands of "user-generated data" are all included in this discussion. The authors note that these emerging forms of informational media were a dramatic departure from the print media of previous generations. Print media traditionally make clear references to the qualities of a piece of information that indicate its value. These notably include references to the author and their qualifications as well as vetting procedures, such as peer review or fact-checking, that provide external verification of the author's reliability.

These overt sources of value are conspicuously absent in social media and similar sources of information unique to the internet. Users may create or share information on a wide variety of topics with which they have varying levels of familiarity. In many cases, no quality assurance process prevents people from making dubious statements or advocating for information they are ill-equipped to assess critically. The agreed standards of external verification that define traditional print media are also compromised on the internet. Though some online information sources maintain standards of peer review or fact-checking, many do not. Mackey and Jacobson (2013) suggest that the information environment of the internet has encouraged a variety of alternative verification methods to emerge, many of which lack the rigour of fact-checking or peer review. A blog or forum, for example, may offer users the option of showing their approval of a particular post or comment, such as "like" or "upvote", which essentially functions as a means of community-based review.

This shift towards community-based validation raises concern about the reliability of information in the digital age. While the ACRL framework acknowledges these new forms of information evaluation, it does not fully address the implications of this shift for educational contexts, especially in settings where students may not have been taught to critically assess the credibility of such user-generated content. As Fister (2014) points out, the ACRL framework might benefit from a more explicit focus on the development of critical digital literacy skills that go beyond traditional notions of

information literacy, equipping students to navigate and evaluate the vast array of information sources available online.

Taken together, the features of the online information environment suggest that the value of information can be highly reliant on context. A statement with no empirical support that would carry no value in the context of a peer-reviewed journal might be deemed highly valuable in the context of a social media group predisposed to agree with the statement. Similarly, an information source might be deemed valuable on social media based entirely on how convincing the source's rhetoric is to a certain group of individuals. It is in judging which of these contexts is most appropriate for the student's purposes that lived experience enters the evaluation. The students' empirical experience (or lack thereof) with different information contexts and the topics contained within will have a direct bearing on what value they assign to information in that context. A student who has grown up researching on the internet has likely experienced dubious claims being celebrated as valuable information on social media. This experience has hopefully informed us that not all sources of information on the internet carry the same value for academic research.

Furthermore, the ACRL model also recognises that research is a process of inquiry, which simply means that learning builds upon prior knowledge (Jacobson and Mackey 2013). Then, when the student has acquired confidence in this process of learning, which is the fifth frame, they are able to think of scholarship as a conversation, that is to say, engage in a critical discussion about the merits and demerits of different sources of information and the knowledge that is acquired or put forward. Having obtained the baseline of understanding and sufficient confidence in order to hold a constructive conversation, the process of research then becomes a process of searching as strategic exploration. These frames must be read as interfaced with one another rather than distinct from one another, consistent with the overarching view of information literacy as a lifetime construct.

The framework is differentiated from other models as the ACRL framework considers that information literacy is multifaceted and places greater emphasis on self-directed scholarly learning. Specifically, the ACRL makes clear that to be effective, information

literacy should also encompass a higher degree of critical engagement and evaluation (Schroeder and Cahoy 2010). The ACRL framework is more likely to be discussed in relation to higher education, where it would be anticipated that learners have the necessary basic skills to identify and gather the information they require (Kuhlthau 2013), with a focus on the critical interrogation of sources and their legitimacy.

In a theoretical study reflecting on the application of information literacy models, including ACRL, Abbas (2014) further identified that students in developing economies, particularly Nigeria, face challenges with respect to information literacy because they do not necessarily have the same confidence in more traditional forms of literacy such as reading and writing. Abbas (2014) did not speculate on why students may have less confidence but did identify the critical necessity of information literacy in a dynamic world where mastery of information is a critical source of value for both child and adult learners. This concept has been further explored by other studies, notably the research conducted by Baro and Fyneman (2009) on information literacy among undergraduates at Niger Delta University in Nigeria. They discovered that undergraduates had an unrealistic perception of their information literacy abilities, as when tested, the opposite was true because they had not been formally taught the use of e-library resources.

In addition, Nwosu et al (2015) found, somewhat worryingly, that even academic staff at higher education institutions across Nigeria had, at best, moderate information literacy. A similar empirical study by Igwe et al (2015), looking at information literacy in the educational system of Nigeria more broadly, also found a gap in the information literacy capability of educators. Although these results may not represent the Nigerian higher education system as a whole, they point to a possible problematic situation where education providers themselves may not have the necessary skills or tools to support Nigerian students in obtaining information literacy confidence. The potential wider implications of this situation are that Nigerian students who subsequently learn within the context of a Western education system could find themselves significantly behind their other home and international peers in terms of information literacy.

2.17.4 Justification for Using the ACRL Framework

The ACRL framework is well-suited to the needs of this study for a number of reasons. The metaliterary framework on which this model is built takes a wide scope on what literacy contexts should be considered by an IL model. This wide scope necessitates the ACRL's emphasis on the critical evaluation and strategic exploration of the wide variety of informational sources opened by metaliterary. It is these specific skills- critical evaluation and strategi- exploration, that Nigerian students struggle with in Scottish higher education. Though the broadened scope of metaliterary was intended to address social media, this paradigm is also primed to embrace the fact that Nigerian students grew up in a different informational culture. Expectations regarding Western academic traditions, such as formal citation, may have differed greatly from those of the culture in which they are pursuing higher education. Few empirical studies of these cultural differences regarding information literacy exist; thus, best practices for such an investigation remain undecided. The ACRL model's broad scope and focus on matching context to purpose make it a natural candidate for such a study.

Furthermore, the ACRL model has a history of usage in recent studies of the information literacy of Nigerian students. Abbas (2014), Baro and Fyneman (2009), Isa, Amusan, and Umma (2009), Abubakar and Isyaku (2012), Adetimirin (2012), and Ukpebor and Emojorho (2012) all employed the ACRL model in their research on Nigerian students' information literacy. These studies were instrumental in identifying the difficulty Nigerian students have in critically navigating the information resources available in the extensive resource environment of the internet. A central concept of the ACRL model is that learning and lived experience are fundamentally connected, and, in part, because of this, people are lifelong learners. Helping students hone their information literacy skills can thus be a life-changing investment. Nigerian students entering Scottish higher education are guided by their lived experience in a different informational culture. Devising methods to assist them in learning the standards of the information culture they are entering can only enrich them as scholars.

Finally, the ACRL Model has been used to understand the process of information literacy in the fields of librarianship and information literacy instruction (Latham, Gross, and Julien 2019) and to research adult information seeking within a work context, which may relate to how students apply these skills after they graduate (Jinadu and Kaur 2014). It has been utilised in studies of information literacy planning (Allison Hosier), in setting an assessment rubric for professional standards in nursing (Gloria Wilson and Katelyn Angeli), within a cultural setting (Hicks and Llyod 2015), and with international students (Pillon and Umetsubo 2020).

Additionally, there has been little attempt previously to combine the ACRL model and the Big6 model in a single study. Therefore, the amalgamation of these two models would represent a novel and powerful foundation for conducting this research, bringing together technical skills but also encouraging the foundations of continual reflective practice, which is important for ongoing learning beyond formal education (Cottrell 2017).

2.17.5 Limitations and Gaps with ACRL in Relation to Nigerian Students

Nigerian students in Scottish higher education institutes may struggle to adapt to the standards and expectations of the new information environment they find themselves in. With its unique focus on different information cultures and contexts, the ACRL model offers a beneficial tool with which to study the difficulties experienced by these students. However, one of the possible limitations of ACRL is that it makes a number of tacit assumptions around the initial education of students and their access to resources. For example, the model presumes that students have sufficient basic education in literacy and numeracy, that they can search for information that they require, and that they have sufficient language mastery to interpret correctly the authenticity and meaning of sources that they discover. For any student, irrespective of whether they are a child, a young adult, or a mature learner, there is a possible risk of misinterpretation of both the authenticity and meaning of sources if such information literacy searches are carried out by learners who are not using their first language.

The ACRL model assumes that students have access to resources, which means that their learning journey can be relatively easily facilitated. As the analysis of the ARCL model in relation to Nigerian students revealed, presumptions around sufficient language mastery and access to resources could be questionable. In a domestic context (i.e., when students are in Nigeria), there can be issues with access to resources because of the different resource availability across the country. Furthermore, in an international context (i.e., when a Nigerian student is studying internationally), there is the parental risk of language and contextual misinterpretation. Such cross-cultural confusion is possible even when an individual has fluency in multiple languages due to personal biases or beliefs that influence how they understand other cultures. The first stage of the ACRL model illustrates exactly why making assumptions around constructed knowledge can be problematic, however, it could equally also provide fresh insight. There is an apparent lack of research that focuses on Nigerian students' learning experiences through the frames of the ACRL, and this represents an opportunity for further research.

In addition, the ACRL framework has been critiqued for being overly abstract and not always easily applicable in diverse educational contexts. As Pawley (2003) argues, while the framework's emphasis on authority and information value is theoretically sound, it may overlook the practical challenges students face in environments where access to diverse and reliable information sources is limited. For instance, students in under-resourced educational systems like Nigeria might struggle to apply these principles when they have limited exposure to authoritative sources. Additionally, the framework's assumption that students can easily contextualise information within their lived experiences may not hold in cross-cultural or resource-constrained environments where students' prior knowledge and experiences differ significantly from the normative assumptions of western educational paradigms.

In conclusion, while the ACRL model provides a robust framework for understanding information literacy, its application to Nigerian students in Scottish higher education reveals several limitations. These include assumptions about students' foundational

literacy skills and access to resources, which may not be valid in all contexts. Addressing these gaps through further research could enhance the model's applicability to diverse student populations and improve information literacy outcomes.

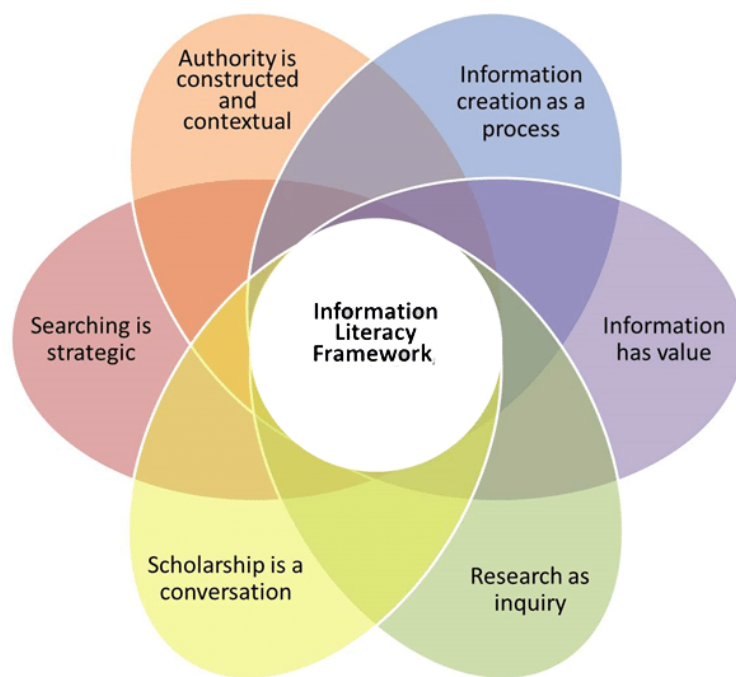


Figure 2. ACRL Framework (UARK, 2022)

2.17.6 Big6 Model

The Big6 Model of Information Literacy was developed by Eisenberg and Berkowitz (2007) and is described as integrating "information search and use skills along with technology tools in a systematic process to find, use, apply, and evaluate information for specific needs and tasks" (The Big6 2022 p.1). As reflected in **Figure 3**, the framework has benefits in that it encourages learners to ask themselves a series of questions about where they gather information from, what they are gathering it for, and how they will fit it together. This structured approach ensures that students develop a systematic process for engaging with information, enhancing their ability

to manage complex academic tasks. Additionally, this framework has links to the discipline of reflective practice, as evaluation in this model is the final step and is used by the learner to reflect on what they have learnt intellectually and personally from the process.



Figure 3: The Big6 Model (Big6 2022)

2.17.7 Justification for Using the Big6 Model

The Big6 model is particularly valuable in academic settings because it breaks down the complex process of information gathering and evaluation into six manageable steps: Task Definition, Information Seeking Strategies, Location and Access, Use of Information, Synthesis, and Evaluation. Each step provides clear guidance on how to approach an information task, making it especially useful for students who may struggle with organising their research efforts (Eisenberg and Berkowitz 1990).

Research supports the effectiveness of the Big6 model in improving students' information literacy, as it provides a clear sequence of steps that promote efficient information seeking and use. For example, Mendoza (2020) emphasised that the Big6 model helps students master the Common Core standards because the process

allows them to actively engage with each specified portion of the standards. Similarly, Kamba and Buba (2022) noted that the Big6 model encourages students' ability to engage critically with information, a crucial skill in higher education.

However, it is important to critically evaluate whether this structured approach might also constrain more advanced students or those who prefer a less linear research process. In the context of Nigerian students studying in higher education institutions in Scotland, the Big6 model offers a framework that can be tailored to address specific challenges such as unfamiliarity with Western academic norms, the necessity for critical evaluation of sources, and the development of independent research skills. Given the structured nature of the Big6 model, it can help bridge the gap between the educational approaches students were exposed to in Nigeria and those they encounter in Scotland, where independent and critical thinking are highly valued.

Nevertheless, the model's strong emphasis on structure may not fully accommodate the diverse learning styles and cognitive strategies of students who might benefit from a more flexible approach. For instance, Nigerian students who are accustomed to rote learning may initially find the Big6 model's emphasis on critical thinking and reflection to be challenging.

2.17.8 Limitations of the Big6 Model

While the Big6 model offers many strengths, it is not without limitations, particularly when considered within the specific information literacy context of Nigerian students in Scottish higher education.

One of the issues with the Big6 model is that users often struggle to articulate their information needs clearly, and the model's strong emphasis on problem-solving may not be applicable in situations where the information requirements are vague or poorly defined. Additionally, the model falls short in addressing important legal and ethical considerations, which are essential in educational contexts, and it lacks a focus on collaboration (Odede 2020). The model's individualistic approach may not fully support students in developing the collaborative skills necessary for effective group work and knowledge sharing, which are crucial in many academic contexts.

For Nigerian students in Scotland, the Big6 model may pose additional challenges. It assumes that users already have a basic understanding of the information-seeking process, which may not be true for students with different educational backgrounds. Nigerian students may face difficulties due to differences in educational systems, where rote learning is often emphasised over critical thinking and independent research (Abubakar and Isyaku 2012). Furthermore, the Big6 model does not explicitly address the cultural nuances of information literacy. For instance, the model does not consider the impact of cultural beliefs on students' information-seeking behaviour and their interpretation of information (El-Maamiry 2020). Nigerian students might struggle with the expectations of critical analysis and scepticism toward sources, which are central to Western academic practices but may not have been emphasised in their previous education.

Given these limitations, it is clear that while the Big6 model can provide a useful framework, it may require adaptation to better meet the needs of Nigerian students. This could involve integrating more flexible, culturally responsive approaches that recognise the unique challenges these students face, as well as incorporating elements that promote higher-order thinking and collaboration.

2.17.9 Conclusion

In conclusion, while the Big6 model provides a structured and effective framework for developing information literacy skills, its application in the context of Nigerian students in Scottish higher education must be approached with care. The model's limitations, particularly its linearity, lack of cultural sensitivity, and emphasis on individual tasks over collaborative learning, suggest that it should be adapted to better meet the needs of these students. By incorporating more flexible and culturally responsive elements, educators can help Nigerian students overcome the socio-cultural and information literacy challenges they face, thereby enhancing their academic success in a Western educational system.

2.18 Conceptual Model of this Study

In terms of the conceptual model for this study, it would be helpful to synthesise or integrate aspects of multiple frameworks in order to evidence an extension or modification of existing theories in a novel application. Synthesis comparison is a technique applied by Abbas (2014) because it helps to bridge potential gaps or limitations in specific models in terms of application. It is useful for this study to amalgamate the ACRL framework and the Big6 framework, as these have relevance with regard to understanding international student learning experiences in a higher education context, where it is expected that learners are self-directed.

With regard to the ACRL framework, it has already been established earlier in this discussion that there is precedence for its application in relation to Nigeria, such as with the work of Abbas (2014), Jinadu and Kaur (2014), Baro and Fyneman (2009), Isa, Amusan, and Umma (2009), Abubakar and Isyaku (2012), Adetimirin (2012), and Ukpebor and Emojorho (2012). These studies have identified that Nigerian students may lack the information literacy skills required to find the information they need or the knowledge of where to search for information. However, the findings of these studies vary and are contingent on the population sample, suggesting that there is more to understand about the application of the ACRL framework in different contexts. In addition, as discussed in section 3.1, there are potential limitations and gaps in the application of ACRL, and the present research will be buttressed by a synthesis of two frameworks (the ACRL and the Big6) in order to holistically examine the IL skills and their impact on Nigerian students' independent learning.

The benefits of applying the Big6 model are that it integrates the practical stages of other information literacy models, and it does so in a way that can be readily accessible to learners, particularly if they are not currently learning in their first language, when there may well be a double barrier to learning comprehension (Rahmah 2020). The reflective element of the Big6 model is also helpful for learners in order for them to establish what they have learnt about the process of learning as much as the information they have captured and how they can carry this learning forward and improve on it in the future (Malliari et al 2017).

In applying the Big6 IL model to the study of Nigerian students in Scottish higher education institutions, further research can focus on capturing reflections of students on whether they can:

1. Understand the question they are being asked.
2. Identify how they will find the information they need to address the question or task.
3. Establish where they will gather information from and how they will do so (for example, does the learner have the skills to use the library efficiently?).
4. Carefully consider the information captured from the process.
5. Critically synthesise and follow an appropriate presentation style in order to demonstrate comprehension to the tutor.
6. Evaluate the result (effectiveness) and the process (efficiency) of the information source.

In addition, when thinking about the application of the Big6 model to Nigerian students in Scottish higher education institutions specifically, it does not yet appear to be any research that particularly explores whether Nigerian students engage in aspects such as self-reflection as part of the learning process, although both theoretical and empirical sources (e.g., Eisenberg and Berkowitz 2007, Big6 2022) flag the importance of self-reflection. There is currently no empirical work examining whether Nigerian students engage in self-reflection as part of the learning process or as part of expanding their information literacy when they study internationally. This suggests that there is a gap in the state of knowledge, and further exploration could contribute to increasing understanding in this area.

In addition, earlier studies, such as the work of Adeyemi (2017), used quantitative data collection methods to identify that students were, to some extent, aware of their information literacy gaps; however, the SCONUL model was not specifically used to collect qualitative data on students' self-reflection around IL. The lack of qualitative research in this area suggests the existence of a research gap around further

understanding and conceptualising any barriers Nigerian students may encounter with reference to the context of their learning.

The evaluation of this research has led to the conclusion that an amalgamation of the ACRL model and the Big6 Model of Information Literacy would be preferable within the context of the research. Principally, because the study focuses on Nigerian students in Scottish higher education institutions, it would be expected that students have a higher degree of self-directed learning. Such students are, therefore, more likely to benefit from understanding the validity of sources and where they are capturing information from and from reflecting on the learning process.

2.18.1 The relationship of the ACRL Framework and BIG 6 Model to the socio-cultural context

The emergence of the socio-cultural perspective on information literacy advocated by researchers such as Alison Hicks (2017) was necessitated by the perceived pitfalls of early drafts of the framework on information literacy for higher education (Association of College and Research Libraries 2016). Librarians gave much attention to the framework, scrutinising every aspect of the document, appreciating it for some merits, such as its flexibility, and criticising it for its perceived demerits, such as over and under-theorisation, amongst others (Bombaro 2016). The new definition of information literacy, which formed part of the framework package, was the only aspect of the framework that escaped critique. Assumptions made to explain this development were that the definition could be in line with the existing definition of IL since 1989/2000 (Association of College and Research Libraries 2000) or based on the assumption that IL forms an undisputable concept that does not need further examination. The 1989/2000 definition addresses information literacy as "a set of abilities requiring individuals to recognise when information is needed and have the ability to locate, evaluate, and use the needed information effectively". While the 2015 definition reads, "Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new

knowledge and participating ethically in communities of learning” (Hicks n.d). These definitions may be considered as additional evidence supporting the framework's adoption of a socio-cultural philosophy (Wenger 1998).

However, Hicks argued that the framework failed to incorporate literature that examines the nature of IL from a socio-cultural standpoint, which represents a gap that could indicate a considerable missed opportunity for the advancement of IL theory and practice. Hicks averred that although the initial framework has led to the development of more intricate instructional methods, the irresistible emphasis on teaching suggests that librarians have overlooked the essence of information literacy. Hicks recognised the fact that the emphasis on teaching limits the scope of librarians' contribution within complex information settings.

The socio-cultural perspective of information literacy is an offshoot of Hick’s discontentment with the early framework of IL. She drew insights from her classroom experience and delved into the socio-cultural theory developed in practice, suggesting that librarians could play a role in designing more impactful educational experiences. Essentially, instead of viewing theory as separate from practice or assessing theory against practice, information literacy (IL) should arise from everyday contexts. Hicks (2017) advocates for a socio-cultural perspective in information literacy grounded in the following beliefs:

- Embracing a socio-cultural viewpoint in information literacy fosters a more comprehensive and inclusive examination of the relationships between individuals and information.
- While there is a growing interest in socio-cultural learning theories, their relevance to the essence and extent of information literacy is yet to be fully understood.

CHAPTER 3 - RESEARCH METHODOLOGY

3.1 Introduction

This study was conducted to explore the impact of socio-cultural and information literacy challenges on the academic self-efficacy of Nigerian students in higher education (HE) institutions in Scotland. The following sections outline the methodological approach that was developed to gather and compare insights from a sample population of 304 Nigerian students in Scotland about their encounters with these challenges. Furthermore, by utilising qualitative techniques in the analysis of empirical data pertaining to the socio-cultural and information literacy challenges of this particular group, via interviews with students, the study has yielded valuable insights and new evidence that directly addresses the central aim of this research process.

This chapter offers an overview of the study design, the population of the study, the sample and sampling technique, the instrument for data collection, the validity and reliability of the instrument, and the method of data collection and analysis.

3.2 Research Design

The research design is the architecture of the entire study, as it constitutes the blueprint for the gathering, measurement, and analysis of data (Kirshenblatt-Gimblett 2006). This study adopted a mixed method approach consisting of qualitative and quantitative procedures for a complete and more synergistic utilisation of data to ensure that the results of the study were grounded in respondents' responses. Creswell and Clark (2007 p.10) defined mixed methods research as an approach to inquiry that combines both qualitative and quantitative data collection methods, which involve different philosophical assumptions: the positivist and the constructivist.

The positivist worldview, which originally emerged in the natural sciences, reflects an orderly, systematic examination of evidence gathered mostly through quantitative methods (Jonker and Pennink 2010 p.30). This approach offers a significant benefit by providing a comparable, replicable, and analytical examination, enabling the

exploration of relationships between variables across diverse sample populations (Bryman 2015). Morgan (2014 p.26), however, argues that "activities cannot be pulled away from the context in which they occurred" in social scenarios. Consequently, quantitative methodologies in empirical research may not only restrict the depth and authenticity of the study but also have the potential to modify the nature of the evidence and conclusions (Morgan, 2014 p. 26).

The constructivist paradigm, on the other hand, adopts a phenomenological research approach and acknowledges the overarching notion that social behaviours and activities are shaped by situational and constantly evolving forces (Jonker and Pennink 2010). In this vein, constructivism asserts that individuals' experiences are not predetermined; rather, they are adaptable and reflective of the shared views and perspectives of individuals participating in a social context (Jonker and Pennink 2010). Constructivism emerged from the social sciences and employs an open-ended methodology for research and empirical investigation. It predominantly utilises inductive, qualitative methods for interpreting evidence (Jonker and Pennink, 2010 p. 30). One advantage of this approach is that it offers a unique perspective that, despite each individual's distinct viewpoints, can be used to compare and gain insights from collective human behaviour and experience (Bryman 2015).

While both of these perspectives offer independent value in empirical research, Creswell and Clark (2017 p. 8) propose a more integrated empirical approach that combines both quantitative and qualitative data evidence within a single study method. This comprehensive approach aims to mitigate the weaknesses inherent in both qualitative and quantitative methodologies. Utilising qualitative and quantitative methodologies and integrating both into a study, entails more than just gathering and analysing data from both sources. It involves leveraging both methodologies concurrently to enhance the overall robustness of the study beyond what either qualitative or quantitative research could achieve alone.

Mixed methods can be utilised following a sequential or concurrent integration of 'mixing' of qualitative and quantitative data within a single investigation (AHRQ

2021). Employing both methodologies allows for comparing and contrasting results derived from the sample, thereby facilitating a more profound understanding through the exploratory nature of the research, in addition to statistical evidence to support the design decision (Gunnell 2016). Using both designs together can answer the who, what, when, where, why, and how of respondents' behaviours and experiences, ensuring that the limitations of one type of data are balanced by the strengths of another. Utilising both qualitative and quantitative approaches in tandem offers a broader spectrum of perspectives and viewpoints, enabling the validation of findings through diverse methods. This enhances the overall validity of results and increases the utility of the study for its intended audiences (Maxwell 1998).

In this research, the qualitative strand adopted a correlational research design, which was non-experimental in nature. It enabled the researcher to measure two or more variables to assess the statistical relationships (i.e. the correlation) between variables. Correlational research was adopted for the investigation of the magnitude and direction or nature (positive or negative) of the relationship that existed between dependent variables (criterion variables) and one or more independent variables (predictor variables) (Kpolovie 2010). More specifically, the correlational design was used to describe the strength and direction of the relationship between academic self-efficacy and the other variables used in the study (information literacy skills challenges, socio-cultural adaptation challenges, language and communication challenges and everyday life challenges). The assumption was that if there was a relationship between these variables, based on statistical procedures for data analysis (Gunnell 2016), then specific inferences could be made on the associations between these variables.

The qualitative aspect of this study adopted a descriptive narrative design. Descriptive narrative research involves asking individuals to recount stories and experiences from their lives, with the aim of deriving meaning from the shared experiences (Creswell 2003, Berrios and Lucca 2006). The focus of this study was on gathering data from a sample selected from a specific population to describe

particular characteristics of the sample as they existed at the time of the study (Gunnel 2016). The research data analysis was conducted by means of analysing the descriptive narratives of students deriving from semi-structured interviews rather than quantifying the data (Lucca 2006).

The major limitation of quantitative research lies in the fact that it is weak in understanding the context or setting of the study and participants' voices are not heard directly (Creswell 2003). On the other hand, qualitative research may make it difficult to generalise the results of the study to a larger group (Creswell 2003), but it complements this weakness by ensuring that the voices of participants are heard, and this gives credibility to the study. Utilising the benefits and strengths of both qualitative and quantitative approaches in this study helped to generalise the data to the entire population of Nigerian students in higher education institutions in Scotland and also understand in detail the challenges students encountered in relation to their academic self-efficacy, enriching the results of the study. In addition, the qualitative aspect of the study helped the researcher to explore further some of the findings of the survey in more depth and explore experiences around challenges that these Nigerian students faced in everyday life and their academic context as a whole (Gerdes and Conn 2001). The overall benefit was that the weakness of one approach was complemented by the strength of the other, thereby giving more depth and credibility to the study. A more detailed overview of the justification of the mixed methods followed in this study is provided in section 3.7.3.

3.3 Data Collection Process

Based on a mixed methodological design for the research study, the data collection process involved both a quantitative and a qualitative strand. The quantitative part of the research involved the design of a survey instrument with five major parts addressing each variable of the study. The qualitative part involved the design of semi-structured interviews to complement the survey instrument and gain a more in-depth insight into the actual challenges faced by Nigerian students in Scotland.

The qualitative strand allowed for a thorough examination of individuals' unique experiences and further clarified unique perspectives (Kent 2007).

3.3.1 Quantitative Component: Survey Instrument

The first part of the data collection process involved the collection of quantitative data by means of a questionnaire survey that explored the challenges Nigerian students in Scottish universities experience in their everyday and academic lives, including information literacy, socio-cultural, language, and communication challenges. In addition, the questionnaire sought to collect data on students' self-perceived academic self-efficacy and demographic characteristics (e.g., gender, age, and year of study).

The survey included the following thematic sections:

- Part 1: Demographic Section: Data in this section were collected on respondents' demographics and were grouped into six categories: sex, generational group, marital status, current type of study, current course of study, and mode of study.
- Part 2: Academic Self-Efficacy and Challenges Encountered: This section included a set of structured questions designed to collect data on:
 - a. Academic self-efficacy challenges encountered during learning and teaching activities, as well as around understanding and discussing the subject matter studied, taking active part in the class, understanding feedback, addressing any academic problems, and managing study time.
 - b. Academic information literacy challenges: these included the most effective methods students adopt in their search for everyday life and academic information, as well as their overall confidence in their information literacy skills and the challenges they faced, with reference to key stories and experiences they encountered, and suggestions for further support.

- c. Everyday life information literacy: this section collected data on a range of information needs, such as financial, health, and legal, among others, that relate to students' everyday practices as well as how they make informed decisions regarding their everyday lives.
- d. Academic socio-cultural adaptation: this section asked students about challenges with their lecturers, classmates, and other students in their new socio-cultural environment.
- e. Everyday life socio-cultural adaptation challenges: this section collected data on challenges that students encountered around adjusting to their new socio-cultural environment and how they build relationships with their fellow students and make new friendships outside the school environment. It further explored students' development of critical thinking skills and their adjustment to the teaching methods in Scotland.
- f. Language and communication challenges: this section included how students relate to their lecturers, classmates, and other students. It also looked into issues/barriers that students have when communicating with others in their academic pursuits and whether or not this had an effect on their academic performance or advancement. Finally, it prompted respondents to reflect on their own culture and explore whether they faced any challenges as a result of language and communication gaps.

A 5-point Likert scale was used (1=not at all challenging to 5 =extremely challenging) for all closed ended-questions. A number of open-ended questions were also added to the different sections of the questionnaire survey instrument to explore further challenges that were not directly mentioned in the closed-ended questions. Respondents were invited to further participate in the semi-structured interview process (the survey questionnaire is included in Appendix 1).

3.3.2 Instruments that guided the development of the questionnaire

Information literacy challenges

For the information literacy questions, an existing information literacy assessment tool developed by Kurbanoglu, Akkoyunlu, and Umay (2004), the Information Literacy Self-Efficacy Scale (ILSES) (which consists of 28-items), was used to measure students' information literacy. This instrument, has been tested in previous empirical studies. For instance, Ko-Wai Tang (2018) used the tool to explore the perception of the information literacy skills of undergraduate freshmen from Hong Kong. The results of the study indicated that participants had difficulties with information literacy skills. In another study, Herbert and Rouge (2018) used the tool to address the gap in knowledge of Masters' students in an information science programme at Louisiana State University, with results indicating a moderate positive correlation between the different variables. The information literacy tool was also adapted by Aharony and Gazit (2018) to assess how students, at the Information Science department of the University of Bar-Ilan in Israel, manage and assess the abundance of information available on the internet. Findings indicated that information seeking is a complex process and is related to students' IL self-efficacy. Other researchers have used the tool developed by Kurbanoglu et al (2004), such as Kultawanich (2015) and Leichner (2016). The number of researchers who have used this instrument shows that it is a valid and reliable instrument to use. However, some of the items were adapted to suit the purpose of this study, for example, finding information for a part-time job, understanding the accent of the Scottish people in everyday conversations/communication, and putting together ideas to organise coursework thematically. In addition, the questionnaire contained information literacy items both related to academic and everyday life, i.e., it measured Nigerian students' challenges in searching, evaluating, and using information in their daily living as well as in their academic lives, i.e., how they identify a variety of potential sources of information.

3.3.3 Socio-cultural, language, and communication challenges

The socio-cultural, language and communication, and everyday life challenges sections were adapted using measurement of socio-cultural adaptation found in the SCAS assessment tool developed by Ward and Kennedy (1999). This instrument has been tested in previous empirical studies, both in acculturation research and across other disciplines, including communication and language acquisition, education, international business and management, and organisational psychology (Hippler, Caligiuri, Johnson, and Baytalskaya (2014), Kim (2009), Townsend and Wan (2007), Wu and Mak (2012), and Yu (2010).

However, some questions/items were rephrased and new questions were added to suit the focus of the study. The original measurement contains 40 questions; however, these were shortened and modified to a total of 16 questions included in this study. For example, for the everyday socio-cultural adaptation questions, some of the rephrased questions include building relationships with lecturers and fellow students and participating in socio-cultural activities. Additional questions included making friends outside the campus (socio-cultural interaction, what people do to have fun and relax). For the academic socio-cultural questions, some questions were similarly added to suit the focus of the study, for example, developing into an independent/active learner and developing critical thinking in academic studies. Furthermore, the language and communication questions were rephrased, and new questions were added to suit the focus of the study. The rephrased questions included understanding the Scottish sense of humour (e.g., jokes) and changing your tone and accent when speaking to a non-Nigerian person. Additional questions included communicating with university lecturers and students during classes and talking about yourself and your culture with others.

3.3.4 Everyday life socio-cultural adaptation challenges

The everyday life socio-cultural adaptation challenges section of the questionnaire measured the possible challenges likely faced by Nigerian students, resulting from

socio-cultural differences between the host country and their country, such as understanding the different cultures (e.g., new values, beliefs, customs, and mannerisms).

The language and communication challenges section of the questionnaire addresses how Nigerian students communicate with university lecturers and students during classes and how well they understand the accent of the Scottish people in everyday life conversations and communications.

All the above challenges were measured on a 5-point Likert scale: 1=not at all challenging; 2=slightly challenging; 3=moderating challenging; 4=Very challenging; 5=extremely challenging.

3.3.5 Academic self-efficacy

For the academic self-efficacy questions, the academic self-efficacy scale was adapted from Gafoor and Ashraf (2006) and consisted of 40 original questions, but it was also shortened and modified to 16 questions for the current study. This instrument has been tested in previous empirical studies. For instance, Bhati, Bral, and Meher (2022) used this assessment tool to explore the academic self-efficacy and academic performance of undergraduate students in relation to gender and types of education in Bargarh, Odisha, and India. The results of the study revealed a significant positive relationship between students' academic self-efficacy and their academic performance.

The rephrased questions included: 'I spend sufficient amount of time on my study' and 'I express my opinion when I do not understand the lectures'. Additional questions also included 'I ask questions during classes' and 'I meet the deadlines for my assignments'.

3.3.6 Study Hypotheses

The above challenges were explored in relation to academic self-efficacy, and correlation was performed to find out if there was an association between these variables, testing the hypotheses of the study as stated below:

1. Information literacy skills challenges experienced by Nigerian students in Scottish higher education institutions do not significantly correlate with their academic self-efficacy.
2. Socio-cultural adaptation challenges experienced by Nigerian students in Scottish higher education institutions do not significantly correlate with their academic self-efficacy.
3. Language and communication challenges experienced by Nigerian students in Scottish higher education institutions do not significantly correlate with their academic self-efficacy.
4. Everyday life challenges experienced by Nigerian students in Scottish higher education institutions do not significantly correlate with their academic self-efficacy.

3.3.7 Qualitative Strand: Interviews with Students

The qualitative aspect of the study allowed for the acquisition of rich data that provided an in-depth insight into the experiences of Nigerian students through semi-structured interviews. The qualitative strand enabled participants to express their feelings further and describe stories and key incidents with reference to their challenging encounters (Silverman 2013). The qualitative design also helped to explore, in more depth, some of the findings of a survey, examining experiences around challenges (Conn 2001).

The interview questions (see Appendix 4) aimed to accomplish the following:

1. To explore key incidences of the challenges that Nigerian students experience in their academic and everyday lives, starting with the data from the results of the questionnaire survey, particularly selecting questions on the basis of “very challenging” and “extremely challenging” situations. This allowed for an in-depth understanding of the key challenges experienced around specific information literacy, socio-cultural, and everyday life experiences.

2. To explore what existing support mechanisms are already in place in the universities where interviewed students studied and explore whether these were adequate and effective.
3. To explore with the students, support mechanisms that address both academic and everyday life challenges that Nigerian students encounter that are currently not in place in Scottish universities. What gaps did exist for those students, and how could they be addressed, or what additional support was required?

It was also important to examine individual perspectives because Nigerian students come to study in Scottish universities from a wide variety of geographical areas, and there could be differences in the way in which certain challenges are experienced among the population studied. For example, villages in the rural areas of Nigeria lack facilities and poor information infrastructure, which may create additional information literacy challenges for students who arrive from these geographic areas. Thus, it was important to explore the challenges Nigerian students encountered, not necessarily as a homogenous group, as previous experiences may not be the same for all (Baro et al 2009 and Simisay et al 2010).

The qualitative strand adopted a descriptive narrative design and the Critical Incidence Technique (CIT) to collect data. Descriptive narrative research entails inviting individuals to share their personal stories and experiences and aiming to extract meaning from these recounted experiences (Creswell 2003, Berrios and Lucca 2006). The Critical Incident Technique (CIT) involves events that participants consider to be significant (Kostamo et al 2019). It can be used as an effective technique for exploring the participants' immediate past and identifying significant incidents of human behaviour related to a specific phenomenon (Ikkoja-Odongo 2002). The Critical Incidence Technique was used to explore key incidents experienced by Nigerian students with regard to the challenges they face in their academic, socio-cultural, and everyday lives. The CIT technique permitted the analysis of the context and included information about:

1. The backdrop (what happened before the incident).
2. The actual event.
3. The outcome (what happened or did not happen because of the event).

The semi-structured interviews were conducted face-to-face and lasted approximately 40-45 minutes.

Similar to the questionnaire structure, the interview followed the same key thematic areas but aimed to elaborate experiences further and explore key support mechanisms as explained above:

- a. Academic self-efficacy: The academic self-efficacy questions addressed questions on the use of academic sources to conduct research and how students felt overall about their academic self-efficacy, exploring key incidents of learning and challenges from the context of their learning and assessment experiences. For example, indicative questions included: When you started your course programme at the university, did you experience any academic challenges? Can you please discuss with me these academic challenges? How do you deal with these challenges? Do you seek support from anywhere?
- b. Academic information literacy: The academic information literacy questions explored how students search for academic literature, examined the most effective methods students have adopted in their search for academic information, and examined their overall confidence around their information literacy skills, as well as challenges around them with reference to key stories and experiences they encountered, as well as suggestions for further support.
- c. Everyday life information literacy: The everyday life information literacy section of the interview included questions asking the participants to explain the most common problems or obstacles they have encountered while seeking information needed in their everyday lives. It explored whether students sought support from anywhere with regard to their everyday information needs and how they dealt with any challenges they encountered.
- d. Academic socio-cultural challenges: The academic socio-cultural adaptation questions focused on the students' experiences with academic difficulties and

whether they were related to any socio-cultural differences. The interviewer further encouraged the students to share information about their sources of support after asking them if they sought support from anyone in relation to any socio-cultural issues. Students were also asked what measures the university could take to help them deal with any academic socio-cultural difficulties. Finally, students were also asked to give recommendations on how the university can implement strategies to eradicate these challenges.

- e. Everyday socio-cultural adaptation challenges: The everyday life socio-cultural adaptation challenges section of the interview explored the possible challenges likely faced by Nigerian students resulting from socio-cultural differences between Scotland and Nigeria, as well as other subtle socio-cultural differences and everyday life experiences that may be inherent in specific geographical regions of Nigeria.
- f. Language and communication challenges: The language and communication challenges section of the interview asked the participants if their communication skills have helped them in relating with their teachers, course mates, friends, and people in general. It also explored problems or barriers in communicating with others in their academic studies and examined whether this had any impact on academic performance or progression. Finally, it encouraged participants to think about their culture and consider whether they experience any challenges that emanate from language and communication differences and how these could be overcome.

Therefore, the semi-structured interview style was useful for following a consistent but broad thematic structure that matched the key themes of the survey but, at the same time, allowed the participant's story to flow naturally. The participants were encouraged to open up and express themselves via their stories in this style of interview (Rossman and Rallis 2003). Participants were given ample opportunity to tell their stories without being interrupted unless they were deviating from the research objectives. In order to obtain in-depth answers from participants and to gain more understanding of their experiences, probing questions were also asked

(Ritchie et al 2013), and further clarification was sought when meanings were not clear (Silverman 2016). Examples of probing questions, amongst others, included the following:

1. How do you use academic sources to conduct research?
2. If you are required to use one source of information, what would it be and why?
3. Describe how your information literacy skills have helped you to address the challenges in your academic work.
4. When thinking about your own culture, do you experience any challenges in your everyday life on the basis of social or cultural differences?

At the end of each interview, every participant underwent a debriefing session for the purpose of clarification, verification, and authentication.

3.4 Reliability of the Instruments

To determine the reliability of the survey questionnaire, which comprised six subscales, the test-re-test reliability method was adopted. A simple random sampling technique was employed to select a sample of 20 Nigerian students from Scotland (who were part of the study) for the reliability test. The researcher administered the instrument to these 20 Nigerian students, reassuring them of confidentiality, and they were requested to be as honest as possible in their responses. After an interval of three weeks, a re-test was given to the same set of students using the same instrument with a reversed arrangement of the items to guide against easy recall. The initial and re-test scores of the sample were analysed with a correlation test; specifically, the Pearson Product Moment correlation test was used to determine the coefficient value. Thereafter, the internal consistency of the instruments was determined in order to ascertain the reliability of each section of the instrument and how the different sections were positively correlated to one another. A test for inter-item consistency was carried out using Cronbach's (1951) Alpha reliability coefficient with a threshold of 0.70 set by Nunally (1978).

In order to ensure the validity and reliability of the interview process, member checking, also known as the respondent validation technique, was explored to determine the credibility of the result of the qualitative aspect of the study (Birt et al 2016). Credibility has to do with establishing the truth of the findings of a study. The researcher ensured that all interviews were recorded, and after transcribing the data, the material was sent to the respondents to get their approval for the transcript material in order to check for accuracy in the reporting of their experiences. This enabled respondents to appropriately respond to the interpretation given to the data by the researcher or respond to their comments on the data (Frey 2018). The essence of this process was to ensure the study's validity, reliability, and credibility in terms of data collection, analysis, and reporting. The core of high-quality qualitative research is determined by its trustworthiness (Birt et al 2016). Member checks as a credible means of ensuring trustworthiness in qualitative research have been supported by Candela (2019), Frey (2018), and Birt et al (2016).

3.5 Sample and Sampling Techniques

This section discusses the sample sizes and the sampling techniques employed for the collection of quantitative and qualitative data in the two stands of the study.

3.5.1 Quantitative Sampling Technique

The population selected for the survey consisted of all Nigerian students currently studying in Scottish HE institutions. According to the Scottish Government, the population of Nigerian students in higher education institutions in Scotland was 5,275 in the 2021/2022 academic year (HESA 2022).

A good sample must possess the vital qualities of representativeness, accuracy, and precision, which are required for valid conclusions and generalisations about the population (Kpolovie 2011). An appropriate sample size that accurately represents the population under study when nonprobability sampling procedures are used can be determined using a mathematical formula developed by the Research Division of the National Education Association (NEA) in the United States of America. NEA

indicates that when the size of the research population is known and random sampling procedures are to be applied in drawing the sample from the broader population of the study, the minimum sample size can be computed using the following formula. The formula presented below is adjusted for this study using the known overall population numbers of Nigerian students in Scotland from 2019/20, as previously explained above:

$$s = \frac{X^2 NP (1 - P)}{d^2 (N - 1) + X^2 P (1 - P)}$$

s = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size. (5,275)

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

D = the degree of accuracy expressed as a proportion (.05).

By substituting the appropriate sample size, the above population can be obtained as follows;

$$S = \frac{3.841 \times 5275 \times 0.5(1-0.5)}{0.05^2(5275-1) + 3.841 \times 0.5(1-0.5)}$$

$$S = \frac{1589.21375}{4.135 + 0.96025}$$

$$S = \frac{1589.21375}{5.09525}$$

$$S = 359 \text{ (Krejcie and Morgan 1970:609).}$$

From the above analysis, it was concluded that the sample required for the survey was 359 students. This number of students was obtained through a nonprobability sampling procedure. Specifically, purposive quota sampling was adopted. This procedure involved the selection of a certain quota of representative cases from various segments of the population to compose the sample. Quotas are established based on the identifiable characteristics of the entire population, allowing for the

generalisation of findings (Kpolovie 2012). To improve representativeness, we controlled for dimensions pertinent to the study and ensured that those with estimable distribution in the population were included to achieve a balance sample. In addition, snowball sampling was utilised for this study. Snowball sampling involves researchers initially collecting data from a subset of subjects within the target population and subsequently encouraging them to share the survey invitation or introduce other relevant participants. While this method may raise concerns regarding its representativeness, it proves beneficial in gathering data from participants who are not easily accessible. It has been demonstrated that, when implemented correctly, snowball sampling can be a potentially effective technique in social research. Furthermore, certain convenience sampling methods, like web-based surveys, may encounter challenges in distributing questionnaires to specific groups and attaining a satisfactory number of responses. In such cases, snowball sampling might offer a more effective means of distributing the survey to a broader audience. (Baltar and Brunet 2012, Noy 2008).

This method proved particularly suitable for the research context, where participants were reached through administrators of Nigerian society groups across various online platforms. By leveraging the network of group administrators, the snowball sampling technique facilitated access to Nigerian students who are studying in different higher education institutions in Scotland, which is typically challenging to reach through conventional sampling approaches due to the diverse locations of the different universities.

The questionnaire was disseminated by reaching out to various administrators of Nigerian student society groups on social media platforms such as Facebook, WhatsApp, and Telegram. These groups were associated with fifteen higher education institutions in Scotland, as listed below:

1. University of Glasgow
2. University of Aberdeen
3. University of Edinburgh

4. University of Strathclyde
5. University of Dundee
6. Heriot-Watt University
7. University of Stirling
8. Edinburgh Napier University
9. Robert Gordon University
10. Glasgow Caledonian University
11. Abertay University
12. University of the West of Scotland
13. Queen Margaret University
14. University of the Highlands and Islands
15. University of St Andrews

A request to invite all participants was made through the administrators of all Nigerian society groups in the above Scottish universities. Although not all Nigerian students belong to these groups, a balance in terms of demographic characteristics such as gender, year of study, new students versus continuing students, and undergraduate and postgraduate students was ascertained.

In addition, it is important to mention that not all Nigerian student societies are present on Facebook. A portion of these societies also maintain active group profiles on alternative platforms such as Telegram and WhatsApp. While certain administrators were reached through Facebook, others were contacted via WhatsApp and Telegram channels. Below are some Nigerian student societies that were contacted via Facebook.

The different Nigerian societies on Facebook in Scottish higher education institutions are shown below with their various links (Table 3.1).

Table 3.1: Nigerian Societies on Facebook

Name of Nigerian Students' Society	Links
Robert Gordon University	<u>RGU Nigerian Students Society Facebook</u>
University of Aberdeen	<u>Nigerian Student Society Aberdeen - Home Facebook</u>
University of Dundee	<u>University of Dundee Nigerian Students' Society (NSS) Facebook</u>
University of Edinburgh	<u>The University of Edinburgh Nigerian Society Facebook</u>
University of Glasgow	<u>Glasgow University Nigerian Students' Society - Home Facebook</u>
<u>Glasgow Caledonian University</u>	<u>https://www.facebook.com/nss.gcu/ss</u>
University of the West of Scotland	<u>https://www.facebook.com/uwsnigeria/</u>
Heriot-watt University	<u>Heriot-Watt University Nigerian Scholars 2010/2011 Facebook</u>
University of Strathclyde	<u>(20+) Facebook</u>

Administrators of Nigerian society groups from the following universities were contacted via WhatsApp and Telegram, given that these Nigerian groups were not located on Facebook: University of St. Andrews, University of the Highlands and Islands, Queen Margaret University, Abertay University, Edinburgh Napier University, and the University of Stirling.

Broadly speaking, Nigerian societies in universities (often referred to as the Nigerian Students' Associations) have the objective of promoting and defending the welfare needs of students in university communities (Peter and Ebimobowei 2015). The associations serve as the voice of the students and they look after students' welfare

and promote a friendly environment for academic progress, including teaching, learning, social, and research activities (Peter et al., 2015). Student societies have the responsibility of managing the affairs and interests of students in institutions where they exist (Ogunbodede, Idowu, and Odeyemi 2020). Alada (2011) noted that student societies help students develop their organisational abilities and assets to prepare them for greater responsibilities. They also engage with the socio-economic and political spheres of the institution and society at large. David (2013), for example, discusses the following aims of societies around:

- a. Students' welfare: such as expressing solidarity in support of a member during an incidence of death.
- b. Social activities: such as cultural day activities of Nigerian students, are championed by these societies.
- c. Community service: they coordinate and volunteer activities such as blood donations and organising environmental awareness campaigns, amongst others.
- d. Information Dissemination/Orientation: they create awareness for new and old students through notice boards, banners, and others, and also organise orientation on ethical conduct and general aspects of the institution to its members for effective functioning, among others.
- e. Economic activities: they raise funds through dues and other constitutional means to run the affairs of the societies.
- f. Give awards to deserving members who are hard-working, and also confer awards of excellence to lecturers, staff, student leaders, and people in government who have distinguished themselves.

The National Association of Nigerian Students (NANS) is the umbrella body of all Nigerian students in higher institutions at home and abroad. It is an advocacy platform for the improved welfare of Nigerian students. It was established in 1956 and is the largest student movement in Africa (NANS Official 2021). Nigerian students advocate for social justice, good governance, and a better educational system, among others, in their home country.

3.5.2 Qualitative sampling

Participants for the qualitative strand involved a total of 20 Nigerian students in Scottish higher education institutions. They were selected for the study through the list of survey respondents. As explained earlier, the survey used a nonprobability purposive quota sampling procedure that sought to extrapolate a certain quota of representative cases from various segments of the population. This quota was established based on known characteristics of the entire population, allowing for findings to be generalised (Kpolovie 2011). A minimum of one willing student was chosen from ten higher education institutions in Scotland, and a maximum of two students were selected from five other higher education institutions in Scotland to get the required number (20) for a wider spread.

3.6 Administration of Data Instruments

As explained above, primary data collected consisted of responses from the study respondents/participants through a questionnaire survey and semi-structured interviews.

3.6.1 Survey Procedure

The online questionnaire (Appendix 1) was disseminated to the respondents through administrators of Nigerian society groups on different social media platforms. The questionnaire survey was opened in September 2021 for a period of two months, and the results were collected using the survey tool JISC Online Surveys.

3.6.2 Interview Procedure

The participation of interviewees was on a voluntary basis, and they were given the freedom to opt out of the study at any stage. The researcher reassured the students that there was no risk of criticism and that no negative consequences would result in the event of declining participation. Interviews were mostly conducted via video calls via Zoom since it was not easy to meet all the interviewees physically due to distance. Through video calls, the interviewer could judge the nonverbal clues or behaviour of

the respondents. These cues provided additional information and context during the interview and reinforced or contradicted what was said in words for a balanced judgement. The purpose of the qualitative research strand was to interact with the participants directly in order to explore their perspectives, opinions, and challenges around the key areas of the study. The interviews allowed the researcher to achieve a deeper understanding of the socio-cultural and information literacy challenges of Nigerian students, and the semi-structured nature of the interview protocol included a checklist with the key issues and questions (Darmer 1995, Bryman and Bell 2007).

The interviews lasted 45–50 minutes, following a semi-structured interview guide. Prior to data collection, participants were briefed on the study's objectives and the significance of their involvement. Participants were assured of the confidentiality and anonymity of their data. After all these processes, the interview questions were presented to the participants, and their responses were recorded. Additionally, follow-up questions not strictly outlined in the interview guide were asked for clarification where expressions were not clear. Each participant underwent a debriefing session at the conclusion of the interview to further clarify, verify, and authenticate their responses.

3.7 Data Analysis

3.7.1 Quantitative Component

For the quantitative data analysis, descriptive statistics, such as mean and median values, as well as standard deviation, were used. In addition, inferential statistics, i.e., regression analysis, was used to test the hypotheses, using the Statistical Package for Social Sciences (SPSS) at a 0.05% level of significance. Statistical relationships were explored between the independent variables (i.e., academic information literacy challenges, information literacy challenges, socio-cultural challenges, academic socio-cultural challenges, everyday life socio-cultural challenges, everyday life information literacy challenges, and language and communication challenges) and the dependent variable, academic self-efficacy.

3.7.2 Qualitative Component

In terms of the analysis and interpretation of the qualitative data, participants' interview data were audio-recorded and transcribed, and thematic coding employing template analysis was adopted. Thematic coding is useful to a set of texts, such as interview transcripts, which enable to directly examine the data to identify common themes, topics, and ideas. It enables the identification, analysis, and interpretation of patterns of meaning by initially sorting data into broader themes (Braun and Clarke 2012, Maguire and Delahunt 2017).

Thematic coding is a widely used qualitative research method that involves identifying, analysing, and reporting patterns (themes) within data. This approach is highly flexible, accommodating both inductive and deductive analyses, making it suitable for a broad range of research questions and epistemological perspectives (Braun and Clarke 2006; Nowell et al 2017).

Understanding the core of thematic coding requires discussing its detailed and systematic process. Researchers begin by familiarising themselves with the data through repeated readings to deeply immerse themselves. This initial step is crucial for generating initial codes by identifying interesting and meaningful features in the data. These codes are then collated into potential themes, which are subsequently reviewed to ensure they accurately represent the data. Once refined, these themes are clearly defined and named. The final stage involves producing a report that weaves together the analytic narrative and data extracts to tell the story of the data comprehensively (Nowell et al 2017).

Thematic coding offers several significant advantages. Its flexibility allows it to be applied to various research questions and theoretical frameworks. This method can provide rich, detailed descriptions, offering nuanced accounts of complex phenomena (Braun and Clarke 2006). Additionally, thematic coding's adaptability makes it suitable for both novice and experienced researchers.

Despite its benefits, thematic coding has notable limitations. A key issue is its inherent subjectivity, as the process involves the researcher interpreting complex

and often ambiguous information. Thematic analysis, a popular method for analysing qualitative data, requires researchers to identify patterns and themes within the data. However, what one researcher considers a significant theme might be missed or interpreted differently by another. As Braun and Clarke (2006 p.80) stated, "the themes identified are not just latent within the data but are actively created by the researcher through their engagement with the data." This active creation is influenced by the researcher's own experiences and perspectives.

Conversely, situating the subjective nature of thematic coding within the broader theoretical framework reveals that the constructivist paradigm posits that knowledge is co-constructed by the researcher and participants (Charmaz 2006). From this perspective, the researcher's subjectivity is not necessarily a limitation but an integral part of the knowledge production process. This co-constructive process requires careful management to avoid over-imposing the researcher's views on the data.

The resource-intensive nature of thematic analysis also poses a significant challenge. Thematic analysis requires a substantial amount of time and effort, particularly in the coding and theme development stages, making it resource-intensive (Nowell et al 2017). This can be demanding for researchers, especially those with limited time and resources.

Moreover, there is a risk of losing context when breaking down data into codes and themes. The context in which the data was produced can be overlooked, potentially leading to misinterpretations (Vaismoradi, Turunen, and Bondas 2013). This reduction of rich, detailed accounts into mere themes may not fully capture the depth and complexity of participants' experiences and perspectives (Braun and Clarke 2006; Nowell et al 2017).

Another limitation is the lack of detailed methodological guidance compared to other qualitative methods like grounded theory or ethnography. This scarcity can leave researchers, especially novices, uncertain about the best practices for ensuring rigour and trustworthiness in their thematic analysis (Guest et al 2012; Nowell et al).

To address these limitations, researchers can engage in reflexive practices, where they continuously reflect on their role and influence in the research process (Finlay 2002). Acknowledging the researcher's positionality and background can help mitigate biases. Enhancing the credibility and accuracy of the analysis involves member checking, which means sharing the findings with participants to verify the accuracy and resonance of the results with their experiences. According to Lincoln and Guba (1985), member checking is a crucial technique for establishing credibility in qualitative research. By involving participants in reviewing the themes and interpretations, the researcher aims to ensure that the representations in the results accurately reflect their perspectives and experiences. To further mitigate the limitations, techniques such as peer debriefing and triangulation of data sources can help mitigate subjective biases and enhance the trustworthiness of the findings (Nowell et al 2017).

On the basis of the above, and prior to coding the data of this study it was important to recognise my own position as both a researcher and a Nigerian student who has experienced similar situations as the participants, which means that my background may have influenced the coding process. My understanding and interpretation of the data may have been shaped by my personal experiences and preconceptions, potentially affecting the objectivity of the analysis. To mitigate this, however, I engaged in triangulation of data, member checking, and reflexive practices by continually questioning how my position and assumptions might be influencing the coding process. Reflexivity, where researchers continuously reflect on their role and influence in the research process, is essential (Finlay 2002).

A comprehensive explanation of the thematic coding for the first participant is provided in Appendix 5.

The initial level of analysis involved grouping interview segments into the main key themes of the study, which included academic self-efficacy, academic information literacy, everyday life information literacy, academic socio-cultural challenges, everyday life socio-cultural adaptation challenges, and language and communication

challenges. This first analysis illuminated various hidden contextual meanings related to the themes of the study. The interview transcripts were carefully examined, with multiple readings conducted to identify subthemes within the data, highlighting underlying concepts and their occurrence. The related meanings or codes were then grouped and reorganised to generate additional subthemes.

For instance, if someone mentioned a specific challenging situation related to looking for information on finding suitable foods, such a situation would be added as a sub-theme, grouped under the broader theme of socio-cultural adaptation challenges.

Table 3.2 provides an indicative overview of the coding process and outcomes and presents the key constructed themes addressing the main challenges faced by the participants together with sub-themes and support mechanisms. Each theme's sub-themes represent specific issues encountered, while the support mechanisms suggest possible solutions and interventions to address these challenges.

The five themes included the following areas:

1. Academic Self-Efficacy Challenges. This theme encompassed various aspects that affect students' confidence and ability to manage their academic tasks. Common issues included finding information and utilisation of academic databases, lack of confidence, lack of referencing skills, and the inability to search for information sources. The same theme also included support mechanisms to address these challenges, with suggestions such as information literacy classes, academic writing classes, study groups, and academic support outside of lecture.

2. Academic Information Literacy Challenges

This theme involved difficulties with accessing, evaluating, and using academic information sources effectively. Participants highlighted the need to develop better paraphrasing, referencing, and information searching skills, as well as online searching skills. Other issues included a lack of confidence, proficiency in research methods, and the inability to manage tight academic schedules. The same theme addressed recommended support mechanisms such as information literacy classes,

academic writing classes, study groups, time management classes, and academic support outside of lecture aimed at improving information literacy skills.

3. Everyday life information literacy challenges and socio-cultural adaptation challenges

This theme addressed the participants' difficulties in managing everyday life information and adapting to a new socio-cultural environment. Issues included challenges regarding lack of information in finding social opportunities and places of worship, accommodation problems, balancing studies with work and social life, and finding African food. Additional evidence by participants identified a focus on addressing the challenges mentioned through several key support mechanisms. These included establishing information desks to handle queries, providing comprehensive student support services as central information points, and having the university act as guarantors to assist students in securing accommodation. Additionally, training on time management skills and organising social events by universities were crucial.

4. Academic Socio-Cultural Challenge

This theme included challenges related to adapting to different academic and socio-cultural environments. Participants reported difficulties with lack of critical thinking skills, difficulties with paraphrasing, lack of confidence, and lack of class participation/discussions. Support mechanisms to help with these challenges included promoting active participation in class and implementing information literacy classes and study groups.

5. Language and Communication Challenges

This category focused on difficulties related to language and communication, which significantly impact academic performance and social integration. Participants mentioned issues such as understanding different accents, lack of confidence in communication, and lack of participation in class discussions. The suggested support mechanisms highlighted the need to encourage active participation in class and

recommendations to improve communication skills, such as the use of transcription services.

Table 3.2: An indicative overview of the coding process

Main Theme		Sub theme	Support Mechanism	Indicative examples of participants' responses
Academic self-efficacy		<ul style="list-style-type: none"> -Finding information -Lack of confidence -Lack of referencing skills -Inability to search for information sources 	<ul style="list-style-type: none"> -Information literacy classes -Academic writing classes -Study groups -Time management classes -Academic support outside of lecture 	<p>Participant 7: "When searching for specific information, I use the Boolean operator to narrow my search".</p> <p>Participant1:" Yes, I do. You know some times; you don't even feel confident about your academic capabilities or how to attain your academic goals. So, I am really not confident some times. But that is why we keep learning.</p> <p>Participant 1:" I always also get the referencing wrong, but I am getting better at it I think it's really different from the way we referenced at my university way back in Nigeria"</p> <p>Participant 15: "I do not feel I have the requisite abilities to search for information promptly since it is crucial to get quality information sources quickly in order to meet assignment deadlines".</p>
Academic information literacy		<ul style="list-style-type: none"> -Lack of paraphrasing skills -Lack of referencing skills -lack of information searching skills -Lack of confidence in academic abilities -Tight academic schedule 	<ul style="list-style-type: none"> -Information literacy classes -Academic writing classes -Study groups -Time management classes -Academic support outside of lecture -Tutoring and buddy programmes 	<p>Participant 2: "Sometimes, I find it difficult to paraphrase without losing the message the author is trying to convey. You know you can paraphrase in a way that the meaning of what you are trying to say, become different from the original source. So, you have to be very careful".</p> <p>Participant 19: "I cannot correctly reference, cite, and arrange my work in accordance with the course requirements".</p> <p>Participant 1:" I must also state that my information searching skills aren't that great as I am trying to improve in that aspect.</p> <p>Participant 14: "I do not have enough confidence in my</p>

				<p>academic abilities. I remember I once had a deadline to complete an assignment but was behind schedule because I didn't know how approach the task."</p> <p>Participant 15: "My academic schedule is really tight, and so I really don't have time to socialise as I would love to".</p>
Everyday life information challenges and socio-cultural adaptation challenges		<ul style="list-style-type: none"> -Lack of information on social events and finding places of worship -Difficulty in finding accommodation -Inability to balance study and social life -Finding African food 	<ul style="list-style-type: none"> -Information desks -Student support services (non-academic) Housing guarantor by the university -Training on time management skills organization of social events by universities 	<p>Participant 8: "I didn't know where to go for Sunday worship. I had to use Google to find places of Christian worship near me".</p> <p>Participant 10: "When I first arrived, I was looking for a church to attend but couldn't find any. I had to use Google map to ask for places of worship".</p> <p>Participant 2: "I can't seem to get accommodation, which is a significant problem. I live with a friend presently since I don't have a space of my own. It's a difficult for me. Most landlords don't rent to overseas students for unknown reasons".</p> <p>Participant 11: "Finding time to socialise is difficult due to my intensive study hours".</p> <p>Participant 17: "Not being able to get Nigerian food consistently and at a cheap rate is a challenge for me. Having my traditional meals brings a sense of invigoration and comfort, which helps to reduce the issue of homesickness thereby making the adaptation process much easier".</p>
Academic socio-cultural challenges		<ul style="list-style-type: none"> -Lack of critical thinking skills -Difficulties in paraphrasing -Lack of confidence -Lack of class participation/discussions 	<ul style="list-style-type: none"> -Information literacy classes -Encourage active participation -Study groups 	<p>Participant 1: "Critical thinking and writing are not concepts that were taught in universities way back in Nigeria. It's something new to me".</p> <p>Participant 18: "I do not feel confident about my abilities to paraphrase accurately as I always struggle to find the right vocabulary to us in my essays".</p> <p>Participant 9: "Sometimes I do not believe that I can</p>

				<p>achieve my academic goals as I am not really confident in my academic abilities”.</p> <p>Participant 9: “I really don’t like to ask questions in class because you don’t want to come across as someone who is not intellectually sound [...] People might think you are asking dumb questions”.</p>
Language and communication challenges		<p>-Accent difficulties</p> <p>-Lack of class participation</p>	<p>-Transcription services</p> <p>-Encourage active participation in class</p>	<p>Participant 4:” I sometimes do not understand what is being taught because of the accent of the lecturer”</p> <p>Participant 20: “I think most people do not contribute or ask questions in class because they don’t want to be put on the spot”.</p>

3.7.3 Justification of Using Mixed Methods in this study

The mixed methodology employed in this study was crucial for gaining a comprehensive understanding of the challenges faced by Nigerian students in Scotland. By integrating both quantitative and qualitative approaches, this study was able to leverage the strengths of each method to provide a more robust analysis. The quantitative data offered a broad view of the patterns and relationships among the variables, while the qualitative data provided in-depth insights and a contextual understanding of these patterns.

The survey results from this study identified significant challenges and correlations among variables such as academic self-efficacy challenges, academic information literacy challenges, everyday life information literacy challenges, socio-cultural adaptation challenges, and language and communication challenges. These quantitative findings formed the basis for the subsequent qualitative phase of the research, where interviews were conducted to further explore and contextualise these challenges. Employing the mixed methodology approach, as described by Greene et al. (1989), enabled a comprehensive analysis by integrating quantitative and qualitative insights.

For example, the survey results indicated that academic information literacy challenges were significantly correlated with academic self-efficacy challenges. The results from the interview further contextualised the findings from the quantitative data, revealing that participants encountered various academic information literacy challenges, including a lack of referencing skills and finding the required information for their studies. To delve deeper into these findings, interview questions were designed to ask participants to narrate their specific challenges with academic information literacy. For instance, one interviewee offered a more detailed account, which exemplifies this difficulty in finding an adequate number of resources within a limited timeline: "There was this assignment that I had to submit within two weeks. I searched various sources for information that could help me complete the

assignment, but I found only two, and they contained similar details. I had to read all the documents fully to ensure that I understood the content in order to complete the assignment, which was about 15 pages. I had to write a 15-page document and read only two articles. This made it difficult to have enough references. I also had to search for documents that could help me reference my work, as the referencing style in my school is new to me, and this was a big challenge.”

The qualitative data provided a deeper understanding of these experiences and the meanings behind the quantitative findings, illustrating the practical implications of the survey results. This approach aligns with the qualitative research techniques described by Denzin (1978), which facilitate a deeper and more contextualised interpretation of the quantitative data. Denzin’s approach to qualitative research emphasises the importance of capturing the richness and complexity of social phenomena, which often cannot be fully understood through quantitative data alone. This approach, rooted in the concept of triangulation, involves using multiple methods, data sources, theories, or investigators to cross-check and validate findings. By employing data triangulation, which combines qualitative and quantitative methods, researchers can enhance the credibility and robustness of their outcomes.

In addition, the results from the questionnaire survey indicated that socio-cultural adaptation challenges were significantly associated with academic self-efficacy challenges. The results from the interview further contextualised the quantitative data results, revealing that participants faced various socio-cultural challenges, including finding affordable Nigerian food, finding social opportunities, and securing accommodation. For example, one interviewee recounted an experience where, upon viewing an accommodation, they were asked if they were an international student. When they responded affirmatively, they were informed that they could not secure the accommodation without a guarantor. The participant expressed confusion, questioning how a new international student could be expected to have a guarantor. They further stated that this greatly impacted their studies as they had to devote

more time to searching for accommodation instead of focusing on their academic work.

These qualitative insights highlighted the significant influence of socio-cultural factors on their academic engagement and overall well-being. For instance, the frequent difficulty in finding accommodation emerged as a notable barrier, affecting participants' ability to concentrate on their studies and consequently impacting their academic performance.

3.8 Linking to Lloyd's Theory on Social Sites

The mixed methodological approach aligns well with Lloyd's theory of social sites, which posits that the social and cultural context significantly influences individuals' practices and experiences. According to Lloyd (2010), a "site ontology" refers to the various social sites that have specific architectures governing practices within them. In this study, the transition from one social site (the home country) to another (the host country) significantly impacted the students' information practices and their feelings of academic self-efficacy.

When Nigerian students move to Scotland, they are shifting from one social site to another, each with its own set of cultural norms and institutional structures. This transition involves adapting to new academic resources, support systems, and social practices, which can create significant challenges. For example, students might face difficulties in locating and accessing relevant academic resources, understanding different teaching methods, or managing practical aspects of their new environment, such as finding affordable food or suitable housing.

The mixed-methods approach combining quantitative surveys and qualitative interviews captures these challenges effectively. The quantitative findings identified general patterns and significant relationships between academic self-efficacy challenges and the various thematic variables in the study. In contrast, interviews provide rich, contextual narratives that elucidate how these challenges manifest in students' daily lives and academic experiences. For instance, qualitative data might reveal specific instances of difficulties, such as adjusting to a new academic

environment or coping with cultural differences, which help explain the quantitative findings.

The change from Nigeria to Scotland also affects students' academic self-efficacy. This transition often leads to decreased confidence due to unfamiliarity with the new academic environment and perceived challenges. While surveys might show trends of reduced self-efficacy, interviews offer deeper insights into how students perceive their abilities and manage these new expectations. This shift is influenced by the different social norms and expectations of the new site, affecting how students approach their academic tasks and perceive their own capabilities.

By integrating both quantitative and qualitative data, the study provides a comprehensive view of how the transition from Nigeria to Scotland impacts Nigerian students. These mixed methods approach not only validate findings but also provide a nuanced understanding of how the new social site influences students' practices and self-efficacy. The integration of Lloyd's theory of social sites helps to frame these experiences, demonstrating the relevance of the theory in explaining the students' adaptation process.

These qualitative insights helped to explain the survey findings in the context of Lloyd's theory, showing how the social site of Scotland, with its unique cultural and environmental characteristics, impacted the students' practices and self-efficacy (Lloyd 2010).

3.9 Triangulation

Triangulation in research is a method used to increase the credibility and validity of research findings by combining multiple methodologies, data sources, theories, or investigators. This technique is particularly significant in mixed methods research, which combines qualitative and quantitative approaches to enrich the understanding of a research problem. Researchers utilise this technique to examine inconsistencies and unexpected discrepancies in the data.

Triangulation is also particularly effective in addressing complex research questions that cannot be fully explored using a single method. Mixed methods research,

through methodological triangulation, allows researchers to examine different facets of a research problem simultaneously. This approach is invaluable in fields such as the social sciences, where research questions are often multi-dimensional and require a comprehensive analysis. Creswell and Plano Clark (2011) highlight how triangulation allows for a richer, more detailed examination of complex phenomena.

Data triangulation therefore helps to:

1. Improve the validity of the study.
2. Provide a comprehensive understanding of the research problem.
3. Explore diverse perspectives on the research problem.

3.9.1 Enhanced validity and credibility

Triangulation significantly enhances the validity and credibility of research findings. Noble and Heale (2019) emphasised that research triangulation aims to validate results by ensuring that findings are as close to reality as possible. By using multiple methods, researchers can cross-verify data, thus reducing biases and increasing the reliability of the results. Greene, Caracelli, and Graham (1989) highlighted that triangulation helps to counterbalance the limitations of one method with the strengths of another, leading to a more robust outcome. This is crucial in mixed methods research, where both qualitative and quantitative data need to corroborate each other to present a holistic view of the research problem.

One of the primary advantages of triangulation is that it allows for a more comprehensive understanding of the research problem. By integrating different methodologies, researchers can address various dimensions of a phenomenon. Quantitative data can provide generalisable results, while qualitative data offers in-depth insights into the context and underlying reasons behind those results. This complementary relationship between qualitative and quantitative data enriches the research findings, making them more robust and nuanced. This aligns with the complementarity purpose of mixed methods research, which aims to obtain a fuller

understanding by examining different facets of a phenomenon (Greene, Caracelli, and Graham 1989).

3.9.2 Reduction of Bias

Triangulation helps in identifying and mitigating biases in research. By utilising multiple data sources, it reduces biases related to sampling and procedures, as well as those introduced by individual researchers, thereby increasing both validity and credibility of the research process. Even when triangulation results in conflicting findings, researchers can confidently explain these discrepancies. Ultimately, improving the credibility and validity of research through triangulation boosts the researcher's confidence in their findings (Bans-Akutey and Tiimub 2021).

3.9.3 Increased Generalisability

The use of multiple methods in triangulation can enhance the generalisability of the research findings. Mixed methods research, by combining qualitative and quantitative approaches, can answer certain research questions that a single-method approach cannot. Quantitative methods provide generalisable data, while qualitative methods ensure that these findings are contextually relevant and accurately represent the studied phenomena. Combining both can thus provide more comprehensive and convincing evidence. (Guest and Fleming 2015).

3.9.4 Confirming Research Findings

One of the critical benefits of triangulation is the confirmation of research findings. Triangulation in research is crucial for confirming findings by using multiple methodologies, data sources, theories, or investigators to study a single phenomenon. This approach cross-validates results, ensuring they are not merely artefacts of a single method or perspective. The confirmation of research findings through triangulation significantly enhances the credibility and validity of the study (Denzin 1978). Bekhet and Zauszniewski (2012) provide an example where methodical triangulation was used to strengthen results by using both quantitative and qualitative approaches.

3.9.5 Application of Triangulation in the Study

This study adopted complementary triangulation, which enriches the research findings by allowing results from different methods to complement each other (Andrea 2022). Triangulation was manifested through the integration of quantitative and qualitative data to provide a comprehensive understanding of the challenges faced by Nigerian students. The quantitative findings identified significant correlations and relationships between academic self-efficacy challenges and the various thematic variables in the study. These findings were corroborated and enriched by the qualitative data, which provided detailed personal accounts and contextual insights into the specific nature of these challenges encountered by Nigerian students. In other words, qualitative data were explored to triangulate evidence, providing a full-circle analysis that was linked to the quantitative data and the statistical relationships found in the data.

For example, the quantitative data revealed that Nigerian students struggled with referencing skills. The interviews provided further context to these quantitative results, revealing specific challenges and experiences related to referencing skills amongst the participants. In addition, the quantitative data revealed that Nigerian students faced challenges in creating reference lists for different kinds of materials. The qualitative data expanded on this, with some students specifically mentioning that they missed assignment deadlines because they had to repeatedly revise their reference lists to meet the required standards, causing confusion and frustration. This qualitative insight highlights the practical implications of the quantitative findings, demonstrating how difficulties in academic information literacy affect students' academic experiences.

Overall, by combining these strands, the study used triangulation to validate the findings and offer a richer, more detailed picture of the challenges Nigerian students face. The quantitative data provided generalisable results, while the qualitative data

offered depth and context, ensuring a comprehensive understanding of the research problem.

3.10 Ethical Concerns

Central to this research endeavour was a firm dedication to employing ethically responsible methods and data analysis procedures to fulfil the research objectives. According to Bryman (2015), ethical integrity emanates from the systems and structures within the research framework, encompassing measures to prevent and mitigate potential ethical breaches throughout the research process. Punch (2014) further emphasises the importance of researchers in mitigating harm (non-maleficence) and fostering beneficial outcomes (beneficence) at every stage of the research process.

In this study, measures were employed to achieve these objectives and ensure that the outcome was firmly grounded in the analysis of the respondents' feedback. Initially, all participants were given a standardised consent form outlining the expectations of the survey and interview, as well as their rights as participants, before the administration process began (Hammersley and Trainou 2012). Within these terms, respondents were informed that their involvement would remain anonymous, a practice recognised by Babbie (2015) as essential in empirical research for upholding ethical standards and a means to promote candid and open evaluation.

3.11 The Study Limitations

The researcher is aware of some limitations that may have affected the conclusions that were drawn from this research. The findings of the study should be seen in light of the following limitations: Firstly, the researcher faced a difficulty meeting all respondents in person due to time constraints and the geographical distance of the various university students involved in the study. While some respondents were able to be reached in person, most engaged virtually through online methods, and qualitative interviews were conducted via video calls via Zoom. It is worth noting

that during online interviews, some interviewees encountered distractions that could hinder their full attention and engagement in the interview process. During these interruptions, the interviewer was able to promptly respond to external factors by temporarily suspending the interview, although virtual interviews cannot not always afford the same immediate visibility to such distractions. Overall, it was more difficult to build rapport and establish trust between the interviewer and interviewee as it would be in a face-to-face setting.

Furthermore, the study's use of twenty (20) participants, intended to represent all Nigerian students in higher institutions in Scotland, may be perceived as inadequate given the larger population of Nigerian students in Scotland. However, it is noteworthy that the study successfully achieved its objectives by adhering to the principle of saturation during the interview process. To address this limitation, the researcher suggests that future studies could involve a larger sample size by including at least four interviewees from each institution. This approach would help ensure a more comprehensive and representative view of the experiences and perspectives of Nigerian students in Scotland.

In relation to the survey, it was initially envisaged that a total of 359 respondents would be included. However, because the survey was distributed via online society groups by the administrators, it was only possible to finally receive the responses from a total of three hundred and four (304) Nigerian students. Therefore, the sample in the quantitative aspect of the study may not be entirely representative, although originally it followed scientific calculation guidelines (the Krejcie and Morgan formula). This allowed only for some generalisability to the larger population of Nigerian students, and with caution, as there was a limitation in terms of achieving true representation. In addition, due to anonymity and confidentiality restrictions, it was not possible to collect data on which specific university each respondent attended. That information could be potentially linked to negative individual student perceptions associated with a particular university, and the focus of this study was to develop a collective understanding of the challenges experienced by Nigerian students studying in Scottish universities in general. Furthermore, the study may

have been affected by inherent weaknesses associated with the way in which the online survey was distributed via online social media, which can introduce bias into the data (e.g., not all students would use social media community groups).

Lastly, the interviews only encompassed students from 16 states in Nigeria, although Nigerian students could potentially come from 36 different states. This means that the perceptions and sentiments of students from these 16 states may not provide a comprehensive representation of the broader spectrum of Nigerian students, given the socio-cultural distinctiveness and diversity of each state in their adaptation to various issues. Nevertheless, it is important to emphasise that the interviewees from the 16 states were chosen from various geographic regions across Nigeria, encompassing the north, south, east, and west.

3.12 Pilot Study: Evaluation of the Questionnaire Instrument

A pilot study was conducted to collect primary data, and three Nigerian students studying in Scottish higher education institutions participated in the study. "One of the importance of conducting a pilot study is to develop and test the adequacy of the research instruments, assess feasibility, and establish if the sample frame and technique are effective" (Teijlingen and Hundley 2002 p. 1-4). The pilot study facilitated testing the students' responses during the interview process, ensuring that the questions were clear and that the data obtained was suitable and accurate (Curwin and Slater 2008). The outcomes of the pilot study are presented below.

Time Duration

All three students stated that it was very easy for them to complete the questionnaire within the allocated time of 35 minutes.

Simplicity of the Questionnaire

The first student mentioned that the questions were very easy to understand and, most importantly, very relatable. The definition of information literacy used was helpful, and other variable terms were well understood by all three participants.

Confidentiality

The second student mentioned that she was glad it was an anonymous survey because it was easier for her to be truthful with her responses.

Interface

All respondents stated that the questionnaire was easy to understand, and all three students agreed that the interface was user-friendly. In response to an open-ended question, one of the students stated that she feels homesick because of the lack of Nigerian food, as this can influence the way in which Nigerian students connect on a social level in everyday life, and that this may affect the students by making them feel homesick. This aspect, which was a response to the social-cultural adaptation section of the questionnaire, was chosen as extremely challenging by the student. It was understood that food-related issues may present an important barrier, and therefore this was an aspect that could be explored in more detail in the main study.

Additional Questions

An amendment was made after the pilot study to include more open-ended questions on academic and everyday life. This was achieved by prompting participants to narrate an instance when they urgently required information to identify their most crucial information needs. The prompt responses were also amended from not at all challenging to extremely challenging, representing the highest number on the scale.

CHAPTER 4 - QUANTITATIVE RESEARCH FINDINGS

4.1 Introduction

This chapter outlines the quantitative strand of the research, which involved administering an online questionnaire survey to a sample of 304 Nigerian students studying across nineteen HE institutions in Scotland at both postgraduate and undergraduate levels.

This chapter commences with an overview of the participants' demographic overview of their profiles, followed by an examination of the quantitative findings of the study, providing a comprehensive interpretation of the findings derived from the analysis and synthesising the outcomes within the context of the research objectives. Lastly, it investigates the supportive mechanisms offered by different institutions to assist international students in adapting to their academic and everyday life environments in Scotland, specifically exploring the impact of the existing support systems on Nigerian students.

4.2 Demographic Profile of Respondents

This section provides an in-depth analysis of the respondents' demographics. The survey was completed by a total of three hundred and four Nigerian students who were enrolled in fifteen higher education institutions. A total of 139 respondents were female (45.7%) and 165 (54.3%) were male, with a relatively even distribution of gender demographics (Table 4.1).

Table 4.1: Respondents' gender distribution

	Frequency	Percent
Valid Female	139	45.7
Male	165	54.3
Total	304	100.0

The second question in the survey aimed to ascertain the generational group to which the respondents belonged, namely Generation Z (born 1997–2012), the Millennial Generation (born 1981–1996), Generation X (born 1965–1980), and Baby Boomers (born 1946–1964). Out of the total of 304 respondents, the majority (n=163) belonged to the Millennial Generation, followed by the Generation Z cohort (n=103), while only 25 respondents were part of the Generation X group and 13 belonged to the Baby Boomer generation (Table 4.2).

Table 4.2: Respondents’ generations

	Frequency	Percentage
Valid Generation Z (born 1997-2012)	103	33.9
Millennial Generation (born 1981-1996)	163	53.6
Generation X (born 1965 – 1980)	25	8.2
Baby boomer (born 1946 - 1964)	13	4.3
Total	304	100.0

The third survey question was intended to determine the current level of study among the respondents. Specifically, it aimed to ascertain whether they were engaged in undergraduate studies (3 years or longer, such as BA, BEd, or BSc), postgraduate studies (including PG Certificate, PG Diploma, MA, or MSc), or other levels of study. The analysis of the data, as presented in Table 4.3, revealed that out of the 304 respondents, the majority were postgraduate students, and the remaining group of students fell into the “others” category, which includes PhD students.

Table 4.3: Respondents' current level of study

	Frequency	Percentage
Valid Undergraduate University Study (3 years or longer: e.g, BA, BEd, BSc)	74	24.3
Postgraduate Studies (PG Certificate, PG Diploma, MA, MSc)	221	72.7
Other	9	3.0
Total	304	100.0

Table 4.4 displays information about the current course of study of the respondents, categorised by different fields of study (e.g., business and economics, engineering and technology, fine arts and performing arts, humanities and social sciences, and natural sciences). The majority of the respondents (n=119, 39.1%) were studying business and economics, followed by students who were studying engineering and technology (n=75, 24.7%), humanities and social sciences (n=51, 16.8%), natural sciences (n=56, 18.4%), and finally only three who were studying fine arts and performing arts (1.0%).

Table 4.4: Respondents' current course of study by category

	Frequency	Percentage
Valid Business and Economics	119	39.1
Engineering and Technology	75	24.7
Fine Arts and Performing Arts	3	1.0
Humanities and Social Sciences	51	16.8
Natural Sciences	56	18.4
Total	304	100.0

The respondents in the quantitative study were geographically diverse and represented all 36 different states in Nigeria, ensuring comprehensive coverage across the country. The most common states among the respondents were Delta, with 32 respondents representing 10.5% of the total population. Lagos was the second most common region, with 29 respondents representing 9.5%. The least common regions were Adamawa, Akwa Ibom, Kaduna, Kogi, Niger, Plateau, Yobe, and Zamfara, each with only 1-4 respondents, representing 0.7–1.3%, respectively. Table 4.5 provides information on the geographical distribution of the respondents.

Table 4.5: Respondents' Geographical Region in Nigeria

alid	Frequency	Percentage
Abia	11	3.6
Adamawa	3	1.0
Akwa Ibom	2	.7
Anambra	16	5.3
Bauchi	8	2.6
Bayelsa	3	1.0
Benue	5	1.6
Borno	7	2.3
Cross River	4	1.3
Delta	32	10.5
Ebonyi	6	2.0
Edo	20	6.6
Ekiti	6	2.0
Enugu	4	1.3
Gombe	8	2.6
Imo	11	3.6
Jigawa	6	2.0
Kaduna	3	1.0
Kano	4	1.3
Katsina	6	2.0
Kebbi	10	3.3
Kogi	3	1.0
Kwara	11	3.6
Lagos	29	9.5
Nasarawa	10	3.3
Niger	4	1.3
Ogun	8	2.6
Ondo	9	3.0
Osun	6	2.0
Oyo	6	2.0
Plateau	4	1.3

Rivers	15	4.9
Sokoto	7	2.3
Taraba	9	3.0
Yobe	4	1.3
Zamfara	4	1.3
Total	304	100.0

Descriptive Analysis of Nigerian Students' Challenges

This section presents an analysis of the descriptive statistics of the main variables of the study, addressing students' academic self-efficacy, academic information literacy, academic socio-cultural challenges, everyday life information literacy challenges, everyday life socio-cultural challenges, and language and communication challenges. Respondents described their level of agreement in relation to the above challenges on the basis of 5-point Likert scale questions, ranging from 1=not "at all challenging" to 5= "extremely challenging".

Consolidated tables incorporating all questions within each variable are presented below with overall mean values and frequencies indicating only the "very challenging" and the "extremely challenging" results, followed by a detailed examination and interpretation of the descriptive statistics.

These statistical measurements were chosen based on a number of considerations. Firstly, the mean is a measure of central tendency and is commonly accepted as a suitable statistic for summarising Likert scale data (Bhandari 2023). The term "mean value" in statistics refers to the average of a group of numerical data points. Commonly, it is determined by adding up all the values of the dataset and dividing the total by the number of data points (Bluman 2014). The mean is significant because it takes into account every value in the data and, as a result, provides a reliable representation of the data (Manikanda 2011).

Likert scales are widely used in survey research; however, they have limitations. One of the most significant issues is the possibility of bias, which can occur owing to a variety of variables such as response style, acquiescence bias, or social desirability bias (Bertram 2007 and Joshi et al 2015). In order to counteract this tendency and

enhance the validity and reliability of Likert scale data, Pimentel (2010) provides a strategy that focuses on providing a consistent difference between each interval on the scale in order to mitigate this bias and improve the reliability and validity of Likert scale data.

According to Pimentel's method, the possibility for bias may be lowered or eliminated by making the difference in each interval of the Likert scale consistent. This technique seeks to address the problem of perceptual gaps between scale points, which can lead to bias in respondents' interpretations and answer selections. By maintaining a constant spacing between each interval, the scale becomes more dependable, and respondents are better equipped to convey their thoughts or sentiments. This concept is in line with earlier studies emphasising the significance of minimising bias in Likert scale measures in order to improve the validity of the survey data (Suarez-Alvarez et al 2018).

Pimentel's (2010) research highlights the five-point Likert scale as an interval scale, where the mean holds a significant value. Based on the scale, a rating of 1 to 1.8 indicates a lack of challenge—"not at all challenging". Ratings between 1.81 to 2.60 are considered "slightly challenging", while those between 2.61 to 3.40 suggest a moderate level of challenge. For a rating between 3.41 to 4.20, one would perceive the challenge as "very challenging". At the top end of the scale, a rating between 4.21 to 5 implies an "extremely challenging" task (Table 4.6).

Table 4.6: Pimentel's (2010) Likert Scale Interpretation Guide

Likert Scale	Mean Range	Result Interpretation
1	[1: 1.80]	Not at all challenging
2	[1.81: 2.60]	Slightly challenging
3	[2.61: 3.40]	Moderately challenging
4	[3.41: 4.20]	Very challenging
5	[4.21: 5]	Extremely challenging

Pimentel's (2010) mean interval range was applied to all the Likert scale data measurements of this study, indicating the level of challenges students encountered. The subsequent presentation of findings will focus on the academic and everyday life challenges experienced by these Nigerian students.

4.2.2 Academic Self-efficacy

Academic self-efficacy relates to the faith or confidence a student has in their capacity to successfully accomplish an academic task or target (Bandura 1997). Drawing concepts from Bandura's definition, Elias and MacDonald (2007) describe academic self-efficacy as students' assessment of their capabilities to effectively obtain their academic goals.

Considering the above, it can be explained that students with a strong sense of academic self-efficacy or high academic self-efficacy have the tendency to recover their confidence faster after obstacles or disappointments (Pajares and Schunk 2002). Other studies (e.g., Cheng, Barnes, Edwards, and Valyrakis 2015) have also shown that students' high level of academic self-efficacy has a significant impact on their ability to cope with academic challenges. In contrast, it can be explained that students who have low academic self-efficacy will likely overestimate academic tasks beyond what they really are. Such thoughts can lead to feelings of failure, depression, tension, and helplessness.

4.2.3 Academic Self-Efficacy Challenges

Table 4.7 reveals Nigerian students in Scotland face significant academic self-efficacy challenges, with mean scores for 14 out of 15 questions ranging from 3.41 to 3.70. The most notable challenges were asking questions during lectures and responding accurately to unannounced tests.

Specifically, "unannounced tests" posed a significant challenge, as 56.6% of students (n=172) found them very challenging (with the highest mean score of 3.70) and 11.5% (n=35) found them extremely challenging.

In addition, "Asking questions during lectures" was a major issue for 61.8% of students (n=188), who found it very challenging (with a mean score of 3.57), and for 5.9% (n=18) of students who found it extremely challenging.

Finally, "I respond to questions during lectures" was a major difficulty for 52.6% of the respondents (n=160) who found it very challenging (with a mean score of 3.51).

Table 4.7 Descriptive Statistics of Academic Self-Efficacy Challenges
N=304

Variables		Items	Mean	"Very challenging"	"Extremely challenging"
Academic Self-Efficacy Challenges (ASE)	Q1_ASE	I ask questions during lectures.	3.57	188(61.8)	18(5.9)
	Q2_ASE	I respond to questions during lectures.	3.51	160(52.6)	
	Q3_ASE	I plan my time for examinations /course work.	3.48	140(46.1)	
	Q4_ASE	I explain subject matters to my friends.	3.59	144(47.4)	
	Q5_ASE	I meet the deadlines for my assignments.	3.53	165(54.3)	
	Q6_ASE	I express my opinion when I do not understand the lectures.	3.39	151(49.7)	
	Q7_ASE	I make sense of feedback on my examinations/coursework.	3.62	147(48.4)	
	Q8_ASE	I am competent in learning, irrespective of the subject.	3.70	157(51.6)	
	Q9_ASE	I can find out solutions when I am confronted with problems in my study.	3.68	167(54.9)	
	Q10_ASE	I can recollect what I have learnt during examinations.	3.39	138(45.4)	

	Q11_ASE	I comprehend the actual meaning of what I study.	3.44	138(45.4)	35(11.5)
	Q12_ASE	I deal efficiently with unexpected problems in my study.	3.62	160(52.6)	
	Q13_ASE	I complete the homework myself without any help from guidebooks, previous notes, etc.	3.41	142(46.7)	
	Q14_ASE	When a test is required without prior notice, I can answer all questions accurately.	3.70	172(56.6)	
	Q15_ASE	I spend a sufficient amount of time on my study.	3.68	147(48.4)	

4.2.4 Academic Information Literacy Challenges

Table 4.8 highlights the findings from the measurement of the academic information literacy challenges of Nigerian students studying in Scotland. The responses generated for 9 out of 17 questions had mean scores between 3.41 to 3.87.

Notably, "Organising the digital information I find for my learning through folders, bookmarks, and reference management software" was a major issue for 53.9% of students (n=164) who found it very challenging, with the highest mean score of 3.87.

Additionally, "Putting together ideas to organise your coursework thematically" posed a challenge for 55.3% of students (n= 168), who found it very challenging, with a mean score of 3.61, and for 10.9% (n= 33) of students, who found it extremely challenging.

Also, "Defining the information I need" posed a challenge for 66.1% of students (n=201), who found it very challenging, with a mean score of 3.59, and 3.0% (n=9) of students who found it extremely challenging.

Furthermore, “Understanding academic integrity/honesty when accessing and using information (e.g., plagiarism, collusion)” was a major issue for 46.1% of students (n=140), who found it very challenging, with a mean score of 3.41.

Finally, “Following report-writing/ presentation conventions (e.g., formatting different parts, e.g., introduction, collusion)”, posed a challenge for 46.7% of students (n= 142), who found it very challenging, with a mean score of 3.41.

**Table 4.8 Descriptive Statistics of Academic Information Literacy Challenges
N = 304**

Variables		Items	MF Mean	“Very challenging”	“Extremely challenging”
Academic Information Literacy Challenges (AIL)	Q1_AIL	Defining the information, I need	3.59	201(66.1)	9(3.0)
	Q2_AIL	Identifying a variety of potential sources of information.	3.36	147(48.4)	
	Q3_AIL	Using different kinds of print sources (e.g., books, periodicals, encyclopaedias).	3.16	88(28.9)	
	Q4_AIL	Locating resources in the library using the library catalogue.	3.11	112(36.8)	
	Q5_AIL	Using internet search tools (such as search engines, directories, etc.).	2.96	114(37.5)	
	Q6_AIL	Using academic databases (such as Business Source Premier, Emerald, Science Direct, etc.).	2.94	114(37.5)	
	Q7_AIL	Using a variety of academic sources to conduct research.	3.14	113(37.2)	
	Q8_AIL	Initiating search strategies by using Boolean logic (i.e., using syndetic words AND, OR, and NOT to combine search terms).	2.96	104(34.2)	

	Q9_AIL	Refining search strategies by subject, language, and date?	2.86	107(35.2)	
	Q10_AIL	Selecting information most appropriate to my information needs.	3.33	131(43.1)	
	Q11_AIL	Interpreting visual information (i.e., graphs, tables, diagrams).	3.72	162(53.3)	
	Q12_AIL	Putting together ideas to organise your coursework thematically.	3.61	168(55.3)	33(10.9)
	Q13_AIL	Following report-writing/presentation conventions (e.g., formatting different parts, e.g. introduction, conclusion)?	3.41	142(46.7)	
	Q14_AIL	Creating reference lists for different kinds of materials (e.g., books, articles, theses, papers, web pages)	3.36	141(46.4)	
	Q15_AIL	Making citations and using quotations within the text	3.19	132(43.4)	
	Q16_AIL	Understanding academic integrity/honesty when accessing and using information (e.g., plagiarism, collusion)	3.41	140(46.1)	

	Q17_AIL	Organising the digital information, I find for my learning through folders, bookmarks, and reference management software	3.87	164(53.9)	
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4.2.5 Academic Socio-cultural Challenges

Table 4.9 highlights the socio-cultural adaptation challenges of Nigerian students in Scotland, with all eight questions showing high mean scores between 3.52 and 4.06.

The most notable challenges were “Developing critical thinking skills” and “Coping with academic tasks”. The former was very challenging for 59.5% (n= 181) with the highest mean score of 4.06, and with 25.3% (n=77) of students finding it extremely challenging. The latter was very challenging for 62.5% (n=190) of students with also a mean score of 4.06.

These were followed by “Adjusting to different teaching methods”, with 79.3% (n= 241) of students finding it very challenging with a mean score of 3.90, and with 6.9% (n=21) of students finding it extremely challenging.

Another major issue was “Developing into independent active learners”, reported by 68.4% (n=208) of respondents as very challenging with a mean score of 3.87, and with 11.2% (n= 34) of students finding it extremely challenging.

Table 4.9 Descriptive Statistics of Academic Socio-Cultural Challenges N = 304

Variables		Items	MF Mean	“Very Challenging”	“Extremely Challenging”
Academic Socio-cultural Challenges (ASC)	Q1_ASC	Adjusting to different teaching/learning methods in the classroom (e.g., tutorials, team-based activities).	3.90	241(79.3)	21(6.9)

	Q2_ASC	Dealing with staff at the university (e.g., for administration purposes).	3.52	180(59.2)	
	Q3_ASC	Assimilating and understanding information from academic resources presented to you in lectures.	3.73	176(57.9)	
	Q4_ASC	Understanding what is required from you at the university.	3.77	181(59.5)	
	Q5_ASC	Coping with academic work	4.06	190(62.5)	
	Q6_ASC	Planning and managing your academic responsibilities.	3.92	206(67.8)	
	Q7_ASC	Developing into an independent/active learner	3.87	208(68.4)	34(11.2)
	Q8_ASC	Developing critical thinking in your academic study.	4.06	181(59.5)	77(25.3)

4.2.6 Everyday Life Challenges

To cope with the academic and daily life requirements in a foreign setting, international students encounter numerous intercultural challenges and adaptation difficulties that affect their academic self-efficacy (Jiang 2018). According to Chen et al (2021), socio-cultural adaptation is defined as an individual's capacity to effectively handle the intricacies of daily life within the host culture, indicating the level of comfort in navigating one's daily life. Therefore, socio-cultural adaptation assumes a central role in cross-cultural adaptation, as inadequacies in this aspect can result in psychological withdrawal, academic underachievement, and early return (Chen, Xiaojun, and Zongfu 2019).

The challenges of obtaining appropriate information can also impinge upon the academic performance, experience accumulation, and social connectedness of students (Bukhari et al 2018).

4.2.7 Everyday Life Information Literacy Challenges

Table 4.10 demonstrates that Nigerian students in Scotland face substantial everyday life information literacy challenges, with mean scores ranging from 3.69 to 3.95 for 8 out of 9 questions.

The most notable challenges were “Finding information about part time jobs” with 60.2% (n=183) of students finding it very challenging with the highest mean score of 3.95.

These were followed by “Finding information about accommodation” reported by 65.5% (n= 199) of respondents as very challenging with a mean score of 3.89, and with 16.8% (n= 51) of students finding it extremely challenging.

Another major issue was “Finding information around the university, hostel, or living area” with 78.0% (n= 237) of students finding it very challenging with a mean score of 3.87, and with 7.2% (n= 22) finding it extremely challenging.

Table 4.10: Descriptive Statistics of Everyday Life Information Literacy Challenges N = 304

Variables			Items	Mean	“Very challenging”	“Extremely challenging”
Everyday Life Information Literacy Challenges (ELIL)	Q1_ELIL		Finding information around the university, hostel, or where you live.	3.87	237(78.0)	22(7.2)
	Q2_ELIL		Finding information about accommodation.	3.89	199(65.5)	51(16.8)

	Q3_ELIL		Finding information with regards to transportation to campus.	3.73	178(58.6)	
	Q4_ELIL		Finding information for a part-time job.	3.95	183(60.2)	
	Q5_ELIL		Finding information about Immigration, student visas, and student registration.	3.69	169(55.6)	
	Q6_ELIL		Finding information about financial advice (e.g., finding information on how to apply for a short-term loan).	3.71	175(57.6)	
	Q7_ELIL		Finding information about legal advice	3.71	183(80.2)	
	Q8_ELIL		Finding health information (e.g., registering with a doctor)	2.92	131(43.1)	
	Q9_ELIL		Finding travel information (e.g., booking tickets).	3.70	157(51.6)	

4.2.8 Everyday Socio-cultural Challenges

Table 4.11 shows significant everyday socio-cultural adaptation challenges for Nigerian students in Scotland, with mean scores ranging from 3.88 to 4.16 for all nine questions.

The most significant challenge was “Feeling homesick” with 58.6% (n=178) of students finding it very challenging with the highest mean score of 4.16.

These were followed by “Adjusting to the Scottish climate,” with 77.3% (n= 235) of respondents finding it very challenging with mean score of 4.13, and with 18.4% (n= 56) of students finding it extremely challenging.

Another difficulty that respondents encountered was “Understanding the different cultures (e.g, new values, beliefs, customs, and mannerism)”, with 59.5% (n=181) of students finding it very challenging with a mean score of 4.12.

In addition, “Participating in socio-cultural activities” posed another major hurdle, reported as very challenging by 70.1% (n= 213) of the respondents, with a mean score of 4.09. A total of 20.1% (n= 61) of students also stated that it was extremely challenging.

Furthermore, other notable challenges were “Living away from other family members and living independently from parents”. The former was very challenging for 66.4% (n=202) of students with a mean score of 4.04. The latter was very challenging for 69.7% (n= 212) of students with a mean score of 4.0, while 17.1% (n= 52) of students found it extremely challenging.

Table 4.11 Descriptive Statistics of Everyday Life Socio-cultural Adaptation Challenges N = 304

Variables		Items	MF Mean	“Very challenging”	“Extremely challenging”
Everyday life Socio-cultural Adaptati	Q1_ELSC	Adjusting to the climate in Scotland	4.13	235(77.3)	56(18.4)
	Q2_ELSC	Participating in socio-cultural activities	4.09	213(70.1)	61(20.1)

on Challenges (ELSC)	Q3_ELSC	Understanding the different cultures (e.g., new values, beliefs, customs, and mannerism)	4.12	181(59.5)	52(17.1)
	Q4_ELSC	Living independently from your parents	4.00	212(69.7)	
	Q5_ELSC	Living away from other family members	4.04	202(66.4)	
	Q6_ELSC	Understanding social norms (how to behave in public, style of clothes, understanding jokes and humour)	4.02	171(56.3)	
	Q7_ELSC	Building relationships with lecturers and fellow students	3.89	182(59.9)	
	Q8_ELSC	Making friends outside the campus (social interaction, what people do to have fun and relax)	3.88	187(61.5)	
	Q9_ELSC	Feeling homesick	4.16	178(58.6)	

4.2.9 Language and Communication Challenges

Table 4.12 revealed significant language and communication challenges for Nigerian students in Scotland, with mean scores for all ten questions ranging from 3.78 to 4.17.

The most significant challenge was “Understanding the Scottish sense of humour such as jokes” with 57.6% (n=175) of respondents finding it very challenging with the highest mean score of 4.17.

These were followed by “Changing our tone and accent when speaking to a non - Nigerian person” with 63.3% (n=192) of respondents finding it very challenging with a mean score of 4.00.

Another area of difficulty included “Understanding the accent of the Scottish people in everyday conversations/communication” with 69.7% (n=212) of students finding it very challenging with a mean score of 3.92, while 12.5% (n=38) of students found it extremely challenging.

In addition, “Clearly expressing and conveying your ideas in class” was mentioned as a significant challenge with 65.5% (n=199) of respondents finding it very challenging with a mean score of 3.85, and 11.8% (n=36) of students finding it extremely challenging.

Furthermore, “Communicating with university lecturers and students during classes (e.g., lectures and tutorials)” was another major difficulty with 76.3% (n=232) of students finding it very challenging with a mean score of 3.78, and 4.5% (n=14) of students finding it extremely challenging.

Table 4.12: Descriptive Statistics of Language and Communication Challenges N = 304

Variables		Items	Mean	“Very challenging”	“Extremely challenging”
Language and Communication Challenges (LC)	Q1_LC	Communicating with university lecturers and students during classes (e.g., lectures and tutorials)	3.78	232(76.3)	14(4.6)
	Q2_LC	Understanding the accent of the Scottish people in everyday conversations/communication	3.92	212(69.7)	38(12.5)
	Q3_LC	Changing your tone and accent when speaking to a non-Nigerian person	4.00	192(63.3)	
	Q4_LC	Clearly expressing/conveying your ideas in class	3.85	199(65.5)	36(11.8)

	Q5_LC	Adjusting to different communication expectations /styles of language (e.g., when interacting with older people)	3.91	199(65.5)	
	Q6_LC	Understanding different nonverbal cues (e.g., mannerism, gestures)	3.92	197(54.8)	
	Q7_LC	Talking about yourself and your culture with others	3.83	192(63.2)	
	Q8_LC	Communicating your feelings	3.90	179(58.9)	
	Q9_LC	Asking for help when you need it	3.92	185(60.9)	
	Q10_LC	Understanding the Scottish sense of humour (e.g., jokes)	4.17	175(57.6)	

4.2.10 Support Mechanisms

This section investigates the supportive mechanisms offered by different institutions to assist international students in adapting to their academic and everyday life environments in Scotland, specifically exploring the impact of the existing support systems on Nigerian students.

As a means of supporting learning and teaching in higher education, support mechanisms provide evidence of learning progress and insight into students' or learners' major needs in a higher education environment (Lucas, Oliveira, and Oliveira 2020, Hyams-Ssekasi, Mushibwe, and Caldwell 2014, and Trowler 2010).

Table 4.13 presents findings on the support mechanisms provided to Nigerian students in Scotland. Out of the 304 participants, it is evident that the majority, 266 students, reported that the support offered by their university did not significantly boost their academic self-efficacy, whereas only 38 students indicated that it did have a positive impact. Similarly, concerning the effectiveness of the available

support in enhancing academic self-efficacy, 276 participants expressed discontentment, while only 28 students considered the support to be effective.

Furthermore, when considering information literacy support programmes, the data reveals that among the 304 participants, 36 students reported the absence of such programmes in their universities, while 268 students confirmed its presence in their respective schools. Additionally, in terms of the effectiveness of these support programmes in enhancing information literacy, 214 students expressed dissatisfaction, while only 90 students believed the support to be effective. These findings shed light on the perceptions of Nigerian students in Scotland regarding the support mechanisms provided to them. The results indicate that a significant proportion of students do not perceive the support to be effective in boosting their academic self-efficacy or enhancing their information literacy skills. These insights highlight the need for further examination and potential improvements in the support services offered to Nigerian students in order to better cater to their academic needs and enhance their overall educational experience.

Table 4.13 Support Mechanisms

QUESTION	V/M	FREQUENCY	PERCENT
Does the support given by your university enhance your academic self-efficacy? E.g., skills building programmes.	NO YES	266 38	87.5 12.5
Do you consider these skills building programmes effective to improve students' academic self-efficacy?	NO YES	276 28	90.8 9.2
Do you have information literacy skills support programmes available to you at your university?	NO YES	36 268	11.8 88.2
Are these programmes effective?	NO YES	214 90	70.4 29.6

Is there any support mechanism put together by your university to help students find information for their everyday life challenges?	NO YES	167 137	54.9 45.1
Do you find them helpful in overcoming your information needs?	NO YES	205 99	67.4 32.6
Do you encounter challenges with your academics as a result of socio-cultural differences?	NO YES	97 207	31.9 66.1
Do they impact your academics in anyway?	NO YES	143 161	47.0 53.0
Does your university have socio groups that can support your adaptation socio-culturally?	NO YES	165 109	64.1 35.9
Are these socio groups effective in overcoming your socio-cultural challenges?	NO YES	229 75	75.3 24.7
In light of the fact that new international students may have some difficulties in understanding the Scottish accent, is there any support provided by your university to help defy these challenges?	NO YES	260 44	85.5 14.5
Are these programmes helpful in helping you to adapt to the language and communication challenges you experience?	NO YES	280 24	92.1 7.9

4.2.11 Regression Analysis

In this research, further statistical analysis was conducted employing both a Pearson product-moment correlation and a multiple regression analysis. Pearson's product-moment correlation coefficient, commonly known as Pearson's correlation, is a statistical measure used to evaluate the strength and direction of the linear relationship between two variables (Zhou et al 2016). The Pearson correlation coefficient holds significant importance due to its capability to assess the statistical significance of a correlation. Moreover, it serves as a valuable tool for determining the proportion of variability in the independent variable (Y) that can be accounted for or elucidated by the dependent variable (X).

The multiple regression analysis was employed to investigate the relationship between the independent variables and the dependent variable. Multiple regression analysis uses an analytical technique that enables researchers to consider multiple independent variables simultaneously, thus providing a more comprehensive explanation of the variance in the dependent variable (Pallant 2020). Furthermore, multiple regression analysis allows for the assessment of the strength and direction of relationships between the dependent and independent variables (Asika 1991). This valuable information aids researchers in identifying which independent variables exhibit the strongest associations with the dependent variable, as well as making predictions about the impact of changes in these independent variables on the dependent variable (Baridam 2001).

The Pearson correlation analysis revealed statistically significant and strong positive associations between academic self-efficacy challenges and academic information literacy challenges ($r=0.595$, $p<0.05$). Academic information literacy challenges explained 35.40% of the total variability in academic self-efficacy challenges. This indicates that, as academic information literacy challenges increase, academic self-efficacy challenges also tend to increase.

Additionally, a statistically significant and moderate positive correlation was found between academic self-efficacy challenges and everyday life information literacy

challenges ($r=0.484$, $p<0.05$). Everyday life information literacy challenges explained 23.43% of the total variability in academic self-efficacy challenges. This suggests that as Everyday life information literacy challenges increase, academic self-efficacy also tends to increase.

Moreover, a statistically significant and moderate positive correlation was observed between academic self-efficacy challenges and academic socio-cultural challenges ($r=0.461$, $p<0.05$). Academic socio-cultural challenges explained 21.25% of the total variability in academic self-efficacy challenges. This implies that as academic socio-cultural challenges increase, academic self-efficacy challenges also tend to increase.

Furthermore, a statistically significant and weak positive association was found between academic self-efficacy challenges and everyday life socio-cultural adaptation challenges ($r=0.295$, $p<0.05$). Everyday life socio-cultural adaptation challenges explained 8.70% of the total variability in academic self-efficacy challenges. This indicates that as everyday life socio-cultural adaptation challenges increase, academic self-efficacy also tends to increase.

Lastly, a statistically significant and low positive association was observed between academic self-efficacy challenges and language and communication challenges ($r=0.433$, $p<0.05$). Language and communication challenges explained 18.75% of the total variability in academic self-efficacy challenges. This suggests that as language and communication challenges increase, academic self-efficacy also tends to increase. The correlation analysis is presented in Table 4.1 below.

Table 4.1 Correlation Table

	M	SD	1	2	3	4	5	6
1	3.548	0.684	1					
2	3.293	0.767	.595**	1				
3	3.690	0.676	.484**	.546**	1			
4	3.856	0.517	.461**	.401**	.537**	1		
5	4.038	0.484	.295**	.286**	.434**	.431**	1	
6	3.920	0.473	.433**p	.388**	.424**	.606**	.424**	1

1=academic self-efficacy challenges; 2=academic information literacy challenges; 3= everyday life information literacy challenges; 4= academic socio-cultural challenges; 5= everyday life socio-cultural adaptation challenges; 6= language and communication challenges.

Also, a multiple linear regression analysis was conducted to examine the relationship between academic information literacy challenges, everyday life information literacy challenges, academic socio-cultural challenges, everyday life socio-cultural adaptation challenges, language and communication challenges, and the academic self-efficacy of Nigerian students.

The multiple regression model demonstrated a significant statistical prediction of academic self-efficacy challenges, $F(5,298) = 45.377$, $p < .001$, with an R^2 value of 0.432. This implies that the model accounted for 43.2% of the total variation in academic self-efficacy challenges. In other words, the independent variables collectively explained 43.2% of the observed variances or differences in academic self-efficacy among the students.

Four variables, namely academic information literacy challenges, everyday life information literacy challenges, academic socio-cultural challenges, and language and communication challenges, made significant contributions to the prediction as indicated by their p -values being less than 0.05.

When academic information literacy challenges increased by one unit, there was a corresponding 0.374 unit increase in academic self-efficacy challenges ($B=0.374$, $p < .001$).

Similarly, for a one-unit increase in everyday life information literacy challenges, there was a 0.120-unit increase in academic self-efficacy challenges ($B=0.120$, $p = .045$).

Academic socio-cultural challenges showed a one-unit increase corresponding to a 0.199 unit increase in academic self-efficacy challenges ($B=0.199$, $p = .013$).

Furthermore, language and communication challenges demonstrated that a one-unit increase resulted in a 0.183 unit increase in academic self-efficacy challenges ($B=0.183$, $p = .028$).

However, the variable "Everyday Life Socio-cultural Adaptation Challenges" did not show much significance ($=.007$), and its p-value was greater than 0.05 ($p=0.925$). Thus, it can be reasonable to infer that any disparities or connections observed in the data between these two specific variables stem from random chance or sampling variability rather than from genuine effects or relationships within the studied population. The regression coefficients are provided in Table 4.2 below.

Table 4.2 Multiple Regression Table

Coefficients ^a												
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	.362	.301		1.203	.230	-.230	.954					
ACADEMIC INFORMATION LITERACY CHALLENGES	.374	.048	.419	7.855	.000	.280	.467	.595	.414	.343	.669	1.494
EVERYDAY LIFE INFORMATION LITERACY CHALLENGES	.120	.060	.119	2.015	.045	.003	.237	.484	.116	.088	.550	1.818
ACADEMIC SOCIO-CULTURAL CHALLENGES	.199	.080	.151	2.503	.013	.043	.356	.461	.143	.109	.525	1.903
EVERYDAY LIFE SOCIO-CULTURAL ADAPTATION CHALLENGES	.007	.072	.005	.094	.925	-.136	.149	.295	.005	.004	.727	1.375
LANGUAGE AND COMMUNICATION CHALLENGES	.183	.083	.126	2.208	.028	.020	.346	.433	.127	.096	.582	1.718

a. Dependent Variable: ACADEMIC SELF-EFFICACY CHALLENGES

4.3 Conclusion

In summary, the study aimed to investigate the connection between various challenges faced by Nigerian students studying in Scottish universities, including academic self-efficacy challenges, academic information literacy challenges, everyday life information literacy challenges, academic socio-cultural challenges, everyday life socio-cultural adaptation challenges, and language and communication challenges. The findings from the descriptive statistics provided insights into the challenges faced by Nigerian students in various aspects of their academic responsibilities and everyday lives. A comprehensive analysis revealed that Nigerian students experience a wide array of challenges while seeking information for everyday life and academic studies.

The correlation analysis indicated that academic self-efficacy challenges were significantly correlated with all the factors examined, namely academic information literacy challenges, everyday life information literacy challenges, academic socio-cultural challenges, and language and communication challenges. Notably, the variables exhibited a moderate to strong association with academic information literacy challenges, except for everyday life socio-cultural adaptation challenges, which demonstrated a weak association. Moreover, the multiple regression analysis revealed that all the variables, except everyday life socio-cultural adaptation challenges, significantly predicted academic self-efficacy challenges. These findings shed light on the experiences of Nigerian students and emphasise the importance of academic information literacy challenges, everyday life information literacy challenges, academic socio-cultural challenges, and communication challenges in predicting academic self-efficacy challenges. The study further indicated that an increase in each of these variables was linked to a significant rise in academic self-efficacy challenges.

The findings suggest the need for higher education institutions to provide improved information dissemination strategies and support systems to facilitate easier access to essential information both in students' academic and everyday lives. Additionally, the analysis highlights the frequency of challenges confronted by students as they adapt to social norms and establish interpersonal relationships. Targeted interventions and support systems are needed to address these issues and enhance the overall well-being of the students.

CHAPTER 5 - QUALITATIVE RESEARCH FINDINGS

5.1 Introduction

This chapter discusses the findings of the qualitative strand of the research, which involved interviews with Nigerian students studying in HE institutions in Scotland. The chapter addresses the challenges students experience within their academic environments, such as adjusting to different academic requirements and their expectations around critical thinking, in-class communication, time management, and information literacy skills, and discusses how this influences their perceptions of academic self-efficacy. In addition, the chapter addresses the everyday life challenges students experience, including dealing with their everyday life needs and making social connections. The chapter ends with recommendations from students for academic support and everyday life adaptation in the form of support mechanisms, as well as potential improvements for existing support programmes.

5.2 Demographic Characteristics of Participants

The qualitative strand of the study involved conducting semi-structured interviews with twenty Nigerian full-time (undergraduate and postgraduate) students enrolled in different courses from fifteen Scottish universities out of the total population of nineteen HE institutions in Scotland (Universities Scotland 2023). At least one student participated from each of the fifteen participating universities, while four universities were excluded from the list, as all efforts to reach out to Nigerian students from these universities proved unsuccessful.

A range of demographic data of interview participants was collected, including gender, generational group, time spent in Scotland, discipline/area of study, and previous education and internet connectivity experiences (Table 5.1). Twelve of these students were female, and eight were male. Almost half of the students (n=9) were part of the Millennial Generation, while the rest belonged to Generation X (n=4), Generation Y (n=2) and Generation Z (n=5). The exact ages of interview participants were not gathered; rather, they were only asked to identify which generation they

belonged to. Generation Y, or Millennials, between the ages of 27 and 42, were the most represented age group, with ten interview participants from this group. Generation Z, or Zoomers, between the ages of 11 and 26, was the second most represented group, with six participants coming from that group. Generation X, within the age range of 43 to 58, represented the older end of the common university student age spectrum and was the least represented among interview participants. Only four participants came from this age group. A diverse range of subject areas was represented among the interview subjects, with students studying in a variety of subject areas including Law, Social sciences, Economics, Creative and Cultural Business, Health Sciences, Engineering, Computing Science, Management, and Applied Sciences. All students interviewed attended classes in person and on campus, as opposed to remote schooling or hybrid options.

Table 5.1: Demographic Information of Interview Participants

Participant	University	Sex	Faculty/School	Generation	Geographical location	State of previous study	Length of stay
Participant 1	Robert Gordon University	F	Law	Z	Rivers	Katsina	1 month
Participant 2	Robert Gordon University	M	Creative and Cultural Business	Y	Delta	Imo	6 weeks
Participant 3	University of Aberdeen	F	Business	Z	Yobe	Delta	1 month
Participant 4	University of Edinburgh	F	Economics	Y	Imo	Imo	5 weeks
Participant 5	University of Glasgow	M	Computing Science	Z	Oyo	Oyo	2 months
Participant 6	University of Aberdeen	M	Business	Z	Ogun	Ogun	2 months
Participant 7	University of Dundee	M	Health Sciences	Y	Akwa Ibom	Edo	4 months
Participant 8	University of Dundee	F	Health sciences	Y	Delta	Delta	3 months

Participant 9	University of Strathclyde	F	Engineering	X	Enugu	Lagos	1 month
Participant 10	University of Stirling	M	Management	Z	Taraba	Lagos	7 weeks
Participant 11	University of Edinburgh	F	Engineering	Y	Ondo	Taraba	1 month
Participant 12	University of Strathclyde	M	Business	Y	Kwara	Jigawa	5 weeks
Participant 13	Abertay University	F	Applied Science	X	Kaduna	Edo	1 month
Participant 14	University of the West of Scotland	M	Management	Y	Delta	Ondo	2 months
Participant 15	Queen Margaret University	F	Health and Life Sciences	X	Sokoto	Enugu	3 months
Participant 16	University of St Andrews	F	Management	Z	Anambra	Kano	1 month
Participant 17	University of the Highlands Islands	F	Nursing	Y	Anambra	Anambra	3 months
Participant 18	Glasgow Caledonian	F	Computing	X	Edo	Osun	1 month
Participant 19	Edinburgh Napier	F	Applied Sciences	Y	Delta	Rivers	2 months
Participant 20	Heriot Watt University	M	Social Science	Y	Niger	Ekiti	3 months

Interview participants had all been studying in Scotland for a short period, having arrived at their new university between one and four months prior to being interviewed. Collectively, these students offered a wide geographic representation of Nigeria. Participants either came from or had previously studied in the states of Anambra, Kano, Zamfara, Edo, Imo, Delta, Akwa Ibom, Ogun, Lagos, Oyo, Rivers, Enugu, Kaduna, and Kwara.

All students interviewed had previously reached at least college level in Nigeria, with some having done so in their home states and others having travelled to other states.

Finally, all interview participants had access to the internet at their homes in Nigeria. However, only a few had stable and reliable connections, with most experiencing a much slower and less reliable internet than what was available to them in Scotland.

5.3 Challenges with Academic Socio-cultural Adaptation

Academic socio-cultural adaptation pertains to a student's ability to integrate into the social dynamics of a new cultural environment (Lee and Ciftci 2014). A new academic culture can present a number of unique challenges to international students as they go through a period of acclimation. Difficulties with cross-cultural communication and learning new academic expectations can cause international students' significant stress; however, the majority of studies suggest that most students can eventually successfully adapt to these factors with time (Lewthwaite 1996).

The interviews with the Nigerian students revealed that they encountered several socio-cultural adaptation challenges within their new academic learning environment. When interviewed on this subject, Nigerian students identified critical thinking and in-class participation as two key areas in which the expectations of their host culture were substantially different from what they had previously experienced in Nigeria. Furthermore, they encountered difficulties relating to understanding other students with different language backgrounds due to their accents. The added stress of a full academic calendar requirement was also discussed as a common barrier to making social connections within a new host culture.

5.3.1 Critical Thinking

The primary style of learning employed within a Nigerian academic environment is known as the "talk and chalk" method. In this approach, teachers convey information verbally through lectures, and students are expected to retain this information through rote memorisation. Information retention is then tested exclusively through exams (Mammam, Badar and Bala 2020). The Nigerian students interviewed, however, made clear that this foundation offered them little preparation for the

greater focus on critical thinking and in-class discussion expectations of Scottish universities. As one student explained:

"Critical thinking and writing are not concepts that were really taught in universities way back in Nigeria. It's something new to me, and so it's a challenge". (P1)

Students described aspects of the "talk and chalk" system when mentioning this difficulty. For instance, the words of the students below express more familiarity with being tested on memorisation than having to display critical engagement with course materials:

"The reason behind this may well be that I tend to prioritise answering assessment questions based on textbook readings and taking notes during lectures rather than applying critical thinking skills through independent research on a topic. So, the idea of developing critical thinking skills is new to me, and this has really affected my studies". (P2)

"This concept is really new to me, as it's not something that I am accustomed to, and the grading system in my institution in Nigeria is significantly different from the ones used here. Also, most times my previous courses in Nigeria were exam-based, and I didn't really need to do much of essay writing". (P19)

"The concept of critical thinking is unfamiliar to me. In Nigeria, our approach typically involves taking notes during lectures and then applying the knowledge gained in assessments". (P12)

"Initially, I faced some confusion, and even now, I'm uncertain if I truly comprehend this term. Despite the explanations provided by the instructors about what critical thinking entails, I still lack confidence in effectively applying it within my assignments, which has led to poor grades". (P15)

"The contrast with Scotland is quite noticeable, as here the approach seems to be about teaching students how to think and learn independently. In Nigeria, it is more centred around the student taking notes and the teacher imparting knowledge. When I began my first semester, I enrolled in three courses, but I struggled to manage the

workload. It was quite challenging, and for the first time, I wondered if perhaps I should have been exposed to critical thinking earlier on in Nigeria". (P9)

"I consistently feel the pressure when reading class materials and attempting to critically articulate my understanding through research techniques, especially since I lack prior experience in research. I have had to fail some courses because of this". (P7)

"I lack any experience in engaging in the practice known as critical writing. This issue has resulted in me having to do some resat assignments. It's possible that I thought what I was doing in my previous studies in Nigeria could have been considered critical writing or something similar, but I wasn't aware of it since my Nigerian lecturer never provided that clarification". (P20)

"The concept of critical thinking was unfamiliar to me during my undergraduate studies. My teachers didn't stress its importance in the assignments that we were required to do. They mainly focused on requiring us to deliver classroom presentations. Arriving here in Scotland for studies made me realise I have a whole lot to learn as I am currently struggling with my studies because of this". (P4)

"I don't really know much about critical thinking. During my undergraduate days in Nigeria, all we did was read our textbooks, take notes during lectures, and then apply the knowledge in order to pass our exams and assessments". (P17)

"I lack experience in research, so critical thinking and writing are entirely new to me. As a result, this has affected my studies in some courses". (P6)

The experiences of Nigerian students studying in Scotland highlighted significant challenges arising from the differences between the educational system in their home country and those in Scottish universities. In Nigeria, students primarily encounter a "talk and chalk" approach focused on rote memorisation and exam-based assessments. This method contrasts sharply with the emphasis in Scottish universities on critical thinking and independent research skills.

The quotes from the students highlight their difficulties in adapting to this transition. Many expressed unfamiliarity with critical thinking and writing, attributing this to

their previous education's reliance on textbook readings and lecture notes for exams. This gap becomes evident as they encounter the Scottish educational system, where students are expected to analyse and critically engage with course materials rather than simply absorbing information.

Furthermore, the students' reflections reveal broader dissatisfaction with their prior educational experiences in Nigeria, where critical thinking was neither explicitly taught nor valued in assignments. This deficiency has contributed to challenges in applying critical thinking skills in their current academic pursuits, often resulting in academic setbacks such as failed courses or the need for re-submissions.

In conclusion, these narratives underscore the urgent need for educational support and adaptation strategies to assist Nigerian students in bridging the gap between their previous learning environment and the rigorous academic expectations of Scottish universities. The students' quotes vividly depict their personal challenges, emphasising the importance of nurturing critical thinking skills and providing robust support for international students transitioning to a new educational environment.

5.3.2 Language, Communication and In-class Discussion

English is the official language of both Scotland and Nigeria, but the regional dialects and accents are very different (Kperogi 2015). These differences presented substantial challenges to Nigerian students in terms of both understanding others and being understood themselves. The difficulties experienced by the students included understanding Scottish accents as well as participating in the class because of their Nigerian accent, which made them feel hesitant to speak in class.

All the Nigerian students interviewed described some difficulty understanding the Scottish accent, especially within their academic settings. The accents of Scottish lecturers and classmates, for example, presented a considerable barrier to learning. As explained by the students quoted below, there were occasions when they could not clearly understand what was being taught or discussed during class:

"I sometimes do not understand what is being taught because of the accent of the lecturer". (P4)

"I have challenges with my academics, especially with group work, as I found it hard to relate to some of the students based on accent difficulties and cultural differences. I sometimes don't participate, and that makes me lose marks". (P12)

"Well, this has to do with the accent. I sometimes struggle with what is being taught in class as a result of the accent difficulties". (P18)

"It's pretty difficult to understand the accent here. I believe that is one of the greatest challenges I face. I struggle to understand my course mates as well during conversations for group work, so I just don't participate during the discussion, thereby losing marks as I probably didn't comprehend what was expected of me". (P11)

Other students expressed concern that their Nigerian accent would not be understood by their Scottish lecturers or peers:

"I think it's because of the communication barrier as a result of the accent based on how we speak. We feel sometimes people struggle to hear our accent just as we struggle to hear theirs". (P13)

"I sometimes do not express myself in class because my lecturer and other non-African students struggle to hear my accent as I struggle to hear theirs as well". (P8)

"In my course, there are two lecturers. The first lecturer communicates with remarkable clarity, enabling me to comprehend the subject matter effectively and perform well academically. However, the second lecturer, a woman with a strong Scottish accent, has proven to be challenging to understand due to her accent and frequent movements during lectures. This has affected my ability to understand her viewpoints, thereby affecting my academic performance for that specific course". (P10)

"I think it is sometimes discouraging, especially if you ask a question and you have to repeat it several times as a result of your lecturer or some students not understanding you. I think the issue of understanding each other's accent is from

both ends. It's very discouraging as this affects the instructions given during course work and the understanding of the lecture". (P19)

Participating in class discussions was also identified as being difficult for other reasons, such as the different socio-cultural expectations of Nigerian students in relation to active class discussions. For example, interview respondents indicated that, although in Nigerian universities, many students would be willing to ask questions in front of a large class without hesitation, this would be difficult in their new learning environment because of shyness or the expectation that only the most intelligent students would be expected to be asking questions:

"Because Nigerian students are different from other students based on the new academic system that is different from Nigeria. For example, in Nigeria, expect 30 or 40 students in a large class of 300 students to ask questions or participate in class discussions. The case might be different here based on cultural differences, as some students are usually shy in a new environment. I am not saying we do not interact and ask questions here, but it's something that only the very intelligent ones like to do, as others are concerned about how they will pass the module and move on to the next course." But in Nigeria, everyone asks and participates in class discussion, especially if the lecturer is friendly". (P2)

However, this was not always an opinion that all students shared. For example, other interviewees expressed this as a characteristic of individual differences rather than socio-cultural differences. It could just be personal shyness and not necessarily due to socio-cultural differences unique to Nigerian students:

"Students here are very open and outspoken, but in Nigeria, some students tend to shy away from asking questions in class. I don't think it's based on our socio-cultural differences, but maybe individual differences". (P15)

"Well, nothing much. It's just that students here are extremely free and outspoken. Although, as Nigerians, we are very outspoken as well, some of us shy away from asking questions in class in a new environment. I don't believe it's based on socio-cultural differences, but maybe individual differences". (P17)

"I think some students are generally shy sometimes". (P7)

"I must admit that sometimes I can be very shy [...] it affects the way I communicate with my classmates during preparation for a group task or presentation". (P14)

Furthermore, several participants compared their abilities with those displayed by their Scottish peers, expressing fear that asking questions in class or attending support programmes would give others the impression that they had poor academic skills. This was reflected in the belief that they did not possess the academic abilities necessary to meet the academic expectations their lecturers had of them. As one participant explained:

"I think it's not effective because students deliberately shy away from such sessions as they do not want to be seen as someone who lacks such skills. I believe that not asking questions in class can affect our understanding of the concept being taught, thereby affecting our performance". (P1)

This concern with how others might perceive their intellectual abilities was expressed by several interview participants:

"Some Nigerian students have this misconception that asking questions in class means you are not intelligent, which is not true. In fact, asking questions in class means that you are focused and eager to learn more". (P16)

"I really don't like to ask questions in class because you don't want to come across as someone who is not intellectually sound [...] People might think you are asking dumb questions". (P9)

"I think most people don't contribute in class because they don't want to be put on the spot". (P20)

"I think lack of confidence or fear that they may say the wrong thing or give a wrong answer to a question". (P5)

"I think that the difficulty in asking questions during lectures is a result of being timid and fear of the question turning out to be irrelevant". (P3)

The experiences of Nigerian students in Scottish universities highlight significant challenges related to language and communication, particularly concerning accents and cultural differences.

The quotes from the students revealed a common difficulty with understanding Scottish accents, which impedes their comprehension during lectures and discussions. They express frustration at times when their own Nigerian accent is not understood by lecturers or peers, affecting their ability to communicate effectively in class.

Additionally, cultural differences contribute to the dynamics of students' participation. Nigerian students observed that in their home country, class participation, such as asking questions, varies depending on individual differences; participation tends to be more common among those who are very intelligent or when the lecturer is friendly. These differences in socio-cultural expectations contribute to some students feeling hesitant to actively engage in class discussions.

Furthermore, there is a prevalent concern among Nigerian students about how their participation in class might be perceived. Some students fear that asking questions could be interpreted as a sign of intellectual inadequacy, reflecting broader anxieties about academic performance and self-confidence.

Overall, these insights highlighted the complexity of linguistic and socio-cultural adaptation faced by Nigerian students in Scottish academic settings. The quotes illustrate not only the practical challenges of communication but also the cultural factors influencing their classroom experiences. Addressing these challenges requires fostering a supportive learning environment that recognises and accommodates diverse linguistic backgrounds and encourages inclusive participation.

5.3.3 Time Management and Study Methods

Claessens et al. (2007 p.262) define time management as "behaviours that aim at achieving an effective use of time while performing certain goal-directed activities". The practice of time management includes self-management, with a focus on efficiently utilising time by choosing which tasks to complete, how to complete them

more effectively, when to set aside specific time slots for each task, and when to carry out those tasks (Savino 2016). Furthermore, it has been associated with reduced anxiety levels and enhanced academic performance among students (Jenaabadi, Nastiezaie, and Jalalzai 2016).

Several studies have highlighted the benefits of time management. In particular, studies have shown that proficiency in time management enhances student learning and academic achievements (Kearns and Gardiner 2007, Kelly 2002, McKenzie, Gow, and Schweitzer 2004). Krause and Coates (2008) further emphasised the importance of effectively managing one's time as a fundamental benchmark for students to develop effective study habits and success strategies. Time management is a crucial factor, as highlighted by Claessens et al (2007), in equipping individuals with the tools to organise and oversee their tasks and responsibilities. Additionally, it provides the foundation for students to develop successful study habits and strategies for achieving success.

When asked about how they managed their academic schedules, most interview subjects responded that they had no plan in place. Two interview subjects, for example, gave the following response:

"I don't think I organise my coursework. Wherever the wind blows, I follow. [Laughs]". (P6)

"I have never practiced time management." I must admit that I have poor management skills. I just read my books and try to memorise what I have read when exams are fast approaching. This has made me very anxious before exams and assignments due dates". (P18)

"When it comes to my studies, I struggle with time management. Often, I find myself cramming at the last minute, attempting to memorise everything I've read. As exams draw near, I consistently feel anxious". (P10)

"I do not have any time management strategies for my studies, so I tend to engage with course work materials only as deadlines and exam dates approach". (P15)

These responses collectively suggest a lack of awareness regarding the value of a personal time management strategy when it comes to studying and keeping up with coursework and examinations.

In a follow-up response, this student clarified that they were referring both to how they studied for courses and approached writing assignments. Lack of organisation for them meant both difficulty ordering their thoughts in writing and difficulty prioritising their academic work when it came to studying outside of class, which had greatly impacted their academic performance. Their explanation implied that they were putting aside what they believed was adequate time in their personal lives for academic work but lacked an effective strategy for using it. Many participants specified that their only guidance in managing their time during the semester was the course syllabus provided by their instructor or the academic calendar offered by the college.

There was only one participant who emphasised the significance of being organised and systematic in their approach to handling academic pressures effectively when asked about the methods that helped them cope with their studies:

"I create a large timetable and display it on my wall. Using marker pens, I colour code the tasks to differentiate the important ones, those with approaching deadlines, and the ones I have already completed". (P13)

A few other interviewees also responded that they did have a method of organising their academic work, noting a number of benefits related to doing so. One Nigerian student explained that time management boosted their confidence and lowered anxiety, stating that:

"I just attempt to maintain a regular study schedule and avoid waiting until the last minute to start studying for examinations since I believe that doing so will help me feel less anxious and more confident, which will enable me to solve any concerns before the exam day". (P11)

This response, however, indicated that the student took a casual approach to their academic study approach, following common sense practices rather than devoting

time to creating a study plan. Such responses were common, with many interviewees answering that they did not have an organised study method but then describing common sense strategies they followed. For example, another interviewee stated that they did not follow an organisational strategy, although they prioritised according to the difficulty of the course:

“I really do not have any time management plan in place. However, when faced with more difficult courses, I prioritise studying for them over others”. (P7)

The majority of participants admitted to lacking structured time management strategies for their academic pursuits. Many described their approach as reactionary, only engaging intensively with coursework and exam preparation as deadlines loomed closer. For instance, one student humorously confessed to following wherever the “wind blows” in organising coursework. This sentiment was echoed by others who acknowledged their tendency to cram information at the last minute, leading to heightened anxiety before exams.

Moreover, several participants highlighted their reliance on the course syllabus or academic calendar as their sole guide for managing academic tasks, indicating a reactive rather than proactive approach to study planning. This reactive approach often resulted in stress and a lack of confidence in their academic performance.

However, amidst these admissions of poor time management practices, a few interviewees did share methods they found effective. One student described using a colour-coded timetable prominently displayed on their wall to prioritise tasks and manage deadlines effectively. Another emphasised the psychological benefits of maintaining a regular study schedule to reduce anxiety and boost confidence before exams.

Nevertheless, the overall consensus revealed a gap between the recognised importance of time management and its practical application among Nigerian students in Scotland. This disconnect underscores the need for tailored support and education on effective time management strategies within the academic environment. Addressing these challenges could potentially alleviate anxiety,

improve academic performance, and foster a more proactive approach to learning among Nigerian students studying abroad.

In conclusion, while some students demonstrate effective organisational methods, the broader interview findings indicate a pervasive need for greater awareness and implementation of structured time management practices to enhance academic success and overall well-being.

5.4 Information Literacy Challenges

Information literacy (IL) comprises those capabilities that enable an individual to recognise the type of information that is required, comprehend the way information is structured, recognise the most appropriate sources of information for a particular problem, access and effectively use these sources, and evaluate the information collected (Okon, Etuk, and Akpan 2014). According to Hadimani and Rajgoli (2009), IL is important not only for educational success but also for personal and social well-being. IL competencies are crucial to the lifelong learning of students and can serve as the foundation for learning processes that are used across all academic fields, settings, and educational settings (Salleh et al 2011). They offer students the ability to fully grasp the context, broaden their research, develop their learning strategies, and become more self-directed.

Among the most consistent academic challenges described by students were different aspects related to information literacy skills. Expressed in terms of the ACRL Framework for Information Literacy, the most common difficulties experienced were found in relation to the frames described as "Research as Inquiry" and "Scholarship as Conversation". The former describes a student's ability to clarify a particular academic task, define an appropriate scope for research, and organise and critically analyse available academic resources (ACRL 2016). Scholarship as conversation describes a student's ability to correctly cite and synthesise information from other academic sources in the process of contributing to a scholarly conversation (ACRL 2016).

Students experienced several challenges and expressed difficulties in fully understanding what to search for and finding enough relevant information in a timely manner. The task of finding an adequate number of relevant academic sources was also noted as a challenge, despite many students describing familiarity with commonly used information sources and search methods. Other challenges students experienced included recognising that different types of information searches require different unique strategies, understanding how to effectively articulate a research topic using search terms, and developing strategies for quickly vetting sources for quality and relevance (Armstrong et al 2005). Correctly referencing and paraphrasing sources were also two very common difficulties that students discussed during the interview process.

5.4.1 Defining Information Needs and the Process of Searching

Most of the students interviewed described at least a basic level of knowledge when it came to using academic databases for their school assignments. When asked to give examples of academic databases they have used in the past, Google Scholar was mentioned by almost every student interviewed as a commonly used tool for academic research. At the same time, several students also mentioned other academic databases that were more specifically tailored to their academic disciplines, such as JSTOR, ResearchGate, Emerald, Science Direct, Scopus, Z-library, and the school library (P10, P14, P17, P15).

Although Google Scholar solely provides access to freely available academic articles that are not protected by a database paywall, students could use it as a search interface as it permits connecting its interface with academic libraries (Jensenius et al 2018). Though it is not as thorough as more domain-specific academic databases, Google Scholar is considered by information science experts to be an excellent tool for research as it provides easy access to scholarly articles with links to full-text articles or abstracts when available. This can save researchers time and effort in accessing the publications they need (Jasco 2005).

In addition, several students were familiar with using Boolean operators to narrow or broaden their searches to the most relevant result, such as “AND”, “OR”, or “NOT”, which is considered to be an effective means of executing a well-focused search for academic resources (MIT 2023).

“When searching for specific information, I use the Boolean operator to narrow my search”. (P7)

“I use key words to get the needed information”. (P5)

“I use Boolean logic [...] using specific keywords/search terms as required”. (P4)

“I always try to use the Boolean operator. Sometimes I struggle with it as I am new to this way of searching for information”. (P17)

“I use search terms, or sometimes I use the exact phrases to get the needed information”. (P3)

“Sometimes I just input specific words on Google Scholar, and other times I use Boolean logic”. (P2)

“I use Boolean logic, and other times I just lazily type the question on Google to see what information comes up [laughs]. I know I shouldn’t be doing that”. (P14)

“I often type synonyms of the specific word to get some information”. (P16)

However, there were also instances where difficulties with searching for information were encountered, which left students feeling less confident or frustrated:

“Sometimes, when I feel less confident in my searching skills, I tend to get frustrated as it’s a very difficult process to search for information. You might get some output, but it might not necessarily be what you are looking for, so you have to keep searching. This has greatly affected the whole research process for me”. (P10)

Challenges with search skills were also explained on the basis of a lack of experience with the overall process of developing independent research skills. This reflected the priority given to memorisation over research skills within the Nigerian education

system, which meant that transitioning to a more research-based academic tradition presented a challenge for Nigerian students:

"I think this is the case because of how I previously learnt in my former school in Nigeria. I was not familiar with research skills, as this was not really practised in my school. We just read our handouts given to us by our lecturers, and then I go and sit for the exams, hoping that I will pass". (P12)

"The problem I encounter with regards to searching for information revolves around searching with keywords and using efficient search strategies. Unfortunately, I never received instruction on utilising these skills during my schooling in Nigeria". (P13)

"One of the difficulties I encounter in information search is my limited knowledge of using effective keywords and strategies. I only became aware of these skills recently because my previous assessments in Nigeria solely relied on exams, and I never had to utilise research skills for any subject". (P18)

Furthermore, even in the cases where familiarity with different sources and techniques for searching for information was present, when it came to describing what information was needed, a sense of confusion regarding what to search for when looking for relevant academic information for a research project was a common and challenging experience described by several interview participants. This was evident in the way in which students explained how they did not completely understand the task itself when beginning the research process. This could be presented as a significant hindrance to progressing with their academic work or lead to a lack of confidence. The following quotes describe different experiences of this problem, demonstrating that there may be some improvement with time, but the process of finding information can be a daunting task for a new student:

"Searching for information can be really difficult. Sometimes you can't even define what exactly you are looking for. Let's say you were asked to complete an assignment; if you don't understand the task, you don't even know what to search for". (P9)

"Searching for information is a long and round process. You have to understand the task first before you can even begin to search for the information to complete the task. I believe with time, my information-searching skills will improve. It's a daunting task, but it's doable". (P20)

"Sometimes I do not even understand the task itself, let alone begin the process of searching for information to complete the task. These challenges are impacting on my academic studies". (P1)

"When I'm not feeling particularly competent in my search abilities, it affects my confidence. Sometimes, I don't know the exact information I should be searching for in order to complete an essay or a written assignment. Again, even when you get some sources of information, it may not be what you need, so you will need to keep searching. [...] There are instances when I just don't feel capable of meeting study or assignment deadlines, whether because I lack self-assurance in the topic at hand or because I simply do not grasp the idea being taught. It depends on how difficult the course is". (P19)

The difficulties that students expressed in this area also created challenges in meeting deadlines for assignments. This was presented as a feeling of not being able to work fast enough when going through the research process:

"Sometimes, I feel I don't know how to search fast enough for the information that I need. You know your ability to source information fast is very key in research". (P11)

"I do not feel I have the requisite abilities to search for information promptly since it is crucial to get quality information sources quickly in order to meet assignment deadlines". (P15)

"I was supposed to work on an assignment but found it difficult to get enough articles to support my work, and due to that, I ran out of time and wasn't able to send the task on time". (P6)

When asked about key incidence experiences during their initial time as a student in Scotland, the following interviewees offered a more detailed account, which

exemplifies this difficulty in finding an adequate number of resources within a limited timeline:

“There have been many instances, but there is this one that really hit me. There was this assignment that I had to submit after a week of the due date for the assignment. I searched various sources for information that can help me complete the assignment, but I found only two, and they contained similar details. I had to read all the documents fully to ensure that I understood them in order to do the assignment, which was about 25 pages. I had to write a 25-page document from my head and just two read documents. This made it difficult to have enough references. I also had to search for documents that could help me reference my work, and this was a big challenge” (P8).

“I attended a school-sponsored information literacy class, but it wasn't very helpful because I was short on time. I ended up completing the assignment under pressure, which affected my performance, and I didn't do well. As a result, I had to retake the course, which required extensive study hours, yet I still struggled to achieve a good grade. The course was focused on essay writing, and although my initial issue was running out of time, I must admit that my research skills are weak. I often struggle to find adequate sources for my academic tasks. I believe that if the information literacy class had been integrated into the ongoing school curriculum, it would have been much more beneficial for students like me, rather than just a one-week sponsored course that doesn't offer much depth” (P15).

Nigerian students interviewed displayed a basic knowledge of using academic databases for their assignments, with Google Scholar being the most commonly used tool.

Students showed an understanding of advanced search techniques, particularly the use of Boolean operators, which help narrow or broaden search results. However, despite this knowledge, some students still struggled with the application of these techniques, leading to frustration and a lack of confidence in their search skills.

One significant challenge identified was the transition from the Nigerian education system, which prioritises memorisation over research skills, to the more research-based academic environment in Scotland. This gap in their educational background made it difficult for students to adapt, affecting their ability to conduct independent research effectively. Many students expressed that they were not familiar with research skills in their previous studies in Nigeria, which relied heavily on reading handouts and taking exams without much emphasis on research skills.

Another common issue was the difficulty in searching for information. Students often struggled with understanding what specific information they needed to search for, especially when conducting research. In addition, one participant stated that sometimes they can't really define what exactly to search for with regards to completing an assignment. They also added that if you don't understand a task, you don't even know what to search for. This confusion hindered their ability to begin the research process effectively, impacting their overall academic performance.

Furthermore, the student's key experiences emphasise the challenges of having insufficient time to meet academic deadlines and difficulties in finding adequate sources. This key incident underscores the importance of a comprehensive, ongoing information literacy class to effectively develop essential research skills.

These challenges led to anxiety and a lack of confidence among students, who often felt inadequate in their academic abilities. The transition to a new academic environment with different expectations only exacerbated these issues. In addition, with regards to having effective time management for their studies, while a few students developed strategies to manage their academic workload, such as using timetables and colour-coding tasks, these methods were not universally applied. Some students still relied on common sense practices rather than having a structured plan for their studies.

The experiences of Nigerian students highlighted the need for improved support in developing research skills and understanding academic expectations in a new educational context. While Nigerian students possess foundational knowledge of

using academic databases, the shift from a memorisation-focused education system to a research-orientated one presents significant challenges. Addressing these gaps through targeted training and support can enhance their research capabilities and overall academic success.

5.4.2 Different Experiences with Referencing Abilities

As described by the ACRL framework, correctly referencing academic sources is an essential skill in accurately representing the existing academic “conversation” regarding a particular research topic (ACRL 2016). Academic citations can take a variety of formats, often depending on the academic discipline. This can become confusing to all students (not only Nigerian students), especially when they are commencing their studies (Greer and McCann 2018).

However, during the interviews, several students mentioned the challenge of correctly citing information sources when asked about areas in which they lack confidence in fulfilling their academic requirements. They explained that this skill was not emphasised as much during their previous academic experiences in Nigeria. As a result, they now faced difficulties in meeting the proper academic standards for referencing and citing sources.

“Sometimes I make mistakes when I cite sources within my work. I think it’s based on my university’s standards and expectations”. (P8)

“I always also get the referencing wrong, but I am getting better at it. I think it’s really different from the way we referenced it at my university way back in Nigeria”. (P1)

“Citing different academic sources can be a bit confusing as I am just new to academic writing”. (P20)

“I cannot correctly reference, cite, and arrange my work in accordance with the course requirements”. (P19)

“Yes, I just struggle with referencing my work sometimes”. (P14)

"As further explained by one of the students: "The referencing style used at my university differs significantly from the one I am used to in Nigeria. I really struggle with the referencing style when writing my essays and assignments". (P9)

Referencing sources correctly was a challenge, especially when a deadline was rapidly approaching for an assignment:

"Not long ago, I had to submit my assignment, and the challenge was ensuring that all references were done properly according to my school's referencing style. I got some wrong but had to submit because time was running out". (P5)

During the interviews, several students mentioned the challenge of correctly citing information sources. They explained that this skill was not emphasised as much during their previous academic experiences in Nigeria. As a result, they now faced difficulties in meeting the proper academic standards for referencing and citing sources. For instance, students expressed that they often had difficulties when citing sources within their work, as the referencing style used in their current university differed significantly from what they were used to in Nigeria. This unfamiliarity with the new referencing style made academic writing more confusing and challenging.

The challenge was particularly pronounced when assignment deadlines were approaching, as stated by one student, as they felt the pressure to ensure all references were correct according to their school's standards, sometimes resulting in errors due to time constraints. This indicates a broader issue of adapting to different academic expectations and standards in a new educational environment. The students' experiences highlighted the need for additional support and training in academic writing and referencing to help them meet the academic requirements confidently.

5.4.3 Challenges with Paraphrasing

When explaining the concept of paraphrasing, most researchers emphasise the alteration of word choice and sentence structures, as well as the preservation of meaning between the original text and its rephrased version. This implies that paraphrasing entails modifying a text while still conveying its intended meaning. As

these definitions indicate, a paraphrased text incorporates distinct vocabulary and sentence structures compared to the original source while maintaining the overall meaning. It is worth noting that paraphrasing does not involve reducing the length of the text, which distinguishes it from summarising (Hirvela and Du 2013).

This is an important skill for students attempting to represent academic resources in writing without directly quoting them. When asked if they had any difficulty identifying the information that they needed for their academic work and conducting research from various academic sources, many students stated that they have difficulty paraphrasing an author's work without distorting the original meaning of the content of an academic paper. This difficulty is clearly expressed in the following quotes from three different interviewees:

"Sometimes, I find it difficult to paraphrase without losing the message the author is trying to convey. You know you can paraphrase in a way that the meaning of what you are trying to say becomes different from the original source. So, you have to be very careful". (P2)

"There are moments when I struggle to paraphrase. If you are not careful, you may change the meaning of what you are trying to paraphrase". (P7)

"I do not feel confident about my ability to paraphrase accurately, as I always struggle to find the right vocabulary to use in my essays". (P18)

The following students highlighted their lack of experience with paraphrasing as well as the difficulty it poses, alongside other challenges in academic writing.

"Paraphrasing is unfamiliar to me as it wasn't taught in my previous school". (P2)

"During my studies in Nigeria, assessment was primarily centered on presentations and exams; thus, we didn't practice paraphrasing since my courses were not based on essay writing". (P17)

"My challenge with paraphrasing arises when I lack comprehension of the content, making it difficult to articulate and employ the appropriate vocabulary or words to convey my thoughts". (P11)

"I need to improve on how I present my arguments in a logical and concise manner. I also need to know how to paraphrase without losing the meaning of what I am trying to convey". (P13).

Some students expressed challenges with paraphrasing an author's work without distorting its original meaning. This difficulty was particularly evident in students' concerns about losing the author's intended message during paraphrasing.

In addition, students highlighted their lack of experience with paraphrasing and the additional challenge it poses in academic writing. For example, some students mentioned that paraphrasing was unfamiliar to them because it wasn't taught in their previous educational settings. They explained that their previous assessments were mainly centered on presentations and exams, which did not require paraphrasing skills. Furthermore, the challenge of paraphrasing was compounded by difficulties in understanding the content and finding the right vocabulary to accurately convey their thoughts. One student emphasised the need to improve their ability to present arguments logically and concisely while paraphrasing without losing the original meaning.

These insights suggest that the students' struggles with paraphrasing stem from a combination of unfamiliarity with the skill and the complexities involved in accurately rephrasing academic content. This highlights the importance of targeted support in developing paraphrasing skills to help Nigerian students meet academic standards and effectively convey their understanding of what paraphrasing entails.

5.5 Challenges with Academic Self-Efficacy

Academic self-efficacy refers to a student's personal belief that they can attain a certain level of success in academic assignments and realise their overall academic goals (Hayat, Shateri, Amini, and Shokrpour 2020). Interview participants were first asked a series of questions pertaining to their sense of academic self-efficacy, followed by an exploration of the potential impact the lack of academic self-efficacy may have on their ability to perform their academic work successfully.

Nigerian students expressed the perception that they lacked certain academic skills and abilities expected of them from the Western academic culture. This was expressed as a concern that they were not prepared for the academic expectations of Scottish academia or generally that they were less academically capable than their peers. Participants' verbalisations also revealed that low academic self-efficacy was connected to academic skills development gaps and students' lack of participation in class discussions, as explained earlier.

For example, several students expressed an overall sense of personal lack of academic self-efficacy, which was linked to low confidence, a feeling of being demotivated, and, in some cases, a lack of self-assurance created because of uncertainty about what was required as part of their studies:

"As a student, sometimes I am not confident enough about my ability to learn and understand, and this has caused me to be unmotivated". (P6)

"...There are instances when I just don't feel capable of meeting assignment deadlines, whether because I lack self-confidence in the topic at hand or because I simply do not grasp the idea being taught. It depends on how difficult the course is". (P19)

"Sometimes I do not believe I can achieve my academic goals as I am not really confident about my academic abilities". (P9)

"I think it has affected me negatively as I struggle with critical thinking skills and the ability to construct my writing with good arguments [...]". (P8)

"I do not have enough confidence in my academic abilities. I remember I once had a deadline to complete an assignment but was behind because I didn't know how to approach the task. I attended a school-sponsored information literacy class, but it didn't help much since I was running out of time. I executed the assignment under pressure, and I didn't do well". (P14)

Reflected in this statement are many aspects of academic self-efficacy, notably information literacy, study strategy, and time management. This student struggled with assignment and waited until they were under significant pressure from the

deadline to seek university support. These stressful conditions, along with the lack of useful information from the information literacy class, contributed to the students' poor performance on this task. It can only be speculated as to how this experience will influence the student in their overall academic career, but it had an immediate and negative impact on their sense of academic self-efficacy.

However, for other students this lack of self-efficacy became a driving force to further develop their academic skills. Several students had a positive perspective on learning, expressing an acknowledgement that feelings of low self-efficacy were temporary and could be overcome. For example, when asked if they experienced any challenges with their academic self-efficacy, students answered that although they struggled with lack of self-efficacy, this was part of the learning process:

"You know, sometimes you don't even feel confident about your academic capabilities or how to attain your academic goals. So, I am really not confident sometimes. But that is why we keep learning". (P11)

"When I don't do well in my studies sometimes, it affects my academic self-efficacy. However, I usually encourage myself that I can do better, and then I put in the effort to study more, which sometimes brings about the desired result". (P5)

"I don't have enough academic self-efficacy, but I believe if I work harder, things will change". (P17)

"I don't feel very confident in my academic self-efficacy. But I am positive that despite the challenges, if I put in more work, I will be able to achieve my goals". (P4)

"I don't have belief in my academic self-efficacy. However, I am determined to put in the work to achieve my academic goals. So, I am positive". (P12)

Furthermore, some students referred to motivation for developing specific academic skills, such as information-searching skills:

"The issue is that the research process is a bit difficult, but with consistent effort and determination, I am able to get all the necessary information needed to accomplish a given task". (P15)

"Because of my urge to meet my academic goals, I am constantly looking out for sources of information, mostly online and in libraries". (P7)

This motivation for self-development was also expressed as a need for continuous learning and development:

"I feel good. I am able to put together information from different sources in relation to my area of interest. But then again, I still need to do better". (P12)

"There are some tasks that have little information, and therefore searching or trying to get more information is a bit difficult, but by trying to manage the challenges with a little patience and drive, I am able to get all the necessary information needed on a particular subject". (P2)

For this student, the key experience was being persistent in trying to meet the informational requirements of some of their initial assignments. This diligence enabled them to be successful in their academic tasks and improved their overall perception of self-efficacy. Such experiences were discussed by several other students interviewed and reflected a philosophy of self-reliance. One student expressed this philosophy as follows:

"I am always of the opinion that anything can be learnt, and there are many tools that can help us do so. I trust myself in searching for information. Because of this ideology, I try to explore different avenues and techniques to find the information I need, and this has helped me improve my academic performance". (P20).

During the interviews, several students expressed low academic self-efficacy, linked to a lack of confidence, demotivation, and uncertainty about academic requirements. This often hindered their ability to meet deadlines and understand complex topics.

Despite these challenges, some students used their lack of self-efficacy as determination to develop their academic skills further. They saw these feelings as

temporary and believed that with effort, they could improve their academic outcomes. They emphasised that determination and hard work were essential for achieving their academic goals.

Some students highlighted the importance of motivation in developing specific academic skills, like information searching. They noted that consistent effort and determination helped them gather necessary information for their tasks. Persistence and exploring various sources of information were considered essential for achieving academic success.

Overall, while many students faced challenges linked to low academic self-confidence, others maintained a positive outlook and were open to learning and improving their academic skills.

5.6 Recommendations for Academic Support

This section addresses support mechanisms by which educational institutions can assist students to address challenges encountered, such as information literacy development, academic socio-cultural adaptation, and language and communication challenges. When discussing academic challenges, interviewees often concluded their thoughts with recommendations regarding how their university may better support them as they become acclimated to Scottish culture, academic expectations, and language. Suggestions and recommendations from students interviewed were a key part of this research. As new students who are simultaneously entering an unfamiliar university, country, and culture for the first time, they offer a particularly relevant perspective on what support mechanisms might ease this stressful transition. For this research, suggestions were defined as general comments indicating a desired resource, while recommendations were more specific, actionable steps the university could take.

As we will show later, students offered suggestions and recommendations for support in both their academic and everyday lives as they acclimated to Scotland. In addition, it's worth noting that some students offered multiple recommendations or suggestions. This section offers a collection of themes from these recommendations

based on the challenges experienced by the interview subjects in their academic studies.

Study Groups and Group Work

Suggestions for academic support often combined a desire to receive support in meeting academic expectations and studying with others who were either experiencing or had experienced similar difficulties. This was reflected in both the suggestions for study groups and tutoring programmes that would bring fellow Nigerian or other international students and home students together. Interviewees noted that this practice was more similar to what they had been accustomed to in Nigeria. Other students believed group work would encourage international students to overcome shyness and concerns that their peers would be unable to understand them. It was also suggested that group work between international and Scottish students would reduce cultural barriers and encourage the sharing of insight between peers regarding different academic socio-cultural issues:

"We have study groups in Nigeria where we engage students to see how well they have prepared for their forthcoming exams. Students ask each question randomly to see if they know the answer. This is like a preparatory process before exams. This method is not practised here. I will recommend something similar, as it will make students more serious with their academics" (P 10).

"I think there's a system in place in my friend's university in London where they put students in study groups to share ideas. She said this method has helped her tremendously, as she has learnt so much from that group. If my school can introduce something similar, that would be great". (P1)

"Pairing local and international students together to partake in group discussions, fieldwork, and group tasks will enable international students to understand the accent better as they interact more with one another". (P17)

"I recommend that students and their lecturers interact once in a while to discuss how they are faring in their academics. This will be like a forum where everyone will

be engaged in the discussion. I feel listening to other students speak will enable students to familiarise themselves with the accent better". (P6)

"Lecturers can put students together in a study group. This will help students prepare for assessment without being lazy". (P4)

"I believe there should be study groups aimed at aiding Nigerian students in understanding accents, teaching fundamental skills, and supporting them towards exam preparations". (P9).

The interview participants shared various suggestions and recommendations aimed at improving support mechanisms within their university, particularly concerning adaptation to Scottish culture, academic expectations, and language challenges. A recurring theme was the establishment of study groups and enhanced interaction between students and lecturers.

Participants highlighted the value of study groups that integrate both Nigerian and Scottish students. They emphasised that such groups could facilitate peer learning, alleviate language barriers, and promote cultural exchange, thereby enhancing academic preparation and confidence. Additionally, they proposed regular interactions between students and lecturers to foster a supportive academic environment, which will assist them in understanding Scottish accents and academic requirements.

These recommendations underscore the importance of creating inclusive and collaborative spaces within the university to support Nigerian students in their academic journey and cultural adjustment.

Tutoring or Buddy Programmes

Offering tutoring or buddy programmes was another idea shared by students:

"The universities should pair old students who have gone through a particular course with new students and give them incentives to teach these new students in their spare time, as students sometimes prefer to learn from their buddies or other students". (P2)

"I think a one-on-one tutoring session should be available to all students during their entire course programmes". (P15)

"I think that a buddy system or peer study groups will help as Nigerian students like learning from their peers." (P8)

"The university should have peer buddies or volunteers who will assist new students in finding everyday information". (P16)

"A friend of mine informed me that they have a buddy/friend programme at their institution and that this has greatly helped her. So, I will recommend that my university implement this method". (19)

"The university should have students that can volunteer as study buddies to new students, as this will help with their academics". (P11).

The interview participants provided insights into support mechanisms they felt would benefit new students at their university. They emphasised the effectiveness of tutoring or buddy programs, suggesting that pairing experienced students with newcomers could enhance learning experiences. Participants highlighted the preference for peer-based learning among Nigerian students and recommended implementing structured buddy systems or volunteer programs to assist new students in navigating academic and everyday challenges effectively. These suggestions can foster a supportive environment and facilitate peer-to-peer knowledge exchange within the university community.

Academic Skills Courses

Other recommendations focused more on institutional measures, such as offering remedial courses on information searching and critical thinking classes:

"Since research skills weren't emphasised in my school, I lacked the necessary abilities to effectively conduct research. [...] Maybe an introductory class on information searching can be conducted online before we arrive in our country of study". (P3)

Similar suggestions for courses covering basic academic information literacy skills to be taken upon arrival in Scotland were common among the Nigerian students interviewed:

"The best way the university can improve such services will be to include information literacy skills as part of their course curriculum". (P20)

"If information literacy classes are made compulsory as a course, it will become more effective as students will begin to attend these classes". (P14)

"I will suggest the implementation of an information literacy class. This should be made compulsory for all new international students". (P1)

"I think it will be great if universities can provide short compulsory information literacy classes for Nigerian students before the start of their course programmes". (P5)

"I will recommend information literacy classes. It will be great if we are taught these skills alongside other modules". (P7)

"The university should offer us additional courses on critical thinking and information literacy classes". (P18)

"Critical thinking skills courses should be taught as a preliminary course before the start of any degree programme, especially for international students". (P6)

"I feel that the university should organise tutorials for freshmen on how to carry out an effective information search rather than leaving them to their fate. This can even be done before they arrive on campus to start their studies". (P13)

Although students were familiar with introductory courses offered by their universities (e.g., on academic writing), only a few students found these courses helpful for several reasons. For example, a common criticism was that courses of that nature did not cover many important aspects of academic skills. For example, students pointed out that academic writing courses at their university only covered

a limited number of technical skills but did little to improve their actual academic writing skills:

“I suggest that the university should provide sessions on how students can learn to arrange their ideas and how to present these ideas professionally”. (P19)

“The academic writing class offered at my university is just generally on referencing and paraphrasing skills. We should also be taught how to structure our essays professionally. Also, lecturers should also take time to explain how they want the course assignment to be written”. (P2)

“We are only taught paraphrasing skills in my school. I would recommend that students should also be taught how to make coherent arguments in our writing and how to generally write in a professionally manner”. (P10).

Other students commented that class sizes were so large in introductory courses that instructors often failed to notice when students, unaccustomed to Western academic standards, were struggling. As one interview subject elaborated:

“One of the ways to improve this service is to teach students in smaller groups. If this is done, the tutor will easily spot the weakness of each member of the team and address them accordingly”. (P12)

The interview participants offered recommendations aimed at enhancing institutional support for new students, particularly concerning academic skills development. A prevalent suggestion was the implementation of compulsory courses on information literacy and critical thinking skills, ideally before the start of regular degree programs. Participants emphasised the need for these courses to cover fundamental skills such as effective information searching, critical analysis, and academic writing. They proposed that these courses would better prepare international students, especially those from Nigeria, for the academic expectations and challenges they encounter in their studies abroad.

Moreover, there was a call for improvements in existing academic writing classes, with suggestions to expand beyond basic skills, such as referencing and paraphrasing, to include instruction on essay structuring and coherent

argumentation. Students also highlighted the benefit of smaller class sizes in introductory courses to ensure instructors could provide more personalised support and address individual learning needs effectively. These recommendations aimed to create a more supportive and inclusive learning environment that facilitates the academic success of Nigerian students transitioning to Scottish universities.

Transcription Services

Other ideas included offering transcription services to help with accent difficulties and comprehension of Scottish English, recordings of lecture sessions to provide additional help with comprehension, and using an online chat forum in class, where students can type in questions to ask the lecturer questions:

"I would recommend that transcription services should be available during class lectures". (P16)

"My recommendation would be that the university should provide an online chat session in class where students can type in their questions and the lecturer can type in their responses". (P17)

"I think transcription services should be made available during class sessions. This will eradicate the communication barrier". (P3)

"I think transcription services should be available in classes". (P7)

Overall, students considered their lecturers to be the first point of call for this additional help and support:

"My suggestion would be that the outlines of tasks given to a student should be thoroughly explained by their lecturers with examples. Please let us know in plain terms what is expected of us". (P5)

"I would recommend that lecturers can show us samples of previous work and steps on how to accomplish the task". (P18)

"I think lecturers should try and speak slowly in a clear-toned voice and use transcription services". (P10)

The interview participants offered several suggestions aimed at improving communication and comprehension in academic settings, particularly for students facing challenges with Scottish accents. One prominent recommendation was the provision of transcription services during class lectures to aid in understanding and overcoming language barriers. Students also proposed implementing online chat forums during lectures, where they could type questions for immediate clarification from lecturers.

Furthermore, participants emphasised the role of lecturers in providing additional support by speaking slowly and clearly, using examples to explain tasks thoroughly, and demonstrating previous work to guide students. These recommendations underscored the importance of clear communication and accessibility of academic content to facilitate learning and academic success for international students transitioning to Scottish universities.

Academic Support Outside of Lecture

Suggestions for academic support options outside of traditional, lecture-based courses were common among students. The most frequent suggestions were for tutoring sessions, study groups, and workshops on a variety of topics that interview subjects believed they could benefit from. Because of the difficulties many students described with understanding their professors during lectures, a common suggestion was for one-on-one time outside of the lecture hall in which students could clarify topics they did not understand. When translating this suggestion into an actionable recommendation, many students envisioned these opportunities as occurring in person and on a regular basis. As one student explained this, for example, "It would seem reasonable if the institution can permit students to schedule a private appointment every week with their instructor if need be". (P1)

Other students offered more flexible, technology-based recommendations on how lecturers could assist international students struggling to understand them. One student offered a series of recommendations on how greater lecture support could be offered to students in their position:

“What I think the university can do to help resolve this issue is that questions about a particular lesson or course can be requested to be sent via email or WhatsApp platforms to the course lecturer. The course lecturer can then attend to them in the next lecture. Also, the school can create a FAQ [Frequently Asked Questions] platform where students will have access to some of the questions already asked by previous students in those specific courses”. (P9)

This recommendation offers a more flexible option for lecturers and students to communicate without the need to arrange in-person interaction. Adding a “frequently asked questions” option further opens this support service to students who may be too nervous to reach out to their lecturers. As noted in comments regarding academic self-efficacy, many students stated that they were hesitant to address their lecturers due to shyness or because they did not want to appear intellectually inferior to their peers.

The desire for additional instruction outside of lectures extended to topics that were relevant to, but not included in, the content of academic courses. Instructional aids on how to understand the Scottish accent, adapt to the expectations of Scottish academia, and effectively manage an academic schedule were all recommended during interviews. One example of such a recommendation was, “I would suggest that students should be offered a video recording that explains how to properly schedule or plan for their coursework and study sessions”. (P8)

Recommendations of video or audio recordings were often accompanied by an explanation that such aides were of value because they could be provided to students before they arrived at school to begin classes. Despite the frequent complaints that academic schedules were very demanding, many students still expressed a preference for in-person options, like time management workshops. One student who struggled with strategic use of time expressed a preference for this option: “If the school can support students in this aspect, that will be of great help. Having a session where students can be taught time management skills can help boost academic self-efficacy, as this will enable them to plan effectively for each of their courses”. (P6)

"I really don't know how this will work, but provisions can be made for students to have classes on organisation skills in order for them to learn how to prepare for exams as most of us have many courses running concurrently and it is really hard to plan for exams for all these courses at the same time". (P11)

A few students suggested study groups be organised specifically for Nigerian students, as this was an arrangement they had been accustomed to participating in during university in Nigeria. One interview subject took the additional step of translating this suggestion into an actionable recommendation, noting that organising such a group was something Nigerian students could do amongst themselves. This student noted that a Nigerian student club had once existed on campus for such a purpose; however, it had ceased to function after the students leading the club graduated.

The following suggestions were also given by interview participants:

"The university can help with a mini-mart for African food at an affordable price". (P17)

"The university should have peer buddies or volunteers who will assist new students in finding everyday information". (P19)

The interviews revealed a range of suggestions from students aimed at enhancing academic support beyond traditional lecture-based courses. Common recommendations included tutoring sessions, study groups, and workshops addressing various academic challenges. Many students highlighted the need for personalised, one-on-one sessions with instructors outside of lectures to clarify complex topics. Some students proposed leveraging technology for greater accessibility, such as using email or WhatsApp for Q&A sessions or creating a FAQ platform.

Additionally, there was a call for instructional aides to help students understand Scottish accents, adapt to academic expectations, and manage their academic schedules effectively. Suggestions included video recordings of lectures and

workshops on time management. While technology-based solutions were valued, students also expressed a preference for in-person support for certain skills like time management.

Moreover, cultural adjustments and practical needs were also raised, such as organising study groups specifically for Nigerian students or establishing support systems for accessing familiar foods and everyday information. These recommendations underscored the diverse challenges faced by Nigerian students and highlighted their proactive approach in seeking tailored support mechanisms from their institutions.

5.7 Challenges with Everyday Life and Socio-cultural Adaptation

Everyday life socio-cultural adaptation begins with a period of adjustment in which students familiarise themselves with new aspects of their host culture. A student's success in this period of adaptation is often defined by how different the host culture is from the culture in which they were raised (Bierwiazzonek and Waldzus 2016). Scotland is currently experiencing a cost-of-living crisis in which many people are struggling to remain financially stable. This crisis has been especially hard on immigrant communities, of which Nigerians account for a sizeable portion (Bell 2023). The participants of this study discussed several challenges encountered on the basis of their everyday life socio-cultural adaptation, such as adjusting to the cost of living in Scotland and finding affordable familiar food as well as reasonable accommodation, which were the most common financial challenges they experienced, complicating their everyday life socio-cultural adjustment. In addition, everyday life challenges were expressed on the basis of difficulties in finding reliable information regarding fulfilling personal everyday life needs.

Everyday life socio-cultural adaptation has a significant impact on the adjustment of international students. Research by Ward and Kennedy (1999) indicates that moving to a new country for education presents various challenges related to cultural, social, and environmental differences. These challenges can affect different aspects of international students' lives and their adjustment processes.

Everyday life information literacy is “the ability to address a range of information needs, such as financial, health, and legal issues that relate to everyday practices, as well as making informed decisions that are of significant value to individuals and communities” (Martzoukou and Sayyad 2016 P. 647). Information literacy is seen as a vital prerequisite for active involvement and participation in civil affairs, fostering well-informed citizenship, promoting health and wellness, and ultimately enhancing the overall quality of life for individuals (Leung 2010).

However, international students experience challenging and demanding situations (Ishimura and Bartlett 2014), which may impact both their everyday life and academic progress. Bukhari et al. (2018), for example, have noted that international students’ academic performance, as well as their experiences and social connectedness, can be negatively impacted by the challenges of obtaining appropriate information. These demanding situations may be mitigated with the aid of acquiring applicable information. Furthermore, Liao, Finn, and Lu (2007) have observed that “different cultural body language and gestures, social class and religious differences, traditional passive roles of learners, and shyness about approaching authority figures for assistance can make barriers for library access and information literacy”.

Although information literacy is traditionally considered a skill set for academic work, it can be applied in a vast number of everyday contexts that require the accessing and critical review of information before acting on it. The ACRL model of information literacy emphasises that these skills apply to a wide scope of tasks and are becoming increasingly necessary as greater amounts of information become available (Jacobson and Mackey 2013).

During interviews, Nigerian students described a variety of everyday challenges in which they called up information literacy skills, notably searching for reliable information regarding both necessities and amenities. Everyday information literacy tasks discussed by interview subjects included finding familiar Nigerian food options, places to worship, and opportunities to socialise.

The following section addresses the challenges Nigerian students encountered in their everyday life socio-cultural environment by exploring their capabilities for sourcing and using information for their everyday life socio-cultural needs.

5.7.1 Finding Nigerian Food

The following section discusses challenges faced by Nigerian students with regards to their socio-cultural and everyday life experiences.

When asked to explain the most common problem or obstacles they encountered while trying to adjust to their new environment, the students interviewed particularly highlighted how they had difficulty adjusting to the typical food available in Scotland and missed the familiar food of their home country:

“One of the most challenging problems I have is with the food here. I don’t really enjoy the local food here, as I am not familiar with it. I wish I could have more Nigerian food at my disposal”. (P8)

“I don’t like the food here. It makes me even miss home the more. As a result, it makes me feel sad and lose interest in other aspects of everyday life”. (P3)

“I think the food is the most common problem for me. I feel homesick when I don’t eat my local food”. (P10)

“Not being able to get Nigerian food consistently and at a cheap rate is a challenge for me. Having my traditional meals brings a sense of invigoration and comfort, which helps to reduce the issue of homesickness, thereby making the adaptation process much easier”. (P17)

In addition, students commented on how stores and restaurants offering Nigerian food in Scotland were very expensive:

“Honestly, nothing has been helpful. You see, the African food here is very expensive. If only we could have a small shop where we could buy African food on campus”. (P15)

“The cost of living is very high here, and this affects my budget on buying Nigerian food as it’s very pricey”. (P1)

"Finding affordable and fresh Nigerian food is one of the challenges I face here". (P14)

"As an international student, searching for Nigerian food is challenging and expensive too". (P16)

"I like to eat my home food, but sometimes it's very expensive and may not be fresh enough for consumption". (P13)

Several Nigerian students also expressed frustration with the difficulty of sourcing information on familiar foods:

"A few months ago, I was looking for information on where to get Nigerian food but couldn't get much information as I have struggled to adjust to the different food here to no avail". (P20)

"I enjoy Nigerian foods as I have eaten them all my life, and so changing my diet has become quite an issue. And yet, I was unable to find a place where I could procure foods that could suit my taste". (P11)

"I can't cope any more with not finding quality Nigerian food. I am just tired". (P9)

When I first arrived, I didn't have enough information on where to source African food. This is a major challenge for me, as I really don't like the local food here. I really miss home food". (P3)

"I remember looking for a place to get African food but didn't find anywhere around". (P18)

"I was seeking Nigerian cuisine a few months ago, but couldn't find much information since I've had trouble adjusting to the food here". (P7)

The main source of information for Nigerian food were other people, such as friends and social connections from the church:

"As an international student, searching for Nigerian food is challenging and expensive too. I was lucky enough to get some food items from a friend who recently joined me here from Nigeria for her studies". (P1)

"I couldn't find much information on where to find Nigerian cuisine, but luckily, a friend was coming from Nigeria, so she helped me with some food items". (P2)

"Recently, someone was coming from Nigeria, so I asked them to bring me some food items. That really helped me a lot". (P15)

However, not everyone found interpersonal sources to be helpful:

"I remember looking for a place to get African food but didn't find anywhere around. I asked someone in my church, and she directed me to a very remote place. This was really discouraging". (P19).

Interestingly, regarding Nigerian food, none of the students searched for information online, although one student used Google Maps to locate food stores.

The interviewees were further asked to elaborate on the challenges they encountered by means of sharing stories of key incidents that happened around sourcing Nigerian food. These offered additional evidence that this experience could be both costly and time-consuming:

"As an international student, finding Nigerian food can be both challenging and expensive. I remember a time when I was really craving some Nigerian cuisine, but the nearest place to buy it was far away. Fortunately, I knew someone who was coming from Nigeria, so I asked them to bring me some cooked food in bulk. They kindly agreed, but the catch was that I had to travel quite a distance to pick it up. It was a bit of a hassle, but the food lasted a long time, and it brought me a comforting taste of home [laughs]" (P5).

"Nigerian food is something I simply can't live without. A few weeks ago, I had a strong craving for it, so I hopped on a bus and travelled to a nearby big city to buy some homemade Nigerian dishes. It was pricey, but I was eager to savour the taste of my local cuisine. Even though it cost a lot, I was happy to make the trip and bring the food back with me. For a few weeks afterward, I didn't feel homesick at all—I was really happy" (P12).

As the above evidence demonstrates, the interviews with the Nigerian students in Scotland highlighted a significant challenge related to accessing familiar Nigerian cuisine, which plays a crucial role in their everyday lives and their socio-cultural adaptation process. Students described feeling homesick due to the unavailability of their preferred foods, pointing out that the lack of affordable Nigerian food options hindered their ability to maintain food preferences crucial for their comfort and adjustment. Several students also expressed difficulty adjusting to the local Scottish food options, highlighting a strong preference for the traditional meals of their home country. They emphasised the scarcity of Nigerian cuisine in Scotland, noting its limited availability and accessibility. This was illustrated through key experiences that highlighted creative solutions, such as relying on interpersonal networks (friends and church acquaintances) to obtain Nigerian food items. This reliance on interpersonal networks rather than online resources led to mixed feelings, including stress and discomfort due to long-distance travel and expenses, but also satisfaction from the relief it provided against homesickness. For these students, consuming Nigerian dishes brought more than just sustenance; it evoked feelings of rejuvenation, comfort, and a sense of connection to their cultural roots. Finding freshly made affordable Nigerian food in Scotland created for them a feeling of joy and relief, likening the experience to being back home.

People from diverse ethnic backgrounds eat a variety of meals as a way of maintaining their cultural identity (Sibal 2018). In Nigeria, each ethnic group has unique information needs related to foods that are specific to their culture. For example, while people from the North enjoy cuisine made of grains, like *tuwo sinkafa*, and drink *kunu*, or fresh milk, those from the East prefer eating food made primarily of cassava and yam tubers, like *fufu* and pounded yam with *okazi*, or bitter leaf soup. Pounded yam and *amala* are consumed by the Yoruba with *ewedu*, *efo riro*, or *egusi* soup (Kefa Study 2022). This may create complex information needs that are difficult to address. Deviating from these norms to adopt to new food types within the host community can be associated with culture shock, which has been previously discussed among international students in literature. For example, food-related

cultural shock can have a negative impact on students' diet and health, as well as disrupting the adjustment process for new students (Malota and Mucsi 2008). Students' food choices are influenced by a variety of variables, including taste, availability, cost, nutritional information, health considerations, as well as price and convenience (Alakaam et al 2015). If a positive learning environment is to be created for students, it is vital to comprehend the effects of food related everyday life information challenges and offer appropriate dietary information related support.

5.7.2 Places of worship and social encounters

In addition, another common problem that Nigerian students encountered was finding information on places to participate in worship, which provided the potential to ease the socio-cultural adaptation process. Places of worship are often valuable information resources for international students as they experience a period of socio-cultural adjustment (Yu and Moskal 2019). For example, they are places to find information, seek social assistance, and create friendships. When asked about their socio-cultural adaptation challenges, several participants in this study, for example, indicated that they would source information from church members (P4, P15, P7, P3, P17, P11).

However, other students expressed difficulty in finding places of worship because they did not know whom to ask about local churches or felt uncomfortable asking for such information. As a result, it was typical to resort to internet searches for information:

"That will be when I was looking for a church to fellowship on Sunday but couldn't find any. I felt some type of way asking for help even from my coursemates, so I had to use Google Maps". (P14)

"I didn't know where to go for Sunday worship. I had to use Google to find places of Christian worship near me". (P8)

"When I first arrived, I was looking for a church to attend but couldn't find any. I had to use Google Map to ask for places of worship". (P10)

In addition to the above quotes, some other participants mentioned finding places of worship as a major challenge with regards to their everyday life activities. It is understandable why seeking out places of worship would be a priority for Nigerian students shortly after they arrive in Scotland. However, beyond the difficulty of navigating to places of worship, students also described other everyday-life socio-cultural challenges that addressed different experiences from home. Such experiences could create tension and fear, as well as a sense of unfamiliarity and confusion. For instance, the following stories narrate additional key critical incidents around navigating an unfamiliar social-cultural environment:

“I remember when I first arrived for my studies, I was waiting for a bus by the station, and then suddenly a boy was running towards me with a broken bottle. He was chasing everyone at the bus stop, I started running profusely, and he almost caught up with me. He was obviously a mental case. I ran for my dear life. I will never forget that day in a hurry. If he had caught up with me or any other person, that would be fatal. It gave me anxiety issues. There is no one to talk to about it except that I discussed it with my parents back home. I think the school should have a cultural well-being centre for students where they can discuss any challenges or difficulties they encounter. Having someone to speak to during such times can help calm the tension and fear” (P5).

“I once wanted to watch a play at a theatre in a nearby town that was advertised on campus, but the directions to the venue were unclear. I ended up getting lost a few times and found myself in a completely different part of the city. By the time I finally arrived, there was only an hour left to watch the play. After the show, I realised I had missed the last bus for the day, so I had to spend the night in an unfamiliar place. I wasn’t happy about having to spend extra money on accommodation for the night” (P11).

5.7.3 Finding Accommodation

Another difficult situation described by the students was that they needed to quickly find accommodation near their university, but struggled with landlords unwilling to

rent to international students, and students were left without explanation as to why landlords would not rent to them:

"I can't seem to get accommodation, which is a significant problem. I live with a friend presently since I don't have a space of my own. It's difficult for me. Most landlords don't rent to overseas students for unknown reasons". (P2)

In some cases, landlords specified that their hesitation to rent to Nigerian students was related to their finances. Students were told they needed to secure a local guarantor to rent. This is obviously a difficult task for international students with few, if any, social connections in their host country. The two students quoted below offer perspectives on this challenge:

"I have been having difficulties getting accommodation since I arrived in this country. It's really difficult for international students to get accommodation as most landlords request that you get a guarantor, which is not easy to get". (P13)

Other participants explained that an additional challenge in securing accommodation was that they needed additional time:

"I have been burnt out trying to sort out accommodation issues. My school only gives students a few months in the university hostel, after which you have to fend for yourself. This is really not fair. Students should be given more time in the school hostel before searching for accommodation elsewhere. Again, some landlords do not want to give students accommodation, making the process extremely difficult". (P16)

"My university only provides accommodation for first-year undergraduate students. To be honest, this is not fair on other students". (P4)

Some students also shared key incidents they encountered during their studies, which were related to the challenges of finding accommodation.

For example, securing suitable accommodation near campus emerged as a challenge for Nigerian students in Scotland that could impact their everyday lives and academic performance. Reluctance from local landlords to lease to international students compounded this challenge. One student vividly described the ordeal, stating, "I have

been burnt out trying to sort out accommodation issues. Some landlords do not want to give international students accommodation, making the process extremely difficult. When I first arrived in Scotland, I had to travel from a nearby town to school as the only accommodation I could find was to stay with a friend who lived in the next town" (P16). This student made it clear that the process of finding a place to stay was a very stressful experience, expressing that "I have been burnt out". Sentiments like this were common, as several students in this study also shared that they struggled to find willing landlords in the short time they were allowed to stay at the university's hostel.

Similarly, another student expressed their disappointment in not securing accommodation from a landlord :

"A few days ago, I was asked to come and view an accommodation. On getting there, I was asked if I was a student, to which I answered 'yes'. I was told I cannot have the accommodation if I don't have a guarantor. I am like, how do they expect a new student from overseas to have a guarantor? I think the university should consider giving students accommodation for a longer duration of time in order for them to have more time to settle in. This greatly impacted my studies, as I devoted more time to searching for accommodation than studying". (P7)

Several of the comments on the issue of accommodation further suggested that temporary housing was the only resource the university provided to solve this challenge. Adding further complications was that the time allowed in the university's hostel was for a short duration. This meant that students had to contend with the stress of finding accommodation immediately after that period of time. Something that they described as having a negative impact on their academic performance:

"Accommodation was a major issue for me, although the university provided accommodation, but only for a short period of time. The university should have offered an accommodation for a longer period of time to allow me settle into my new environment. So, I had to start searching for accommodation after the period of time

I was given. This greatly impacted my studies, even after resumption from the holiday, I was still looking for accommodation and studying at the same time". (P3)

Therefore, the interviews with Nigerian students highlighted significant challenges regarding accommodation upon arriving in Scotland. Many students described difficulties in securing housing due to landlords' reluctance to rent to international students. The primary barrier cited was the requirement for a local guarantor, which international students often found impossible to fulfil due to their unfamiliarity with the local environment and lack of local connections. Key incidents shared by students included the stress of finding suitable accommodation near campus, with one student describing long commutes and staying with a friend, and another facing issues specifically because of the guarantor requirement.

Students expressed frustration with this requirement and suggested that universities could play a role in facilitating accommodation for a longer period to allow for a smoother transition.

The stress of searching for accommodation while simultaneously managing academic responsibilities was a common theme among the students interviewed. Several felt that this added stress negatively impacted their academic performance, highlighting the need for more comprehensive support from universities in addressing accommodation challenges for Nigerian students.

Overall, the experiences shared by these students highlighted the critical need for institutional support in navigating housing issues and providing more guidance and resources to facilitate a smoother transition into university life.

5.7.4 Navigating the everyday life environment

When asked to describe other common problems/obstacles they encountered when seeking information, students' most common responses reflected difficulty finding amenities in Scotland. Specifically, interview subjects mentioned struggling to find information on places and opportunities for socialisation. Additionally, students described various methods for finding reliable information when asked how they seek support for their everyday informational needs. Several students lacked social

resources for information within their local environment and had to rely on the internet as their primary source.

Students expressed the desire to begin forming social connections with both other international students and Scottish students. However, a lack of social opportunities or information on where to go for social activities was repetitively mentioned by students:

"I personally would like to go for social events, but since I started taking classes at my university, my society group hasn't really planned any social events, and there seems to be no information on where to attend social events". (P7)

"The main reason for this is that my social group have talked about hosting a social gathering for Nigerian students, yet we never get around to doing it. This is so disappointing". (P2)

"I enjoy going out whenever I have free time, but I struggle to find places to socialise. Unfortunately, the Nigerian society to which I belong does not organise social events, so I haven't attended any social gatherings since I arrived here". (P9)

"It is difficult to find enough information on places to socialise, and I feel very upset about it. In fact, there is little or no information on where to go for such events". (P12)

Other students were aware of social activities taking place on campus, but they explained that factors such as poor attendance, the high price of event tickets, weather conditions, and tight academic schedules were the main reasons for their lack of participation:

"I decided not to attend the last social event organised by the Nigerian society as I felt the entrance tickets were too pricey". (P19)

"Some of these events are paid for, and I do not have such money to spend". (P4)

Well, I was not impressed by the attendance of the last social gathering I attended. I don't think I will be attending another one anytime soon". (P14)

"I feel discouraged to attend social events as it becomes too difficult to go out after returning from lectures based on the cold weather". (P20)

"My school schedule is very tight, and it becomes difficult for me to socialise as I am always writing one assignment or the other". (P11)

"I haven't attended any community event as the course work submission dates are very close to each other, making it difficult to have enough time to socialise" (P13)

"My academic schedule is really tight, and so I really don't have time to socialise as I would love to". (P15)

"I hardly have the extra time to attend events because of my tight academic schedule". (P17.)

"One of the challenges I face is finding time to attend social events, as I have to study a lot due to having many courses this semester". (P3)

The primary source that students used for finding information on everyday life needs included Google:

"I usually use Google to get information for my everyday needs". (P9)

"When I need information for an event, Google is my first point of call". (P13)

However, some students also relied on other people, such as friends, religious groups, and colleagues at school, before searching Google:

"Most times, I turn to my church members or my coursemates for everyday information. If they don't have the information, I then turn to Google as my last resort". (P7)

"I would normally ask my classmates in school, and other times I ask members of my social group whenever I need information. I sometimes use Google as well". (P18)

"Sometimes I ask my friends for information on various issues, but if I am not satisfied with the response given, I then use Google as the last option". (P6)

"I ask other students from my social club for assistance if I need any information, and other times I use Google". (P12)

"I ask my friends from church for information all the time. They seem to know a lot [Laughs]". (P17)

"I would normally ask my church members, and if I don't get enough information, I will then try to get the information from Google". (P19)

Therefore, although Google was a popular tool for information, access to social/interpersonal resources, such as church members or classmates, was also preferred. Church communities were particularly highlighted as valuable not only for spiritual support but also for practical information and social connections. Students found comfort and assistance through these networks, which facilitated their socio-cultural adaptation in Scotland.

Overall, while digital platforms like Google were indispensable for immediate information needs, students placed value on interpersonal relationships within their local communities, which offered a sense of belonging and deeper integration into their new environment. This dual reliance on digital and social resources reflects the multifaceted approach that Nigerian students employ to navigate everyday life challenges in Scotland.

5.7.5. Conclusion

The interviews with Nigerian students in Scotland highlighted a significant challenge related to accessing familiar Nigerian cuisine, which plays a crucial role in their daily lives and adaptation process. Many students expressed difficulty adjusting to the local Scottish food options, highlighting a strong preference for the traditional meals of their home country. They emphasised the scarcity of Nigerian cuisine in Scotland, noting its limited availability primarily in a few expensive restaurants and stores.

For these students, consuming Nigerian dishes brings more than just sustenance; it evokes feelings of rejuvenation, comfort, and a sense of connection to their cultural roots. They described how finding freshly made affordable Nigerian food in Scotland brought them joy and relief, likening the experience to being back home.

In addition, the interview with Nigerian students highlighted several challenges related to socio-cultural adaptation and everyday life, particularly in finding places for worship and opportunities for socialising. For students, finding a suitable place of worship shortly after arrival was a priority, reflecting its importance in providing not just spiritual support but also a sense of community and familiarity in a new environment.

In essence, the quest for places of worship among Nigerian students illustrates their proactive approach to maintaining religious practices in a foreign setting. It underscores the importance of familiar social structures in easing the transition to a new cultural environment and suggests the pivotal role of digital tools in facilitating this adaptation process.

Social integration also posed challenges, with students expressing a desire to connect with both international and Scottish peers but facing barriers such as the high costs of social events organised by Nigerian student groups and the demanding academic schedules that left little time for extracurricular activities.

Financial considerations also play a significant role in students' social participation. High costs associated with event tickets were cited as a deterrent, reflecting financial constraints that limit students' ability to attend social gatherings.

Furthermore, practical challenges such as adverse weather conditions and demanding academic schedules further impede students' social engagement. The combination of these factors contributes to a sense of isolation and frustration among students who seek social interaction but face multiple barriers in doing so.

The interviews revealed a significant desire among Nigerian students in Scotland to engage socially, both with other international students and with their Scottish peers. However, several obstacles hindered their ability to do so effectively. As noted, one prominent barrier identified by students was the lack of accessible information regarding social opportunities and activities. Despite searching for information on the Internet using Google, internet searches were not always helpful in this regard. This suggests that while digital tools are effective for certain types of information, they

may fall short when it comes to facilitating social connections and finding social events.

Overall, the experiences shared by these students highlight the importance of institutional support in facilitating socio-cultural adaptation, including providing accessible information on social events and creating opportunities for social engagement that accommodate the diverse needs of Nigerian students amidst their academic commitments.

5.9 Recommendations for Social Support

When discussing socio-cultural and everyday life challenges, interview participants suggested several recommendations regarding how their university may better support them as they become acclimated to Scottish culture. This section offers a collection of themes from these recommendations based on the challenges experienced by the interview subjects in their socio-cultural and everyday life environments. Recommendations for social support were made particularly for the early stages of adaptation, and these reflected the challenges students experienced around addressing everyday life needs, particularly those created by the lack of accommodation:

"The issue I am having is with accommodation. I think the university should consider giving students accommodation for a longer duration of time in order for them to have more time to settle in and search for their own accommodation". (P4)

"I wish the university could offer temporary housing for incoming students to settle in before moving into their own residence. This would be really nice, you know". (P15)

"The university can sign as a guarantor for international students so that landlords can give us accommodation. If the student later defaults in paying their rent, the university then has to take drastic measures against that particular student". (P7)

"The issue of accommodation has really affected me. I wish the university could help us find a temporary place of accommodation". (P12)

"In my school, masters' students do not have access to school accommodations. I wish the university could provide us with accommodation by collaborating with landlords, as most landlords do not want to rent to international students". (P18)

Other suggestions were related to organising social events for Nigerian students as well as other informal opportunities to interact with their lecturers and peers regardless of nationality, encouraging students to participate in socio-cultural activities:

"The university can organise social-cultural activities for students. So, for example, they can organise a day out for all Nigerian students to socialise". (P2)

"The university can plan activities during the weekend or holidays for international students to socialise and integrate into the academic environment quickly". (P11)

"I would recommend social events organised by the university every other month and during holidays between students, lecturers, and department staff. It will be a great way to socialise and make new friends". (P20)

"The university can introduce events every three months or at the end of every semester to bring all international students together. A friend of mine in London said her school organises events like this for different nationalities, and they all come together with their food and cultural attires". (P17)

Furthermore, students suggested that there was a need to promote social events more amongst students and one method of doing that included email communications and the creation of a group forum where students could seek assistance from lecturers and engage with other students:

"If the school could create forums within the university for Nigerians or other international students, and notify them via email when there are such activities, I'm sure they will participate". (P14)

"The university can set up a forum where home students, lecturers, and international students can have discussions monthly on everyday life issues and challenges. In so doing, other people can share their experiences and seek advice as well". (P8)

"The university can create a non-formal group where students and teachers can interact, discuss, and talk about things in general. This can even be online or offline". (P1)

In addition, students recommended that the academic calendar be spaced out more to accommodate additional social support for international students:

"The university can also make sure that courses are not ongoing every day of the week to give students the balance between study and life in general". (P3)

"The university should give us one free day of the week to enable us to do something different from attending lectures. By so doing, we can go out and socialise more". (P5)

In addition, students recommended that the university can recruit old students as volunteers to assist new students with everyday challenges:

Finally, there were also recommendations for mental health support in a way that reflected the challenges students encountered, particularly in independently finding information about everyday life needs.

"I think the school should have a cultural well-being centre for students where they can discuss any challenges or difficulties they encounter. Having someone to speak to during such times can help calm the tension and fear". (P19)

"It would be very helpful if I had a support staff to talk to or a mental well-being space to discuss my issues". (P13)

"I am having challenges adapting to this environment, and I really need help talking to someone". (P10)

The interview participants highlighted several key recommendations for how universities could better support international students, particularly those from Nigeria, in adapting to Scottish culture and addressing everyday challenges.

Accommodation emerged as a significant concern among students, with many suggesting that universities should offer longer-term housing options upon arrival. Some proposed that universities act as guarantors for international students to

facilitate easier access to rental housing, thereby addressing concerns about landlords' reluctance to rent to them.

Social integration and cultural activities were also emphasised. Students recommended that universities organise regular social-cultural events where students from different backgrounds could interact and build relationships. They suggested activities during weekends or holidays to facilitate quicker integration into the academic community and provide opportunities for students to share their cultural traditions.

Communication and information sharing were seen as vital. Students suggested using email notifications to promote social events and provide updates on university activities, enhancing awareness and participation among students.

Additionally, students advocated for adjustments to the academic calendar to allow for more balanced schedules, providing students with time for socialising and participating in non-academic activities. They also recommended utilising former international students as volunteers to assist new arrivals in navigating everyday challenges and settling into their new environment.

Mental health support was identified as crucial, with students expressing the need for dedicated spaces or staff where they could seek assistance and discuss challenges related to cultural adaptation and everyday life stressors. They emphasised the importance of having someone to talk to during difficult times to alleviate anxiety and promote well-being.

Overall, these recommendations highlight the importance of holistic support mechanisms that address accommodation, social integration, communication, academic scheduling, peer support, and mental health for Nigerian students, enhancing their overall experience and success in adapting to university life in a foreign country like Scotland.

5.10 Overview and Discussion of the Qualitative Chapter

In this chapter, the focus was on the qualitative research findings from interviews conducted with Nigerian students who are studying in HE institutions in Scotland. The chapter delved into the difficulties faced by these students in their academic settings, such as adjusting to different academic requirements and expectations related to critical thinking, in-class communication, time management, and information literacy skills. It explored how these challenges influence the students' perceptions of their academic self-efficacy. Additionally, the chapter examined the everyday life and socio-cultural adaptation challenges encountered by the students, including meeting their basic needs and establishing social connections. It concluded by presenting the students' recommendations for academic support and adaptation to daily life, including support mechanisms and potential enhancements to existing support programmes.

Additionally, the chapter focused on exploring the main findings related to the students' experiences. These findings included aspects such as seeking familiar food through social support, their academic experiences, efforts to secure suitable accommodation, as well as valuable suggestions and recommendations from Nigerian students regarding academic support outside lectures or beyond the classroom environment. Moreover, the chapter also discussed ways to enhance the existing support services currently provided by the university.

Many of the reflections and recommendations that emerged during interviews with Nigerian students were connected to influential experiences they had had since moving to Scotland for their studies. These key experiences were both positive and negative. Positive experiences, such as overcoming academic challenges, often reflected a sense of personal responsibility and accomplishment. However, discussions of academic experiences also combined challenges with academic self-efficacy and new expectations of information literacy skills. In some cases, students were able to meet these new expectations and improve their perception of their academic self-efficacy, but others failed to acquire enough information due to a lack of information literacy skills to complete a given task within the time allotted.

Negative experiences were also reported within the everyday life social environment, such as struggling to find Nigerian food in Scotland. A desire to find familiar food items and cuisines from Nigeria was commonly expressed in response to questions about both everyday information literacy and socio-cultural adaptation.

The process of finding somewhere to live near campus also presented a significant challenge to many of the students interviewed. This issue was frequently brought up during questions regarding everyday information literacy and socio-cultural adaptation challenges. Discussions with students resulted in actionable recommendations for ways in which the university might improve its support of international students.

CHAPTER 6 - DISCUSSION OF FINDINGS

6.1 Introduction

This chapter focuses on the analysis and interpretation of the qualitative and quantitative data gathered from Nigerian students studying at Scottish higher education institutions in alignment with the study's objectives and hypotheses, as outlined in Chapter 1 (Section 1.3).

The overarching aim of the research was to investigate how socio-cultural adaptation and information literacy skills challenges impact their academic self-efficacy.

The analysis of the descriptive statistics concerning the academic self-efficacy challenges among Nigerian students studying in Scotland indicated that, for 14 out of 15 questions, the mean scores ranged from 3.41 to 3.70. These results suggest that a significant majority of the participants reported facing substantial academic self-efficacy challenges during their studies in Scotland.

Similarly, the examination of academic information literacy challenges among Nigerian students in Scotland found that, for 9 out of 16 questions, mean scores were between 2.86 to 3.40. This implies that more than the average number of participants experienced moderate levels of academic information literacy challenges while studying in Scotland.

Furthermore, the investigation into academic socio-cultural challenges among Nigerian students in Scotland revealed that, for 8 out of 8 questions, mean scores ranged from 3.52 to 4.06. These results indicate that a majority of the participants

faced high levels of challenges related to socio-cultural adaptation during their studies in Scotland.

Additionally, the assessment of everyday life information literacy challenges among Nigerian students studying in Scotland found that, for 8 out of 9 questions, mean scores ranged from 3.69 to 3.95. This suggests that a significant majority of the participants encountered very high levels of everyday life information literacy challenges while pursuing their education in Scotland.

Moreover, the examination of everyday socio-cultural adaptation challenges among Nigerian students in Scotland revealed that, for 9 out of 9 questions, mean scores were in the range of 3.89 to 4.16. This indicates that a majority of the participants faced high levels of everyday socio-cultural adaptation challenges during their studies in Scotland.

Lastly, the analysis of language and communication challenges among Nigerian students studying in Scotland indicated that, for 10 out of 10 questions, mean scores were between 3.78 to 4.17. This suggests that a significant majority of the participants encountered very high levels of language and communication challenges in the context of their studies in Scotland.

The quantitative data analysis demonstrated that the relationships among the different variables aligned closely with the original hypotheses of the study, with the exception of the regression analysis concerning challenges in everyday life socio-cultural adaptation and academic self-efficacy, where no significant relationship was found between the two variables. These results are discussed more analytically below.

More specifically, the results relating to hypothesis 1 indicated that there is a relationship between academic information literacy challenges and academic self-efficacy. The evidence supporting hypothesis 1 suggests that as challenges in academic information literacy increase, challenges in academic self-efficacy also tend to increase.

Similarly, hypothesis 2 explored the connection between everyday life information literacy challenges and academic self-efficacy. The evidence shows that as everyday life information literacy challenges increase, academic self-efficacy also tends to increase.

Additionally, hypothesis 3 examined the relationship between challenges in academic socio-cultural adaptation and academic self-efficacy. The evidence shows that as challenges in academic socio-cultural adaptation increase, academic self-efficacy tends to increase as well.

The results associated with hypothesis 4 rejected the proposed relationship between challenges in everyday life socio-cultural adaptation and academic self-efficacy, although the Pearson correlation analysis revealed a subtle positive correlation between these two variables. This suggests that as challenges related to everyday life socio-cultural adaptation increase, there is a tendency for academic self-efficacy to also rise.

Finally, hypothesis 5 revealed a correlation between language and communication challenges and academic self-efficacy. The evidence suggests that as language and communication challenges increase, academic self-efficacy also tends to increase.

Overall, the study observed both direct and mediated effects of information literacy, everyday information literacy, academic socio-cultural adaptation, everyday socio-cultural adaptation, and language and communication challenges on the academic self-efficacy of Nigerian students in Scottish HE institutions.

In relation to the qualitative data analysis, the results indicated that Nigerian students face a multitude of challenges, encompassing academic difficulties like adapting to diverse academic requirements and expectations tied to critical thinking, in-class communication, time management, and information literacy skills. Moreover, the results indicated that Nigerian students struggle with socio-cultural challenges both in their academic and everyday lives. These consist of fulfilling their basic needs, forming social connections, and dealing with experiences like seeking familiar foods through social support, navigating their academic challenges, and striving to secure

suitable accommodation. The qualitative study also delved into their key incidence experiences since their relocation to Scotland, including their academic encounters, housing procurement, and the struggles encountered in finding Nigerian cuisine.

The discussion that follows focuses on the results obtained by revisiting the research literature regarding socio-cultural and information literacy challenges, and it particularly emphasises empirical findings that resonate with the current study's findings. Additionally, it explores the distinct experiences of Nigerian students in comparison to other home and international students. These exclusive experiences are specific to Nigerian students and have not been previously examined in the existing body of literature, nor have they been comprehensively explored by means of combining qualitative and quantitative data.

In addition, this chapter offers valuable insights into suggestions and recommendations from Nigerian students concerning academic support, both within and outside the classroom setting, concluding with presenting students' recommendations for enhancing academic support and facilitating adaptation to daily life. These recommendations encompass support mechanisms and potential improvements to existing support programmes, including the author's proposed measures and advice for administrators and faculty staff.

6.2 Academic Socio-cultural Challenges

The quantitative research data of this study revealed that a considerable proportion of the participants identified "adjusting to different teaching and learning methods in the classroom" (n=241, 79.3%) found this task to be "Very challenging" while a smaller percentage (n= 21, 6-9%) perceived it to be "Extremely challenging".

In addition, the results of the Pearson moment correlation analysis revealed a statistically significant and moderately positive correlation between academic self-efficacy challenges and academic socio-cultural challenges ($r = 0.461$, $p < 0.05$). Moreover, the findings from the regression correlation analysis also demonstrated a statistically significant relationship between academic self-efficacy challenges and academic socio-cultural challenges ($p < 0.05$). Specifically, academic socio-cultural

challenges accounted for 21.25% of the total variance in academic self-efficacy challenges. This implies that as academic socio-cultural challenges increase, there is a corresponding increase in academic self-efficacy challenges.

On the basis of the qualitative data, the study demonstrated that the participants' collective encounter with academic socio-cultural challenges was characterised using negative descriptors, including terms such as confusion, uncertainty, challenging, lack of research skills, stress, and lack of critical thinking abilities. The findings of this study align with previous research highlighting the significant difficulty international students face in adapting to diverse teaching approaches within the classroom setting (Hussain and Shen 2019).

Previous research conducted by Khan et al (2015) and Holliman et al (2003) has similarly established that self-efficacy and socio-cultural adjustment challenges significantly impact the academic achievement of international students. Furthermore, a study by Tchoh and Mertan (2018) investigated the impact of socio-cultural challenges on the academic self-efficacy of African students in Cyprus. The findings revealed that African students who encountered socio-cultural challenges reported lower levels of academic self-efficacy compared to those who did not encounter such challenges. Overall, the findings of these studies suggest that there is a positive relationship between academic socio-cultural challenges and academic self-efficacy, which aligns with the results of the present study.

However, in order to understand the academic and socio-cultural difficulties encountered by Nigerian students in Scottish higher education institutions, it was essential to develop a thorough comprehension of these challenges. This was achieved by delving into the specific challenges reported and the firsthand experiences shared by participants in this study.

The introduction to a different educational system that was characterised by unfamiliarity with the student's assessment methods and academic requirements posed multiple difficulties for Nigerian students studying in higher education institutions in Scotland. Among these challenges were assessment-related concerns,

difficulties in comprehending lectures, communication barriers with teachers and host students, and struggles with completing assignments. Previous research has similarly illustrated how international students face a multitude of challenges when adapting to a new academic environment (Cigularova 2005).

These challenges span across academic difficulties to encompass broader socio-cultural issues and differences. Consequently, academic institutions should establish supportive mechanisms to assist Nigerian and other international students in adapting to the socio-cultural context of their new academic environment, and such support may ultimately enhance their academic self-efficacy and overall academic performance, placing emphasis on the importance of comprehending students' educational and socio-cultural adaptation experiences (Zhou and Todman 2009).

In conclusion, the significant correlation between academic socio-cultural challenges and academic self-efficacy suggests that difficulties in adapting to new teaching methods directly impact students' confidence and performance in their academic work. Nigerian students' challenges underscore the need for a more flexible and inclusive approach to teaching that considers cultural backgrounds. This calls for educational reforms that integrate culturally responsive pedagogy in the school curriculum.

6.3 Critical Thinking

The quantitative data of this study revealed that Nigerian students encountered challenges in developing critical thinking skills. For example, most of the participants (n= 188, 55.5%) identified "developing critical thinking in academic studies" as a predominant and "highly challenging" issue when addressing academic socio-cultural challenges, while a smaller proportion of respondents (n= 77, 25.3%) considered it to be "extremely challenging."

The qualitative results of this study provided further detailed insight into the critical thinking challenges of Nigerian students. For example, the participants expressed that developing critical thinking skills was a novel concept for them, as their previous

academic experiences in Nigeria heavily relied on exam-based assessments, and there was limited emphasis on essay writing.

Exhibiting critical and analytical thinking is a fundamental requirement for success in numerous academic disciplines within the UK higher education system (Shaheen 2012). The most difficult aspect of essay writing is the inability to effectively elucidate meanings, objectives, concepts, and information (Facione 1990).

Challenges with critical thinking have been identified in previous research as a prominent issue faced by numerous international students from Asian countries (Campbell and Li 2008, Tsui 2008, Barkley, Cross and Major 2004, Duong 2005, Mehdizadeh and Scott 2005). This difficulty can become a significant hurdle for many international students, often leading to substandard academic performance in essay and dissertation writing (Fella and Lukianova 2015).

Students from countries with traditional rote learning approaches, such as Nigeria, often encounter initial difficulties in meeting the demands of critical thinking (Chen et al 2018). Previous studies have also consistently demonstrated that international students tend to receive lower grades because of challenges in thinking critically, stemming from a lack of prior training before arriving in the UK (Davies 2003).

In addition, numerous studies indicate that international students encounter challenges when attempting to incorporate critical thinking into their academic writing (Samanhudi and Linse 2019). This struggle stems from their diverse cultural backgrounds, which simultaneously require adaptation to an unfamiliar learning approach. However, many international students struggle to respond analytically, not solely due to the demands of writing in a foreign language but also because they lack a clear understanding of how to articulate their perspectives.

Furthermore, the disparity in expectations between international (non-Western) students and their educators is a noteworthy matter that warrants significant attention (Shaheen 2012). Additional research, including the work of Elander et al (2006) and Jones (2007), has contended that international students might struggle

to exhibit critical thinking skills because universities often do not adequately explain and teach their specific discourse practices and conventions.

In the study conducted by Shaheen (2012), it was also observed that international students often approach critical thinking differently due to the influence of their native cultures, where a collective style of learning is emphasised over individualistic approaches. Moreover, there is a cultural norm of respecting the work of scholars without criticising it extensively. These divergent perspectives on critical thinking compared to the British culture are attributed to the cultural specificity of their socialisation and a lack of previous exposure to relevant practices. Shareen identified various hindrances to the critical thinking performance of international students, such as respect for elders, the prevalence of authoritative learning environments in their previous educational experiences, and a general lack of familiarity with the concept of critical thinking, among others. These findings underscore the importance of recognising and addressing cultural influences in facilitating the development of critical thinking skills among international students in British universities.

While previous research has widely acknowledged that international students often face difficulties with critical thinking, the results of this study also indicated a further factor affecting Nigerian students specifically as they are accustomed to the traditional "talk and chalk" teaching method, where the teacher is perceived as the sole repository of knowledge and interactive relationships with students are limited. This offers a unique insight into how Nigerian students not only struggle with critical thinking skills for the purposes of their academic assignments, but also how they transfer this lack of critical engagement to the classroom, encountering difficulties in fully engaging in discussions and communicating effectively with both teachers and peers. These challenges are influenced by prior socio-culturally conditioned educational experiences of students studying within the educational system of Nigeria that emphasises rote learning using the "talk and chalk" method over critical thinking and interactive learning, further complicating their adaptation process. This can hinder students' group work dynamics and their full engagement within their academic setting.

In cultures characterised by significant power distance, such as Nigeria, therefore, educational environments tend to be passive, with students typically acknowledging the authority of the teacher. Consequently, learning primarily occurs through teacher-centered methods like lectures, where the teacher's expertise is unquestioned and student participation is limited unless explicitly encouraged to do so. The teaching approach mainly involves teachers delivering lectures while students passively take notes in class, and they have an inclination towards regurgitating textbook content rather than engaging in independent research and focusing on the development of critical thinking skills.

These findings emphasise the crucial role of critical thinking development for academic success and highlight the hurdles faced by Nigerian students, particularly those from traditional rote learning backgrounds, as they navigate the shift to more interactive and intellectually demanding educational systems. Effective support and guidance are essential to helping these students thrive in their academic endeavours.

6.4 Classroom Engagement, Language and Communication

The first question in this category, "Communicating with university lecturers and students during classes," was the most frequently quoted challenge mentioned by the majority of the students ($n = 232$, 76.3%), who found this task "very challenging", and with a smaller percentage ($n = 14$, 4.6%) perceiving it as "extremely challenging".

This indicates that a significant number of participants faced difficulties communicating within the classroom environment.

The Pearson moment correlation analysis conducted on language and communication challenges accounts for 18.75% of the variations in academic self-efficacy challenges. This implies that as language and communication challenges increase, there is a corresponding tendency for academic self-efficacy challenges to rise as well. Additionally, in the context of the regression analysis, it was observed that a one-unit increase in language and communication challenges led to a 0.183-unit increase in academic self-efficacy challenges ($B = 0.183$, $p = .028$). This finding

suggests that for every one-unit increase in language and communication challenges, the academic self-efficacy of Nigerian students tends to increase by 0.183 units.

The qualitative data of this study provided further understanding of the language and communication challenges students encountered within the classroom setting, making use of words such as nervous, scared, and embarrassed and referring to cultural differences, lack of participation in class discussions, lack of confidence, and shyness in expressing the challenges they encountered with language and communication. These feelings ultimately led to a diminished level of engagement in class discussions. Various socio-cultural and language barriers hinder international students' interaction with their host peers and academic environment, consequently affecting their academic achievement (Baratt and Huba 1994, Chen 1999, Mori 2000, Poyrazli and Kavanaugh 2006).

While previous studies, such as those by Fella and Lukianova (2015), have noted that international students' classroom conduct is influenced by cultural background, this study goes further by uncovering how these cultural influences manifest specifically in Nigerian students. Unlike other international students, Nigerian students' reluctance to participate in classroom discussions is not just due to a lack of confidence but is deeply rooted in a cultural belief that asking questions in class could imply a lack of intelligence rather than an eagerness to learn. This cultural nuance has not been sufficiently addressed in the existing literature, making it a unique contribution to this current study.

These findings suggest that cultural differences, particularly those related to classroom engagement and communication, must be recognised and addressed by educational institutions to foster a more inclusive and supportive academic environment for Nigerian students.

In addition, the results of this research revealed that students faced challenges in comprehending the class content due to difficulties arising from their peers or the lecturer's accent, particularly during class discussions. In a similar vein, other students expressed concern that their Nigerian accents could not be understood by

their Scottish lecturers or peers and that they encountered obstacles in participating in class discussions due to their accents, causing them to feel hesitant about speaking up in class. They further mentioned that their lack of confidence, their fear of providing incorrect responses, or their shyness stemming from their accent all posed significant daily challenges for them. Unlike previous studies, such as those by Yeh and Inose (2003), which primarily focused on embarrassment due to accent and pronunciation, this study highlights that these challenges are compounded by the perception among Nigerian students that their accents make them less credible in the eyes of their peers and lecturers. This additional layer of self-doubt is a novel finding in the context of Nigerian students studying in Scotland.

Moreover, this study found that Nigerian students' language and communication challenges are not just related to language proficiency but also to a lack of familiarity with the active learning methods prevalent in the Scottish educational system. While previous research by Yildirim (2017) identified difficulties in engaging in class discussions among international students, this study, as noted earlier, specifically attributes this to the Nigerian educational background, where students are accustomed to passive learning environments that discourage questioning and active participation. This context specific insight adds depth to the understanding of how educational backgrounds shape communication challenges. These barriers, which encompass language differences and cultural disparities, can hinder students' group work dynamics and their full engagement within their academic setting. By acknowledging and addressing these challenges, educational institutions can, therefore, foster an inclusive environment that supports international students' academic success and integration.

In this study, certain students pointed out that Scottish students tend to be very open and outspoken during class discussions, while in Nigeria, students often avoid asking questions in class. Again, previous research, such as that by Cortazzi and Jin (1997), has highlighted that in many cultures, including Nigeria, students may avoid questioning authority figures, such as teachers, due to deeply ingrained cultural norms that emphasise respect for authority that discourage challenging or

questioning teachers. This avoidance can be linked to a broader socio-cultural context where students are taught to listen rather than actively engage in discussions.

However, this study adds to the literature by showing that this avoidance is not merely due to socio-cultural factors but is also a reflection of individual differences within the Nigerian student population. Unlike Cortazzi and Jin's findings, which focus on the broad cultural context, this research reveals that these challenges can be multifaceted and influenced by personal traits, such as individual differences and personal past educational experiences. For example, while some Nigerian students may avoid participation because they adhere strictly to cultural norms of not questioning authority, others may avoid participation due to personal characteristics, such as shyness. Consequently, regarding them as a homogeneous group would be unrealistic, as individual differences should also be taken into account.

Regarding in-class discussions, a few other students described their experiences as demotivating, leading to misconceptions about their academic capabilities, shyness, and reduced confidence. According to some participants, these challenges occurred notably in group projects, as they had difficulty connecting with their lecturers' teaching and classmates due to their different accents and cultural differences. Other authors have also elaborated on the unique challenges faced by international students during their transition to higher education, highlighting the issue of accent-related hindrances in their understanding of academic materials, coupled with unrealistic expectations that international students should arrive in the UK already possessing a high level of English proficiency, along with prior familiarity with accents and idioms necessary for effortless communication with native speakers (Ecochard and Fotheringham 2017).

The presence of language barriers can pose difficulties for international students in comprehending lectures, engaging in class participation, asking questions, and accurately conveying their ideas. This can extend to responding to essay questions and writing academic papers (Cadieux and Wehrly, 1986, Parr, Bradley, and Bingi 1992). Moreover, language barriers might necessitate international students to invest more time in their academic assignments, potentially resulting in challenges

when it comes to meeting course assessment deadlines. Hence, it becomes crucial for educational institutions to establish supportive mechanisms that can effectively eliminate these challenges.

There is a growing body of research exploring the relationship between language and communication challenges and academic self-efficacy among international students (Oyawole and Isaiah 2022), including some research on Nigerian students studying in Scotland. Studies have shown that students who struggle with language and communication may experience lower levels of academic self-efficacy, which can impact their academic performance and well-being. For example, a study by Cong and Li (2022) explored the experiences of international students, specifically focusing on their language and communication challenges and academic self-efficacy. The study found that students who reported language and communication challenges, such as difficulty understanding lectures or expressing themselves in academic settings, tended to have lower levels of academic self-efficacy. The study also found that these challenges were related to feelings of isolation and cultural disorientation, which further impacted students' self-efficacy and academic performance.

Similarly, a study by Ozowuba (2018) found that Nigerian international students experienced significant challenges related to language and communication, including difficulties with accents, idiomatic expressions, and unfamiliar academic language. The study found that these challenges were related to lower levels of academic self-efficacy and academic performance.

These findings align with the results of this study, which highlighted that language and communication challenges can have a significant impact on the academic self-efficacy of Nigerian international students in Scotland. Socio-cultural, interpersonal, and language barriers could lead to limited interaction between domestic and international students in class (Khawaja and Stallman 2011). To address these challenges, it is important for educators and institutions to provide support and resources that are culturally responsive and inclusive. This can include offering language classes, providing academic support services, and creating an environment that values diversity and promotes cross-cultural communication.

In summary, while the broader literature acknowledges the challenges international students face with language and communication, this research uniquely identifies how these challenges are deeply intertwined with the specific cultural and educational backgrounds of Nigerian students. The findings reveal that their reluctance to engage in classroom discussions is influenced not only by language barriers and accents but also by cultural perceptions of intelligence and classroom dynamics. This nuanced understanding of Nigerian students' experiences contributes new insights to the existing literature, emphasising the need for targeted support strategies that address both cultural and educational factors.

6.5 Time Management and Study Methods

The quantitative findings of this study highlighted that one of the most challenging tasks, reported by the majority of the students ($n = 206$, 67.8%), was "Planning and managing your academic responsibilities."

The inability to have an effective time management schedule was discussed by students during the interviews. The qualitative data revealed that most of the students lacked an effective time management plan for their studies that would help them be more confident in preparing for upcoming exams and coursework deadlines.

This finding aligns with the research conducted by Kasirye (2022), which focused on students from Zaria in Kaduna State in Nigeria and their time management skills. The study identified a direct correlation between poor time management and lower academic grades, attributing this to students' inability to complete required tasks promptly and lack of structured daily activities. This emphasises the importance of addressing time management issues to enhance academic performance among students.

The absence of a systematic approach to time management raises concerns, particularly in light of the growing incidence of deficient time management skills among students, as documented in prior research (Kasirye 2022), which highlights the need for interventions and strategies to help students improve their time management skills and better cope with academic demands. Furthermore, according

to prior research conducted by Chien (2013), it was found that academic writing, time management for study, and critical thinking skills remained the primary challenges experienced by international postgraduate students even after two terms of academic adaptation in the host country.

In this study, students acknowledged not practicing time management and admitted to having poor time management skills. They mentioned relying on cramming their books just before exams, which results in heightened anxiety as exams draw near. Previous study states that due to poor time management skills, students struggle to organise their study schedules, leading to heightened anxiety and stress during assessments, typically scheduled at the end of the course (Scherer, Talley, and Fife 2017).

However, students approached time management in different ways. Some adopted a laid-back approach, arranging their study sessions based on the difficulty of their courses. Meanwhile, a few students shared their effective time management strategies, such as creating comprehensive timetables and prominently displaying them on their walls using colour coding to distinguish between tasks and highlight tasks with upcoming deadlines.

Nevertheless, only a few of the participants indicated that they practice good time management skills. Specifically, one of the interview participants shared how effective time management had a positive impact on their confidence and reduced anxiety and further emphasised the importance of maintaining a consistent study schedule by avoiding procrastination when preparing for exams. They also believed that this approach allowed them to address any uncertainties well in advance of the examination day.

Multiple studies have consistently demonstrated that students with effective time management abilities generally attain higher academic performance. For instance, as outlined by Rashid et al (2020), skilfully managing study schedules, setting achievable goals, and allocating time to study for assignments and examinations have been correlated with improved grades and overall academic accomplishment.

Furthermore, the study conducted by George et al (2008) not only recognised the significance of good time management skills in academic success but also indicated that effective time management is a crucial factor linked to higher academic achievement and overall success among university students. Moreover, the recommendations provided by the participants mirror the suggestions put forth by Misra and McKean (2000), advocating for the implementation of strategies such as time management courses and seminars that improve time utilisation as a means to provide support and enhance academic performance.

Aligning with recommendations from previous research, university administrators need to organise seminars and workshops that are focused on providing students with pragmatic guidance for proficiently organising their time across diverse engagements. This strategy is designed to mitigate psychological stress and reinforce academic performance (Rashid et al 2020).

The ability to manage time is valuable for international students as they navigate a new cultural and educational environment. Proficient time management enables them to balance their academic responsibilities with social engagements, thereby fostering enhanced integration into the campus community (Ye and Wechsler 2021).

Finally, the current study emphasises that for Nigerian students, effective time management is not only a practical necessity but also a cultural adaptation. The need to balance academic responsibilities with the demands of adjusting to a new educational system adds an additional layer of complexity to their time management challenges, a factor that has not been sufficiently explored in existing research.

6.6. Information Literacy Challenges

6.6.1 Defining Information Needs and the Process of Searching

As part of the quantitative study results, one of the most challenging information literacy tasks reported by students was "Defining the information I need," with the majority of students (n= 201, 66.1%) finding it "very challenging." A smaller percentage (n= 9, 3.0%) also perceived this task as "extremely challenging."

Several interview participants also noted difficulties in articulating the necessary information required for their research projects, which caused confusion when attempting to locate pertinent academic resources. This shared challenge was evident in the students' descriptions of their initial research process, where they expressed a lack of comprehensive understanding of the task at hand. They further described the experience as hard, confusing, and challenging.

Furthermore, the students faced challenges with paraphrasing, referencing, and not knowing how to navigate the search process. For example, they stated that they were familiar with using Boolean operators to narrow or broaden their searches to the most relevant result. Nevertheless, there were instances where they encountered difficulties while searching for information, leading to feelings of reduced confidence or frustration. As per one participant's account, who felt less confident in their searching skills, the process of finding information became challenging and frustrating. They highlighted that, although some search results may be generated, the results may not always align with what they are looking for. This leads to the need for continuous searching and persistence, as they struggle even to precisely define what they need to search for with regard to their academic tasks.

Previous study by Shaheen (2012) delved into the challenges faced by international students in the process of finding information and how it can affect their academic writing performance. The study shed light on the difficulties students encounter in defining their information needs and how this can impact the quality of their writing. It also emphasised the importance of developing effective information search skills to overcome these challenges and enhance academic performance. In addition, research has found a connection between information literacy skills, academic self-efficacy, and academic performance overall. Filippou (2019) found that international students who reported low levels of academic self-efficacy also tended to have lower levels of information literacy skills. The study suggested that this relationship may be due to students' lack of confidence in their ability to find and use information effectively.

Additionally, challenges with information literacy skills were attributed to a lack of experience in developing independent research abilities. This issue was rooted in the Nigerian education system's emphasis on memorisation rather than research skills, as expressed by one student describing their past learning experience in a former school in Nigeria, where research skills were not emphasised or practised. As a result, transitioning to a more research-based academic tradition posed a significant challenge for Nigerian students. The predominant approach focused on reading lecturer-provided handouts and taking exams, aiming primarily at passing rather than developing deeper understanding of research skills, such as defining and searching for information.

As Meyers (1986) suggests, lecture-based educational practices often foster passive learning with insufficient emphasis on fostering critical thinking skills. Concerns have been raised by researchers regarding students' passive engagement during lectures (Richmond, 2007) and the prevalence of rote memorisation (Hofstede, 1986). Moreover, there is a growing recognition of students' tendencies to focus solely on exam performance rather than developing a deeper, analytical approach to learning, as highlighted by Volet and Renshaw (199) and Meyers (1986).

In conclusion, this study added further empirical evidence on the basis of these challenges, highlighting that defining information needs, referencing, paraphrasing, articulating research needs, and navigating the search process were the most difficult information literacy skills to develop. However, the research also added a deeper understanding of these challenges in a way that has not been previously explored in existing literature. It was found that there was a reduction in students' confidence, particularly when their search results were not successful in answering their information needs, leading to frustration. This issue was compounded by students' lack of experience in independent information searching because of a passive learning environment dominant within the Nigerian education system, which places emphasis on exams over research skills.

6.6.2 Different Experiences with Referencing Abilities

The quantitative data revealed that almost half of the students in this study (46%) faced difficulties when creating reference lists for various types of materials, such as books, articles, theses, papers, and web pages. Several of the students interviewed also referred to the challenges of correctly citing information sources, explaining that it was not an academic skill previously expected of them during their academic careers in Nigeria. For example, some students had never needed to reference secondary material before and were unfamiliar with the referencing system used by their academic institution in Scotland. This finding is particularly significant because it highlights a gap in the academic preparation of Nigerian students, where referencing and citation practices are not emphasised, unlike in many Western educational systems. As further explained by one of the students, the referencing style used at their university differed significantly from the one they were used to in Nigeria, and this meant that they struggled with the referencing style when writing essays and assignments. This could, therefore, pose serious challenges for the students in their academic writing. In order to prevent plagiarism, students should be familiar with the conventions of acknowledging academic sources and following correct citing standards (Namwera 1995).

The findings of this study are consistent with earlier research on other international students (Brown 2008) regarding their inability to reference materials from secondary sources. However, it is important to note that referencing was not just a minor academic skills difficulty for Nigerian students, but a significant challenge, as almost half of them reported that they were concerned about it, and this also created for them anxiety in relation to effectively meeting coursework deadlines. This anxiety suggests that the standard academic support provided, such as referencing guides, may be insufficient for Nigerian students. It calls for earlier, active, and more systematic academic interventions to support referencing skills that may be beyond just providing referencing guides (which is the approach followed in most institutions), as highlighted in previous research with other international students (Thompson, Morton, and Storch, 2013).

6.6.3 Challenges with Paraphrasing

Paraphrasing is a crucial skill for students aiming to incorporate academic resources into their writing without direct quotations.

However, the quantitative data of this study revealed that the majority of the participants ($n = 140$, 46.1%) encountered challenges in understanding academic integrity and honesty, particularly regarding accessing and using information (e.g., plagiarism, collusion).

The Pearson moment correlation analysis conducted on information literacy challenges revealed that 35.40% of the overall variability in academic self-efficacy challenges can be accounted for. This implies that as information literacy challenges increase, there is a corresponding tendency for academic self-efficacy to rise as well. Additionally, in the context of the regression analysis, it was observed that when academic information literacy challenges increased by one unit, there was a corresponding 0.374 unit increase in the academic self-efficacy challenges of Nigerian students in Scottish higher education institutions. ($B = 0.374$, $p < .001$).

When questioned about their experiences in identifying information for academic work and conducting research from various sources, interview participants acknowledged encountering challenges when paraphrasing an author's work without altering its original meaning. Nigerian students had a deep concern about unintentionally distorting an author's intended message during paraphrasing. This level of concern, coupled with their unfamiliarity with paraphrasing was due to their previous reliance on exam-based assignments in Nigeria.

Previous research by McLean and Ransom (2007) has highlighted that non-UK students often found concepts related to citation, paraphrasing, and plagiarism to be new and unfamiliar. Additional research by Ruslan et al (2020) has demonstrated that students encounter difficulties in paraphrasing, indicating confusion when rewriting passages using various techniques. Paraphrasing skills can also present challenges for non-native English speakers, as evidenced by studies conducted by Abdula Kareem (2013), Chen et al. (2015), Neumann et al (2020), and Shi (2012).

In fact, another study suggested that academic writing might be up to four times more challenging for international students compared to their UK counterparts (Mullins et al 1995). Consequently, it is important for international students to develop strong paraphrasing skills, as these skills can improve reading comprehension, enhance writing abilities, and help avoid plagiarism (Yahia and Egbert 2023).

However, a unique finding of this study is the deep concern that Nigerian students had about unintentionally paraphrasing other works. This concern was not solely linguistic (i.e., rewriting text). It was connected to the development of academic writing skills, such as integrating and organising ideas into clear and coherent arguments within academic work. This adds to the existing literature, which only highlights the lack of language proficiency as the reason of students' difficulties with paraphrasing. By equipping students with the necessary knowledge and strategies for paraphrasing, educational institutions will foster a culture of academic integrity for Nigerian students and ensure that they can confidently and ethically engage with academic evidence in their writing.

6.7 Challenges with Academic Self-Efficacy

The quantitative data revealed that a majority of Nigerian students attending Scottish higher education institutions experience challenges with their academic self-efficacy. Among the challenges mentioned by participants ($n = 188$, 61.8%), the inability to ask questions during lectures was the most challenging reported difficulty, with a smaller group ($n = 18$, 5.9%) considering it "extremely challenging." These results indicate that a significant number of participants faced difficulties asking questions during lectures in their new academic classroom environment while studying in Scotland.

The multiple regression model demonstrated a significant statistical prediction of academic self-efficacy challenges: $F(5,298) = 45.377$, $p < .001$, with an R^2 value of 0.432. This implies that the model accounted for 43.2% of the total variation in academic self-efficacy challenges. In other words, the independent variables

collectively explained 43.2% of the observed variances or differences in academic self-efficacy among the students.

During the interview some students, who struggled with low self-efficacy, held an optimistic view of learning, acknowledging that challenges with their academic self-efficacy could be overcome and that this was part of the learning process. However, the overall sense of lack of personal academic self-efficacy in students was connected to reduced confidence, feelings of demotivation, and occasional uncertainty about assignment requirements.

Previous research has similarly highlighted the impact of lack of confidence on academic disengagement and reduced participation of students in classroom discussions (Mirijanian 2018). Rubio (2007) further highlighted how the lack of self-confidence can create psychological barriers, such as feelings of insecurity and fearfulness, which can have a negative effect on a student's performance in class and even cause diversions from the learning process. In addition, self-confidence has been found to play a vital role in enhancing student motivation during the learning process (Benabou and Tirole 2002), while on the other hand, low self-esteem can reduce motivation and result in a negative attitude towards learning (Palavan (2017).

This study has similarly demonstrated that self-efficacy serves as a driving force for student motivation and learning outcomes. Although similar findings have been reported in previous research, the findings uniquely contextualise these challenges within the Nigerian student population. This study provides further empirical evidence regarding the academic self-efficacy challenges faced by Nigerian students, emphasising that these challenges hinder their development of critical thinking skills.

6.8 Challenges with Everyday Life and Socio-cultural Adaptation

The quantitative data of this study showed that the majority of the participants reported experiencing high levels of everyday life socio-cultural adaptation challenges while studying in Scotland (mean scores between 3.89 and 4.16. Specifically, adjusting to the climate in Scotland" was the most frequently quoted challenge mentioned by the majority of the students (n= 235, 77.3%) who found

this to be “very challenging”, with a smaller percentage (n=56, 18.4%) perceiving it as “extremely challenging”.

In addition, the Pearson correlation analysis results revealed that 8.70 percent of the variation in academic self-efficacy of the students was a result of everyday life socio-cultural challenges. This indicates that as everyday life socio-cultural adaptation challenges increase, academic self-efficacy challenges also tend to increase, suggesting that Nigerian students in Scotland who experience more everyday life socio-cultural adaptation challenges tend to have more academic self-efficacy challenges. The multiple regression analysis for the variable “Everyday life socio-cultural adaptation challenges” was ($B = .007$), with its p-value exceeding 0.05 ($p = 0.925$), which implies that the statistical relationship between these two variables lacked significance. However, given the high self-assessment scores on socio-cultural adaptation challenges given by students in the descriptive statistics and the Pearson correlation analysis results, it can be concluded that socio-cultural challenges presented an important barrier for students’ academic efficacy. These findings are consistent with previous research that has shown that socio-cultural challenges can have a significant impact on international students’ academic performance and well-being (Holliman et al 2023).

In the qualitative findings of this study, the participants engaged in discussions about various challenges they faced in their everyday life socio-cultural adaptation. These challenges include finding information on places to participate in worship, and finding accommodation. These difficulties emerged as some of the common obstacles, complicating their socio-cultural adjustment in their daily lives.

6.8.1 Participating in Worship and Socialising

A common problem that Nigerian students encountered was finding information on places to participate in worship and time to socialise, which had the potential to ease the socio-cultural adaptation process. Several participants in the study stated that it was difficult to find a place of worship and that, after much effort, they used Google Maps to find information about places of worship. In addition, many students

expressed the desire to begin forming social connections with both other international students and Scottish students. Another barrier to socialisation was the requirements of a full academic calendar and tight academic lectures, which presented barriers to social participation.

Between lecture schedules and their different academic deadlines, students had little time for much else beyond studying. It is important for Nigerian students to find the time to socialise in their new country, establishing these strong religious social connections, as failure to do so may cause loneliness and homesickness. Studies with international students indicate that individuals who lack social connections are more likely to encounter feelings of loneliness (Girmay and Singh 2019). Additionally, international students encounter notable challenges, encompassing culture shock, homesickness, reduced social support, discrimination, language barriers, and loneliness (Faleel et al 2012; McClure 2007), all of which can adversely affect their academic performance. Furthermore, other previous research has proven that socio-cultural adjustment challenges can significantly affect international students' academic achievement (Khan, Hamdan, Ahmad, and Mustaffa 2015).

International students inevitably face numerous challenges when entering a foreign country and adapting to a new socio-cultural and academic environment (Nasir 2011). Several studies have discussed how international students commonly encounter challenges in establishing new friendships as a result of cultural differences which restrict opportunities for social interaction (Paltridge et al. 2012).

However, these challenges are conditioned by different socio-cultural characteristics and needs. For example, a study by Khan, Hamdan, Ahmad, and Mustaffa (2015), explored "problems of perception of Malaysian morals and cultural values" (p.154). Other research by Zhang, Zhou and Stodolska (2018) highlighted how international students have to address a "plethora of adaptation problems" and these are created by their "distinct cultures" (p.1). What these studies show is that a deeper understanding of the diverse cultural background of different international students is also essential.

In the present study, Nigerian students emphasised particularly challenges with establishing social connections for worship purposes and the difficulties with long study hours. It could be argued that other international students with different adaptive social needs or abilities may find it easier or more difficult to navigate similar social and academic challenges. Therefore, although socio-cultural adjustment plays a pivotal role in the successful social and academic integration for all international students (Nasir 2011), it is equally important to understand the unique challenges that students from specific socio-cultural backgrounds face. Although this study found that Nigerian students expressed a strong need for a better balance between their academic responsibilities and their social activities overall, as highlighted in previous research with international students, it was also demonstrated how important it is to be cognisant of the diversity of their socio-cultural needs around worship, the ways in which long academic hours impacted their social life and the connection they experienced between socialising and academic success. This reveals a need for developing a more socio-culturally sensitive approach to supporting Nigerian students to establish an productive academic and everyday life balance.

6.8.2 Securing Accommodation

The interviews with Nigerian students highlighted significant challenges regarding accommodation upon arriving in Scotland. Many students described a difficult situation in which they needed to quickly find accommodation near their university but struggled with landlords unwilling to rent to international students, and students were left without explanation as to why landlords would not rent to them. In some cases, landlords specified that their hesitation to rent to Nigerian students was related to their finances. Students were told they needed to secure a local guarantor to rent, which international students often found impossible to fulfil due to their unfamiliarity with the local environment and lack of local connections.

The findings of this study are consistent with previous research, for example, conducted by Nasir (2011), who found that international students inevitably face numerous challenges when entering a foreign country and adapting to a new socio-

cultural environment, including the challenge of finding suitable accommodation. Huang (2008), further categorised accommodation issues as a 'practical challenge' for international students, given their unfamiliarity with the UK context and the absence of on-campus housing. Khawaja and Stallman (2011) highlighted various stressors experienced by international students, including a lack of appropriate accommodation options. These stressors were found to play a role in the adjustment challenges faced by international students, ultimately affecting both their learning experience and overall well-being. Other previous literature has similarly discussed the impact of accommodation issues on the well-being of international students, noting that difficulties in securing appropriate housing can contribute to overall stress and negatively impact student's mental health (Smith and Khawaja 2011).

However, the results of the present study offer a unique perspective on the accommodation challenges faced by Nigerian students in Scotland, highlighting several key issues that have not been extensively discussed in previous academic literature. One of the most significant findings is the requirement for a local guarantor, which poses a substantial barrier for Nigerian students who often arrive in the country without local contacts. This restricts their access to suitable housing and the reluctance from landlords further complicates their transition into a new socio-cultural environment. One key suggestion offered by students to overcome this problem was to be given at least six months in the school hostel before looking for accommodation elsewhere.

In addition, while earlier research has highlighted how lack of accommodation can hinder students' adjustment to their new environment, the results of this study go further to demonstrate how the stress and burnout associated with the housing search process can disrupt Nigerian students' academic focus and productivity. Personal accounts from the students highlighted the significant impact of their time-consuming and exhausting search for accommodation, leaving them with less energy and time to devote to their academic work. This underscores the necessity for more targeted support mechanisms to facilitate the social integration of Nigerian students.

6.9 Everyday Life Information Literacy Challenges

The study's descriptive statistics for the quantitative data revealed that the responses generated for 8 out of 9 questions had mean scores between 3.69 and 3.95. This indicated that a majority of the participants reported experiencing very high levels of everyday life information literacy challenges while studying in Scotland. Specifically, the analysis revealed that Question 4 received the highest mean score of 3.95. This suggests that Nigerian students find it very challenging to get information about part-time jobs.

In addition, the Pearson moment correlation analysis results revealed that there is a statistically significant and moderately positive correlation between academic self-efficacy challenges and everyday life information literacy challenges ($r = 0.484$, $p < 0.05$). Everyday life information literacy challenges explained 23.43% of the total variability in academic self-efficacy challenges. This suggests that as everyday life information literacy challenges increase, academic self-efficacy challenges also tend to increase.

In addition, the multiple regression analysis revealed that when academic information literacy challenges increased by one unit, there was a corresponding 0.374 unit increase in academic self-efficacy challenges ($B = 0.374$, $p < .001$). This indicates that for every one-unit increase in everyday life information literacy challenges, the academic self-efficacy of Nigerian students in higher education institutions in Scotland tends to increase by 0.374 units.

The first question from the questionnaire survey, "Finding information around the university, hostel, or where you live," was the most frequently quoted challenge mentioned by the majority of the students ($n = 237$, 78.0%) who found this task "very challenging," with a smaller percentage ($n = 22$, 7.2%) perceiving it as "extremely challenging."

Similarly, question two, "Finding information about accommodation," was another most frequently stated challenge by the majority of the students ($n = 199$, 65.5%),

who found this task “very challenging,” with a smaller percentage (n= 51, 16.8%) perceiving it to be “extremely challenging.”

Furthermore, the qualitative data revealed that Nigerian students struggled with locating reliable sources for their daily needs, finding Nigerian food, and obtaining information about social opportunities and socio-cultural activities. They often relied on informal networks or the internet, which sometimes led to frustration and confusion.

The findings of this study align with previous research which highlights challenges with the everyday information-seeking behaviour of international students overall. For instance, Hertzum (2019) investigated how international students at a Danish university encountered difficulty in using information resources for both academic studies and everyday life. Another study by Nasir (2011), also identified challenges in international students on the basis of finding everyday life information, such as suitable accommodation. Naveed, Batool, and Anwar (2021), who explored the information-seeking behaviour of postgraduate students residing in the University of Punjab's halls of residence in Lahore, found that participants frequently struggled to promptly access essential everyday life information due to a shortage of information sources. These challenges associated with accessing relevant information may affect the academic performance and the social integration of international students (Bukhari et al 2018).

6.9.1 Google and Other Sources of Information

Students relied on Google as their primary information source for everyday life activities, such as finding Nigerian food and places to socialise, which was an important aspect of Nigerian students' everyday life. Many students exclusively depended on Google for their everyday information needs. However, interpersonal sources for gathering everyday information were equally significant to students. These sources included friends, school colleagues, and church members.

Previous research conducted by Sin and Kim (2013), who empirically examined the information-seeking behaviour of other international students (e.g., in America), has

similarly highlighted social networks as a significant source of everyday information seeking for students. However, the reliance on interpersonal networks as discussed in this study, revealed the gaps in the availability of culturally relevant information online - an issue that has not been extensively explored in existing literature. While Google offers a broad range of information, it does not always meet the specific, culturally nuanced needs of Nigerian students, leading them to require the support of alternative social sources.

6.9.2 Difficulty Finding Nigerian Food in Scotland

In this study, it is interesting to note that none of the students searched for information on food online except for one student who used Google. They mostly relied on social information sources, whereas additional online sources, beyond friends and classmates, could have potentially assisted them in identifying places of authentic Nigerian food.

In addition, finding information on locations that offered Nigerian food options in Scotland was a common problem. Some students explicitly mentioned that while they managed to find places to purchase Nigerian food, the prices were too high to afford. Other students mentioned that they had to travel to nearby cities to find and buy Nigerian food. The comments made during the interviews revealed that Nigerian food is difficult to find in Scotland, as it is only offered at a small number of expensive restaurants and stores. These findings highlight the difficulties of sourcing information to address everyday life essential socio-cultural needs, as well as the economic barriers that Nigerian students face in maintaining their cultural diet in Scotland, caused by the high cost and limited availability of Nigerian food.

The same difficulty of finding information on food items has been explored in previous research with international students, highlighting the need of students to travel considerable distances or invest extra time searching for specific food items (Brown et al 2010), as well as the different factors that affect students' food choices, often leading to altering eating behaviours (Alakaam 2016). This can lead to negative

outcomes, such as an increased reliance on carbs, resulting in a less healthy diet (Hafiz, Gallagher, Devine, and Hill (2023)).

However, the findings of this study specifically highlight how lack of information about Nigerian food in Scotland exacerbates feelings of isolation and homesickness for Nigerian students. This emphasises the critical role of culturally familiar food in alleviating homesickness for Nigerian students and contributes to our understanding of an aspect of transition that has been largely overlooked by researchers, yet one that significantly affects students' well-being in their new cultural environment.

6.9.3 Difficulty Finding Information on Social-Cultural Opportunities and Activities

Participants in this study expressed dissatisfaction with the lack of information on social opportunities. They were eager to begin forming social connections with both other international students and Scottish students, but inadequate planning by Nigerian society groups was cited as a barrier. Additionally, Nigerian students did not use the internet to search for information on social activities and events. Although they were members of Nigerian society groups on social media platforms, in-person gatherings were rare. Students attributed this to several issues, including inadequate planning by the society groups, low attendance rates, and high event ticket costs. This lack of participation was identified as a barrier to forging social connections.

Previous research has shown that engaging in social interactions with the host-country network assists international students in coping with challenges, such as homesickness, which is a common aspect of socio-cultural adaptation (Hannigan 2005, Thurber, and Walton 2012). However, research has mainly focused on the international students' opportunities to socialise with locals and fellow students of the host country rather than with students of their own culture (Zhang and Brunton 2007). In contrast, the current study revealed that Nigerian students encountered challenges in social integration within their own cultural groups. In addition, Nigerian students expressed a need for more affordable and appealing social events. This underscores the need for better-organised and more accessible events that meet their specific social needs.

6.10 Suggestions and Recommendations for Academic Support

Suggestions and recommendations from the students interviewed were a key part of this research. As new students simultaneously entered an unfamiliar university, country, and culture for the first time, they offered a particularly relevant perspective on what support mechanisms might ease this stressful transition. For this research, suggestions were defined as general comments indicating a desired resource, while recommendations were more specific actionable steps the university could take in assisting students to eradicate these challenges.

This section therefore addresses the findings from the interview data on support mechanisms by which educational institutions can assist students in addressing challenges encountered, such as information literacy, socio-cultural adaptation, and language and communication challenges. When discussing academic challenges, participants often concluded their thoughts with recommendations regarding how their university may better support them as they become acclimatised to Scottish culture, academic expectations, and language. This section offers a collection of themes from these recommendations based on the challenges experienced by the interview subjects in their academic studies.

6.10.1 Recommendations for Academic Support

Students suggested different improvements around study experiences, such as study groups, information literacy classes, tutoring or buddy programmes, and academic skills courses, among others. These suggestions are discussed below.

Support during learning

Students suggested different methods for optimising lecture comprehension, including lecture captioning, translation services, interactive transcripts of lecture notes, and the inclusion of visual cues such as images or diagrams to enhance text comprehension. Transcripts could also include relevant visual aids or provide links to supplementary information to aid comprehension. Students suggested that implementing real-time captioning and translation services for live lectures as a

standard practice can offer valuable assistance when facing challenges due to unknown words or accents, they are not yet accustomed to.

In addition, students found the provision of coursework/assessment samples and previous examples a helpful aid in the comprehension of academic requirements they were not yet used to. Although this may appear to be a given or a well-established practice in several universities, that particular suggestion may demonstrate that either it is not followed consistently by all universities or perhaps that not all students are aware of it. In the case of new Nigerian students who have not been acquainted with the nature of specific types of assessments that require the development of reflective and critical thinking, this could present helpful additional support.

Feedback Mechanisms

Another suggestion put forward by students included establishing a digital platform where Nigerian students and, by extension, other international students could anonymously share feedback regarding difficulties with understanding specific aspects of course materials and their overall learning journey. In that way, academic staff can regularly assess student feedback and adapt programme aspects accordingly. The perspectives of international students play a vital role in tailoring the curriculum to address their specific needs, and their input can serve as a catalyst for further enhancements to the course programme.

Information literacy support

In this research, the quantitative findings revealed that students acknowledged the existence of information literacy support programs already offered by their universities. Nevertheless, they stated that the information literacy courses and support available did not adequately address all their academic challenges. In addition, the typical two- to three-hour library orientation session may not sufficiently impart the necessary information literacy skills to new students.

Therefore, it's important for academic institutions to structure information literacy classes to be an ongoing process and part of a course curriculum instead of one short

program. Information literacy should be incorporated as a course, made mandatory, alongside assessments and grading. This is also supported by previous research. For example, one recommendation by Kimani and Onyancha (2005) relates to integrating information literacy training into the standard university curriculum, making it a credit-bearing course for all incoming students. This approach aids in tailoring information literacy training to the immediate needs of new students and adjusting it according to their level of information literacy acquisition as they advance in their studies.

Information literacy enhances students' learning and information-seeking abilities by enabling them to search, find, locate, evaluate, use, communicate, and exchange information to achieve set objectives (Ugwunna and Onyekweodiri 2017). People who possess information literacy skills can quickly find relevant resources, evaluate the reliability of sources, and seamlessly incorporate them into their tasks. This adept navigation through information sources not only improves time management but also enhances efficiency, competence, and productivity (Sevari and Kandy 2011 and Houston 2009). In addition, empirical evidence underscores a positive correlation between information literacy and academic success. This empirical finding reinforces the notion that possessing expertise in planning a search strategy, which is a key component of information literacy skills, can ultimately save time during the information problem-solving and/or research process (Hjorland 2005).

However, it is not only about how the program is offered but also about what the content of information literacy courses should incorporate. Sessions aimed at assisting Nigerian students in specific areas where they experience knowledge and skills gaps will be very valuable, employing diverse learning methods to aid them in searching, evaluating, and synthesising knowledge, structuring their thoughts, and delivering ideas thematically (which addresses the information use aspect of information literacy). These sessions could cover various topics, such as utilising the library's platform, understanding citation styles, preventing plagiarism, and incorporating knowledge into academic writing.

In addition, information literacy courses should include conducting group discussions centered on information-seeking challenges and implementing problem-solving activities addressing tasks commonly challenging for Nigerian students. This could involve bringing together Nigerian students to exchange experiences and challenges and conduct learning activities that incorporate hands-on research exercises that require them to utilise the new skills they have developed and make critical exchanges of experiences; in that way, a lecturer's awareness of the specific challenges faced by Nigerian students would also increase. For example, understanding that Nigerian students' previous learning experiences may be connected to passive learning methods, the introduction of an interactive information literacy program could significantly enhance their knowledge of active learning benefits, as well as their understanding and involvement. Additionally, more detailed recommendations on the basis of the key information literacy models explored in this study are offered in Chapter 7.

Study Skills Strategies

Interview participants suggested study skills strategies such as note-taking, exam preparation, and time management programmes to address their specific challenges. The findings of this study indicated that time management issues were prevalent among Nigerian students. Therefore, it is advisable for Nigerian students to carefully plan their activities to enhance their effectiveness, efficiency, and overall productivity. Time management should become essential, especially when faced with a multitude of tasks. Meeting deadlines for school assignments and other academic activities represents crucial milestones on the path to completing a university degree. Hence, developing strong time management skills is crucial for the academic success of Nigerian students. It is important to incorporate time management and study skills courses or resources tailored to the needs of Nigerian students. These courses can focus on time management and offer guidance on balancing academic commitments. They will empower students to set realistic goals and deadlines, thereby facilitating proactive time management strategies, accurately gauge the time required to accomplish tasks, and allocate their resources judiciously.

Time management, for example, which consists of “behaviours that aim at achieving an effective use of time while performing certain goal-directed activities” (Claessens et al. 2007 p.262), has been found to be key to academic success as a significant predictor of academic achievement. George, Dixon, Stansal, Gelb, and Pheri (2008). Managing time and tasks effectively is also integral to decreasing procrastination levels and forms an essential component of academic self-regulation (Hailikari, Katajavuori, Asikainen, 2021, Limone et al 2020, Wolters, Won, and Hussain 2017). Notably, research also suggests that effective time management practices can significantly enhance an individual's quality of life beyond their academic endeavours (Wang et al 2011).

However, international students face notably greater challenges in adjusting to academic standards and in meeting the demands of academic studies, such as time management, study techniques, and self-directed learning (Burns 2018). Furthermore, academic literature provides valuable insights into the significance of providing international students with access to time management resources. For example, research by Nonis et al (2006) highlighted the necessity of imparting effective time management skills to first-year university students to enhance their academic success. To effectively assess tasks and plan their completion, students must acquire time management competencies. This aids students in developing essential planning skills and a deeper understanding of tasks and their significance when crafting task schedules (van der Meer et al 2010).

Additionally, Chien's (2013) study revealed that even after two terms of adapting to the academic environment in the host country, time management remained one of the primary challenges encountered by international postgraduate students. Consequently, time management skills are of paramount importance for international students as they acclimatise to a new social and academic setting. Paton (2007) also identified time management as one of the factors that contributed to the academic failure of international students. Hence, time management skills are imperative for all students to possess.

To enhance study skills, such as time management, note-taking, and exam preparation skills of Nigerian students, higher education institutions in Scotland could arrange workshops focused on study skills strategies. These seminars would expose students to innovative approaches, offering a contemporary perspective on effective study, time management, and exam preparation that may differ from what Nigerian students are accustomed to.

One notable study skills strategy is the Pomodoro Technique, as conceptualised by Cirillo (2006), which involves dedicating 25 minutes to concentrated studying followed by a five-minute break. The accompanying tool assesses the necessary time for completing a subject or assignment, taking into account factors such as the exam date, assignment due date, the complexity of the material, and the volume of materials to be studied. Additionally, to optimise time utilisation, the tool recommends resources based on the uploaded materials. Should a student procrastinate, the tool detects the delay and issues a warning, prompting the student to take immediate action. The primary objective of the Pomodoro Technique is to cultivate awareness, concentration, and clarity of thought by employing effective time management principles (Wang et al 2010). Implementation of the Pomodoro Technique has been shown to enhance productivity, particularly among students striving to complete their tasks or pursue independent learning, as it helps to eliminate all distractions, set a specific timeline, engage fully in the task at hand, and allow rewards for the effort invested in the task (Oakley 2018). Various studies have explored the development and evaluation of tools based on the Pomodoro Technique. As an example, Almalki et al. (2020) developed a tool with the goal of helping students at the University of Jeddah in Saudi Arabia manage their time effectively and diminish procrastination by implementing the Pomodoro Technique. The tool, used by 15 graduate students over a four-week period, issued warnings if it detected signs of distraction. In a post-study questionnaire, eleven out of the fifteen participants acknowledged that the tool significantly aided them in time management.

Another effective study skills strategy is the Cornell method, initially developed at Cornell University, to assist students in organising, recording, and reviewing their notes. This method entails dividing lecture notes into three segments: a narrow-left column for cues, a broader right column for note-taking, and a bottom section for summarising and evaluating (Pauk and Owens 2011 p. 237-238). Research findings affirm the efficacy of this system in promoting students' academic achievements (Zorn 2013).

In support of the Cornell method's impact on language skills, two studies were identified. The first study, conducted by Davoudi, Moattarian, and Zareian (2015), investigated the method's effect on grammar. The study included Seventy intermediate Iranian EFL students, comprising 44 males and 26 females. The experimental group, trained using the Cornell method for learning grammar, demonstrated improved grammatical knowledge and critical thinking.

The second study, conducted by Hayati (2009), aimed to determine if note-taking strategies, particularly the Cornell method, enhance listening comprehension. The study involved sixty undergraduate students majoring in English at Shahid Chamran University of Ahvaz. The results indicated significant differences when employing the Cornell method, showcasing its positive impact on listening skills.

Through the implementation of workshops that implement these techniques, higher education institutions in Scotland can equip Nigerian students with potent study tools, transcending conventional methods. The objective of this approach is to foster enhanced abilities in time management, note-taking, and exam preparation, ultimately playing a crucial role in students' academic achievements.

Academic Support, tutoring and study groups

Students frequently suggested alternative forms of academic support beyond traditional lecture-based courses. These included tutoring sessions, communication platforms such as WhatsApp to address specific questions with lecturers, instructional resources like videos, audio, or print materials to help them understand the Scottish accent, adapt to a new environment, and study groups to boost academic self-

efficacy. Furthermore, students also emphasised the importance of one-on-one time with lecturers outside of regular class hours for clarifying complex topics. It was important for students that study groups and tutoring/academic skills support were available as a means of a preparatory process.

Research has previously recommended that study groups can increase students' readiness before exams, with significant improvements in students' exam performance (Smith et al 2019), while tutoring and academic skills courses can positively influence students' self-confidence and overall academic achievement (Johnson and Lee 2020). This was important for Nigerian students, who entered an unfamiliar educational system and need fundamental support in the first year of study.

Furthermore, in this study, some participants also proposed unique recommendations based on their key experiences by suggesting that their institutions can explore communication platforms such as WhatsApp to address specific questions with lecturers. The idea of a Frequently Asked Questions (FAQ) website was put forth by some students to provide readily available answers based on previous students' enquiries, making support more accessible to those who might be hesitant to approach professors directly. Additionally, interview participants suggested instructional resources like videos, audio, or print materials to help them understand the Scottish accent, adapt to academic standards, acclimatise to a new environment, and effectively manage their academic calendars before commencing their studies. The aforementioned suggestions highlighted the importance of personalised support, pre-arrival resources, and skill development to empower students for success in their academic journey.

6.10.3 Conclusion

The research highlighted the pressing need for enhanced academic support for Nigerian students who are navigating a new educational and cultural landscape. The findings revealed that students face significant challenges, including difficulties with

lecture comprehension, information literacy, and study skills. Addressing these issues requires a multifaceted approach.

Implementing real-time captioning and translation services, along with interactive transcripts and visual aids, can greatly enhance lecture comprehension and aid students in overcoming language and communication challenges. Additionally, providing samples of coursework and assessments, coupled with a digital feedback platform, will help students better understand academic expectations and offer a means to continuously refine and adapt the curriculum based on their needs.

The study also highlights the importance of integrating information literacy into the core curriculum as a mandatory, credit-bearing course. This approach ensures that students develop essential skills in citation, paraphrasing, referencing, and critical thinking, tailored to their specific needs.

Improving study skills is equally crucial. Workshops focused on techniques such as the Pomodoro Technique and the Cornell method can equip students with effective strategies for time management, note-taking, and exam preparation. These skills are vital for adapting to new academic standards and managing academic workload efficiently.

Moreover, personalised support through tutoring, study groups, and one-on-one interactions with lecturers is essential. Utilising communication platforms like WhatsApp and creating an FAQ website can provide immediate assistance and address common questions. Pre-arrival resources such as instructional videos and print materials can also help students acclimatise more effectively to their new environment.

Overall, adopting a student-centered approach that incorporates these recommendations will create a more inclusive and supportive academic environment. By addressing the specific challenges faced by Nigerian students, higher education institutions in Scotland can enhance their academic performance, improve their academic self-efficacy, and help them acclimatise in a new academic and socio-cultural environment.

6.11 Critique of IL Models and Learning Approaches based on Study Findings

6.11.1 Introduction

This study provided detailed insights into the specific challenges faced by Nigerian students in Scottish higher education institutions, highlighting unique academic information literacy challenges, socio-cultural adaptation challenges, and language and communication challenges. By focusing on these particular needs, the study brings to light the often-overlooked experiences of this group of students in broader discussions about international students (Hussain and Shen, 2019; Khan et al., 2015). The findings from the discussion chapter are crucial for several reasons and present significant challenges to current thinking in multiple areas.

6.11.2 A critique of IL models

This study found that Nigerian students often struggle with tasks related to information literacy, such as defining their information needs, paraphrasing, referencing, and critical thinking skills. The ACRL Framework and Big6 model assume a baseline level of information literacy, which does not fully account for the diverse backgrounds and experiences of Nigerian students. The assumption that students possess a baseline level of information literacy overlooks the reality of educational systems like Nigeria's, where such skills are not prioritised (Zorn 2013). This highlights the need to develop more inclusive and diverse IL models that cater for different educational backgrounds (Shaheen 2012).

In addition, the ACRL Framework and the Big6 model assume an easy progression from clearly defining an information need to sourcing, evaluating, and using the information found. However, as the experiences of Nigerian students illustrated, defining information needs is not always a straightforward process that seamlessly leads to effectively sourcing information. The lack of prior experience in independent research meant that the students often did not know what kind of information they needed or how to articulate it effectively, navigating to information seeking without clarity of their information needs. This complexity suggests that IL models should be more flexible to accommodate and acknowledge students' diverse language barriers

and capabilities (e.g., understanding complex terminologies, extracting key terms that convey the direction of the search) that may be created during specifically the stage of defining information needs and be offered more support to progress through to the remaining stages of the information seeking process (Shaheen 2012).

Additionally, the struggle with paraphrasing and referencing highlights a critical limitation of linear IL models. The Big6 model presents the use of information, including paraphrasing and referencing, as sequential steps that follow information sourcing and evaluation. However, Nigerian students face significant challenges with paraphrasing and referencing due to their lack of familiarity with and practice of these skills. The adaptation process for Nigerian students involves iterative learning, where they continuously refine their skills and understand through experience and feedback. Accepted linear models of IL assume a one-way progression from one skill to the next. However, the findings of this study suggest that students' learning is more iterative and cyclical. They often need to revisit earlier stages of the IL process as they gain new insights and encounter new challenges. For example, students may need to redefine their information needs or seek additional sources as they develop their understanding of the topic. This iterative nature of learning challenges the linearity of traditional IL models and underscores the need for a more dynamic approach that allows for revisiting and refining skills (Davies 2003, Filippou 2019).

Overall, socio-cultural adaptation and language and communication challenges significantly impact Nigerian students' ability to engage with information literacy tasks. Linear IL models often do not account for the socio-cultural and language barriers that can affect students' ability to engage with and understand information. The experiences of Nigerian students in Scotland show that these barriers can hinder their progress at multiple stages of the IL process. For example, language difficulties can make it challenging to comprehend academic tasks or requirements, participate in class discussions, and seek help from peers and instructors. This indicates that IL models need to be more holistic, incorporating socio-cultural and linguistic support to help students navigate these barriers effectively (Yeh and Inose 2003). This research challenges the notion that students can simply follow a linear path to

develop these skills. Instead, it emphasises the need for continuous support and integration of these skills throughout the learning process, rather than treating them as discrete steps to be mastered independently (Kimani and Onyancha 2005).

Additionally, the brief library orientation sessions usually offered by different academic institutions are insufficient to address the above challenges; there is a need to integrate ongoing, comprehensive IL training into the curriculum that would better support students from diverse backgrounds (Kimani and Onyancha 2005), with a recognition of the unique challenges they experience during the different stages of the information seeking process.

Nigerian students' difficulties with defining information needs, paraphrasing, and referencing highlight the need for models that allow for ongoing refinement and support, suggesting that IL education should be more dynamic and responsive to students' evolving needs (Shaheen 2012, Filippou 2019).

One way to address this issue is by integrating IL training and support into the curriculum, making it a mandatory and graded part of the academic experience. This approach can help normalise the process of seeking help and accessing support services by making it a standard part of the academic experience. When IL training is integrated into the curriculum and made mandatory, it ensures that all students participate, which reduces the hesitation associated with seeking help. This, in turn, encourages students to utilise the available resources without fear of judgement or being perceived as incompetent. This approach can also help normalise the use of support services and reduce the stigma associated with seeking help (Filippou, 2019 Shaheen 2012).

Additionally, institutions can provide targeted orientation sessions that not only introduce students to available resources but also address cultural attitudes towards seeking help and promote the benefits of using these services (Shaheen, 2012, Filippou 2019).

Furthermore, peer support and mentorship programs can play a crucial role in bridging this gap. Pairing new students with more experienced peers who can guide

them through the process of seeking and utilising support can help reduce anxiety and build confidence (Hussain and Shen 2019). These programs can also provide a sense of community and belonging, which is particularly important for international students facing cultural and academic transitions (Sawir et al 2008).

6.11.3 Nigerian education systems and Scottish education systems

The Nigerian education system emphasises rote learning and passive engagement rather than encouraging independent research and critical thinking (Hofstede 1986, Meyers1986). This emphasis on rote learning within the Nigerian education system created significant challenges in students' transition to the more interactive and critical thinking-orientated classroom environment experienced in Scotland. Given the high numbers of Nigerian students studying in the U.K., this situation calls for educational reform in the Nigerian curriculum in a way that supports active learning and critical thinking from an early age (Chen et al 2018) to prepare students for more varied educational experiences when they leave their home country. Additionally, educators' training programs should focus on modern pedagogical techniques that encourage student engagement, research skills development, and independent learning (Davies 2003), which would better prepare students for international academic settings (Filippou 2019).

Furthermore, this study demonstrated how in Scotland, Nigerian students face challenges adapting to different teaching methods and language and communication challenges. These challenges point to the need for more tailored support mechanisms within Scottish institutions. Language workshops and cultural orientation sessions would help students overcome communication barriers and adapt more easily (Yeh and Inose 2003).

Educators should be trained to recognise and accommodate the diverse educational backgrounds of their students, using inclusive teaching strategies and providing clear explanations of academic expectations (Shaheen 2012). Establishing mentorship programs, where experienced students guide newcomers, could facilitate better integration and adaptation (Hussain and Shen 2019).

Furthermore, the difficulties faced by Nigerian students are not solely due to their educational background; systemic issues within the Scottish education system, such as insufficient support mechanisms and a lack of culturally sensitive teaching practices, also play a significant role (Pauk and Owens 2011).

Further insights derived from the findings of this study suggest that the host institution's support systems are crucial for the adaptation and success of Nigerian students. While existing literature often attributes international students' challenges to their background (Ecochard and Fotheringham 2017), this study highlighted the importance of effective support mechanisms in the host country.

To address these issues, both the Nigerian and Scottish education systems need to adopt a more holistic approach to supporting students. Ruslan et al. (2020) highlight the importance of educational reforms that emphasise active learning and critical thinking, which could be implemented in Nigeria to prepare students for different educational systems. In Scotland, institutions should develop tailored support programs that incorporate essential elements such as language workshops, cultural orientation sessions, and mentorship schemes, as emphasised by McLean and Ransom (2007). These should not address all international students as the same but recognise the nuanced socio-cultural differences and educational needs that may be different in ways that create unique challenges for students. Educators should be trained to recognise and accommodate the diverse educational backgrounds of their students, using inclusive and culturally sensitive teaching strategies and providing clear explanations of academic expectations (Ecochard and Fotheringham 2017, Hussain and Shen 2019, Shaheen 2012, Pauk and Owens 2011).

For example, this study explored how Nigerian students approached authority and communication in class in different ways because of fear that they may be perceived as less intelligent. Additionally, continuous feedback from international students should guide the development and refinement of these support programs (Cadieux and Wehrly 1986).

However, despite this clear need for support, there is a notable reluctance among Nigerian students to seek the help they require. This reluctance can be attributed to several factors, including cultural attitudes such as approaching people in authority or reluctance towards seeking help, fear of being perceived as incompetent, and lack of awareness with the support systems available in Scottish institutions. Cultural differences often play a significant role; in many cultures, including Nigerian, seeking help can be seen as a sign of weakness or failure, which can discourage students from utilising available resources (Hofstede 1986 Ecochard and Fotheringham 2017).

Understanding these contradictions is essential for developing more effective academic support systems. On one hand, the need for support underscores the importance of providing comprehensive, culturally sensitive, and accessible resources for students. On the other hand, the reluctance to seek support highlights the need for institutions to create an environment where seeking help is normalised and encouraged. This requires a multifaceted approach that addresses both the availability of support and the cultural barriers that prevent students from accessing it.

Overall, the study findings underscore the necessity of inclusive, culturally sensitive educational practices and robust support systems to enhance the academic socio-cultural experiences of Nigerian students in Scotland. It also points to the requirement to prepare Nigerian students for diverse educational experiences when studying abroad, given the high numbers of Nigerian students pursuing academic study in the U.K. By addressing these gaps, educational institutions in Scotland and in Nigeria can better support Nigerian students, leading to improved academic outcomes and overall success.

6.11.4 Conclusion

The findings from this study are significant because they provide a detailed understanding of the challenges faced by Nigerian students in Scottish higher education institutions and offer empirical evidence to support the need for comprehensive, culturally sensitive, and holistic support mechanisms.

The discussion of information literacy (IL) among Nigerian students in Scottish higher education institutions revealed several critical insights that both add to and challenge existing research on IL and its dominant models. These findings are crucial as they highlight the specific challenges faced by Nigerian students and provide a nuanced understanding of their needs, which are often overlooked in broader discussions about international students.

The study advocates for a holistic approach to supporting Nigerian students, integrating academic, socio-cultural, and linguistic support, as opposed to a one-size-fits-all approach. This challenges the fragmented support systems often in place, where academic support, language support, and cultural orientation are provided separately and insufficiently (Yeh and Inose 2003; McLean and Ransom 2007).

The findings suggest that socio-cultural adaptation is as important as academic preparation for the success of international students. This challenges the current focus on academic support alone and underscores the need for institutions to provide comprehensive socio-cultural orientation to help students integrate into their new environment (Hannigan, 2005, Thurber and Walton 2012).

More interestingly, the inherent contradictions in the data regarding the need for support versus the reluctance to seek it provide valuable insights for advancing our understanding of IL among Nigerian students in Scottish higher education. By embracing these contradictions and addressing both the demand for support and the cultural barriers that inhibit its use, institutions can develop more effective and inclusive IL support systems. This approach will not only enhance the academic self-efficacy and performance of Nigerian students but will also contribute to a more supportive and culturally sensitive educational environment overall (Chen et al 2018, Hannigan 2005, Thurber and Walton 2012).

To build on the findings of this study, future research should include longitudinal studies to track the adaptation and academic performance of Nigerian students over time, comparative studies to evaluate the effectiveness of different IL models in

diverse contexts, and intervention studies to investigate the impact of specific support mechanisms on the academic success of international students.

CHAPTER 7 – SOCIO-CULTURALLY APPROPRIATE INFORMATION LITERACY STRATEGIES

7.1 Introduction

The findings of this study offered empirical evidence to support the importance of understanding Nigerian students' socio-cultural differences and the role these play on the basis of information literacy skills development and students' overall academic self-efficacy. The study offered a deeper understanding of the multifaceted academic and everyday life challenges those Nigerian students encountered, together with suggested ideas that students put forward as supportive strategies and mechanisms to assist them to integrate better into their learning and everyday life environment. The study overall supported that increased awareness of international students' different socio-cultural and learning backgrounds will foster socio-culturally appropriate approaches towards information literacy skills development.

Although socio-cultural lenses of information literacy have been discussed on a theoretical level in previous research and scholarship, specific and actionable recommendations that would help in the integration of the information literacy socio-cultural perspective within Nigerian students' educational experiences in Scottish higher education are missing. This chapter, therefore, aims to offer key practical directions for integrating socio-culturally appropriate and inclusive teaching and learning strategies that can be practically implemented to support Nigerian students

in developing information literacy skills. It does so by revisiting the socio-cultural lenses of existing information literacy models that shaped the direction of this research, the ACRL framework and the Big 6 model, and by connecting the discussion of practical strategies to the specific frames and components of the models these strategies are relevant to.

7.2 ACRL Framework

The practical strategies that could be incorporated into the teaching of culturally inclusive information literacy, are linked to two of the six frames of the ACRL Information Literacy framework: “Authority is Constructed and Contextual” and “Research as inquiry”.

7.2.1 Authority is Constructed and Contextual

This frame places emphasis on critically evaluating the authority of a source based on an author’s credibility and expertise but also on the contextual aspects of authority with reference to the various potential communities and the recognition that authority is of different types (ACRL 2016). It highlights “knowledge practices” that learners can utilise to identify authority, such as subject expertise and the author’s position in society. Specific dispositions of learners include developing an open mind, a sceptical stance, and awareness of bias, as well as diverse perspectives and worldviews.

This research study found that Nigerian students experienced challenges in identifying authoritative sources they were not familiar with, as, for them, the concept of authority was not necessarily restricted to the notion of Western society authorship. In addition, perceptions around critically discussing authority sources in writing were different, with students finding it more difficult to critique authoritative sources. On the basis of these findings, there are a number of practical strategies proposed below. Several of these strategies are founded on the importance of cultural sensitivity, which is the first step in incorporating a socio-cultural perspective into information literacy (IL) instruction which stems from students’ diverse backgrounds,

different learning preferences, and educational practices, Vemunt, and Boshuizen 2012).

Additionally, the proposed practical strategies support different learning styles, which often emerge from different cultural attitudes regarding authority.

Integration of African Scholarship

It is important to aim towards the internationalisation of the curriculum with the integration of African scholarship in teaching and learning, which can encompass readings and debates centred on the works of African authors or researchers within specific courses. This approach enriches the curriculum and renders the subject matter more relatable for Nigerian students. For instance, in a history course, academics could introduce a module dedicated to African history and invite Nigerian students to share their perspectives. This would encourage students to engage in meaningful debates regarding historical events as perceived from various authors' viewpoints. Incorporating readings and debates about African authors and researchers makes the curriculum more culturally relevant to Nigerian students as well as inclusive. When students can relate to the content, they are more likely to engage with it, leading to better critical thinking. Furthermore, when students are asked to provide insights into topics related to their own culture or history, they are more likely to think critically about the subject matter. It promotes deeper understanding and analysis.

Critical Reading and Analysis

Critical reading and analysis could be supported by means of assigning Nigerian students a research project that requires them to analyse a complex issue from multiple perspectives, showing them how to assess the credibility and biases of various sources critically. This could be illustrated by examples and exercises that ask students to examine articles from different countries' perspectives, critically evaluating the authority and biases of each source.

Assessments that foster critical information literacy development

Instead of solely relying on written exams, alternative assessment methods could be considered in courses that recruit Nigerian students, including oral presentations, group projects, or reflective essays. These approaches would allow students to practice their information literacy skills and demonstrate their understanding and development of critical thinking, academic writing, and communication styles expected in their new academic learning environment, and therefore open additional opportunities for developing critical information literacy.

Resource Exchange and Empowerment Workshops

Universities could organise a resource exchange information literacy programme where Nigerian students could share relevant academic materials from their home institutions with their Scottish peers. In return, Scottish students could provide guidance on accessing and navigating Scottish academic databases and libraries.

Cultural Integration Initiatives

University research departments and libraries could organise cross-cultural research collaborations to promote collaborative research projects that involve Nigerian and Scottish students working together on topics that bridge their cultural experiences, implementing suggestions from Hofstede's research on the differences between individualistic and collectivist cultures, with an understanding of how these may impact attitudes towards collaborative efforts. For example, Nigeria is a country characterised by a culture that is high on collectivism, which means that students may have a higher tendency to be in groups and learn together, whereas Scottish students are part of a country that shares mostly individualist characteristics and favours personal learning and decision-making (Hofstede et al. 2005; Hofstede, 2005). Taking these differences into consideration, group learning and research activities could be organised in a way that allows for facilitating the co-existence of different cultural characteristics that endorse different learning styles. For example, previous research has found that collectivist countries may favour field-dependent and non-linear learning preferences (Chen and Macredie 2002). By integrating cultural dimensions and teaching frameworks into collaborative research projects, university departments and libraries can create an environment conducive to

fostering cross-cultural understanding and enhancing students' research perspectives and information literacy skills.

Furthermore, cultural exchange events, could be organised where Nigerian students could share aspects of Nigerian academic scholarship and culture with their Scottish peers, fostering cross-cultural understanding and reducing potential bias.

Cultural Sensitivity Training for Faculty

The integration of cultural sensitivity training into faculty and staff development programmes is important for ensuring that educators are aware of the unique challenges Nigerian students may face. It could also foster open communication between educators and students to address cultural misunderstandings or concerns. Culturally sensitive training for faculty would ensure that they understand and appreciate the diverse backgrounds of Nigerian students, leading to more inclusive and supportive classroom environments, where the information literacy challenges of Nigerian students are more clearly understood. It would also help to integrate teaching and learning material from diverse perspectives, acknowledging the multicultural background of Nigerian students.

Mentorship Programmes

University libraries or faculty could create a peer mentorship programme where experienced Nigerian students could guide newcomers in honing their information literacy skills. These mentors could assist new Nigerian students with navigating academic libraries, selecting appropriate search terms, evaluating sources, and mastering paraphrasing and referencing skills.

By implementing these practical strategies with a view of a 'Culturally Inclusive Information Literacy Frame', Scottish higher education institutions could empower Nigerian students to navigate more holistically the complexities of authority and critical thinking in their academic journeys.

7.2.2 Research as Inquiry

The frame 'Research as Inquiry' in the ACRL framework addresses students' ability to differentiate between different investigative methods, understanding when simple questions are needed to search for information, depending on the information need and situation presented, and when more refined research is necessary using advanced search methods, and exploring more diverse points of view. Learners who have developed these information literacy practices can formulate questions effectively, determine the scope of investigation, and use different search methods to interrogate a source, synthesise from different sources, and make conclusions (ACRL 2016).

However, in this study, among the most consistent academic challenges described by Nigerian students were different aspects related to their ability to clarify a particular academic task, define an appropriate scope for research, and organise and critically analyse available academic resources. Students experienced several challenges expressed as difficulties in fully understanding what to search for, understanding how to effectively articulate a research topic, recognising that different types of information searches require different unique strategies, using search terms, developing strategies for vetting sources for quality and relevance, and finding enough relevant information in a timely manner.

Based on the aforementioned information literacy challenges experienced by Nigerian students, this study proposes a number of practical strategies that could be followed for supporting students, following socio-culturally sensitive approaches to Nigerian students' information literacy development as 'inquiry'. These emphasise the need for information literacy strategies to help students navigate the complexities they encounter in relation to developing independent research skills, defining their information needs, searching effectively, and presenting their findings professionally.

Library Resources Workshops

University libraries could conduct workshops that teach Nigerian students how to maximise the use of digital libraries, interlibrary loans, and open-access resources to assist them in getting acquainted with diverse types of library resources that may be

new to them before coming to Scotland to study. Libraries could also provide hands-on training on effectively searching and accessing relevant materials.

Collaboration

Collaboration could take the form of getting academics to collaborate with librarians to organise workshops specifically designed for Nigerian students. These workshops could focus on effective information searching, using online databases to find scholarly articles, source evaluation, citation styles commonly used in Scottish higher education, and helping students to understand how to identify authoritative sources for their research projects.

Academics could also collaborate with other faculty members who have a deep understanding of the challenges faced by Nigerian students. This would encourage faculty to provide one-on-one mentorship, offering academic and information literacy support.

Online Communities and Resource Sharing

Virtual learning communities or forums could be established where Nigerian students could connect with their peers, share strategies for tackling information literacy challenges, and seek advice on academic resources and effective research methods. This could also incorporate online areas where students could upload and share resources, research tips, and tutorials specific to Nigerian students studying within a Scottish academic setting. This collaborative approach could enhance Nigerian students' information literacy journeys.

Cross-Cultural Academic Advisers

Universities should ensure that academic support services are culturally sensitive and responsive. Academic advisers, who are knowledgeable about the unique challenges faced by Nigerian students and can offer personalised guidance on academic and information literacy matters, could be appointed.

These nuanced approaches could be designed to empower Nigerian students studying in Scottish higher education institutions to overcome information literacy challenges while fostering a sense of belonging and cross-cultural integration. They would need to take into account the specific needs and experiences of these students, offering tailored solutions that would bridge the gap between students' Nigerian roots and their Scottish academic environment. Through these initiatives, Nigerian students could overcome the information literacy challenges they encounter while enriching their academic experiences in Scotland.

7.3 The Big6 Model

The Big6 model (Eisenberg & Berkowitz 1990) offers a structured approach consisting of six steps to assist individuals in addressing information-driven challenges. These steps encompass task definition, formulation of information retrieval strategies, identification and access to relevant resources, effective utilisation of gathered information, synthesis of findings, and critical evaluation. This section will focus on the first (task definition) and the fifth (synthesis of findings) stage of the Big6 model as it relates more to the specific information literacy challenges experienced by Nigerian students, as discussed during the interview process.

7.3.1 Task definition

Similarly to the ACRL frame of "Research as inquiry", "Task definition" in the Big6 model requires students to identify the exact information problem presented to them. They must also identify the types of information needed in order to solve the problem.

The students interviewed in this study, however, described their difficulty in relation to completely understanding the task itself when beginning the research process and also in relation to not knowing what to search for, which could be presented as a significant hindrance to progressing with their academic work and could lead to a lack of confidence. The following strategies therefore point to the development of information literacy interventions specifically designed to meet the distinct

information needs and cultural contexts of Nigerian students. Although some of the challenges of Nigerian students have already been discussed in relation to the ACRL framework, the Big 6 model adds a more specific focus on the task of defining the topic itself and therefore invites strategies that can concentrate specifically on information task clarity and preparedness. These are discussed below.

Encouraging Seeking Clarification

Students should be encouraged to take the initiative to seek clarification from their instructors, academic advisers, or fellow students if any aspect of the assignment remains unclear. Effective communication plays a pivotal role in ensuring that students possess a comprehensive understanding of their assignment requirements, and seeking clarification is a crucial practice for Nigerian students to guarantee a thorough comprehension of their academic tasks. Seeking clarification could take the form of encouraging Nigerian students to initiate discussions with their peers about the assignment's requirements when they are unclear, share their perspectives and questions, and collaboratively work toward resolving any areas of confusion. These may not always be obvious to Nigerian students, who may perceive that asking further questions may not be expected or welcome in the class. The same should involve seeking help from the library research support services. For example, as discussed earlier, students who are accustomed to the conventional "talk and chalk" teaching method may have different expectations of the academic instructor's role as the primary source of information, or they may consider that learning should incorporate minimal interaction among students and a more passive learning approach overall. Students from countries that employ traditional rote learning techniques, such as Nigeria, frequently encounter challenges in meeting the standards of critical thinking and interactive learning as a result of the "talk and chalk" teaching methods (Chen et al 2018).

Therefore, it is important to offer resources and strategies to Nigerian students so that they can overcome cultural barriers to class participation. This could encompass the promotion of active listening skills, encouraging students to express their viewpoints, and creating opportunities for cross-cultural discussions. Active

involvement of students in the learning experience, particularly in activities like classroom discussions, can be impacted by the different socio-cultural backgrounds students come from (Okorocha, 1996; Ballard and Clanchy 1997). These challenges can further be exacerbated by language-related issues, highlighting the complex interaction between culture, language, and the learning process. It is therefore important to create inclusive and diverse learning environments, ensuring that all students feel comfortable and engaged in classroom discussions. This is especially relevant for students who may experience anxiety, shyness, or lack of confidence in a foreign cultural setting, as this may hinder their participation in class discussions.

Employing culturally sensitive teaching strategies to cultivate an inclusive classroom atmosphere fosters a sense of value and motivation among all students to participate actively in class discussions (Gay 2000). It also nurtures a sense of self-worth and belonging in students facing diverse learning challenges (Florian and Black-Hawkins 2011). When students feel included and respected, they are more inclined to engage actively in their educational journey, assume responsibility for their learning, and develop greater independence. This enriches the overall educational experience for all learners within the classroom settings.

Early signposting to resources

Nigerian students may require extra support on the basis of engaging in a comprehensive analysis of a given task or assignment. Early signposting to online internal and external resources, educational websites, forums, and academic writing guides can provide Nigerian students explanations and examples related to various academic tasks in order to alleviate any confusion regarding academic requirements. This may also involve workshops that particularly focus on the process of analysing an academic task, helping students to understand its objectives, scope, and the specific requirements that have been set.

7.3.2 Synthesis of Findings

Synthesis of findings refers to the process of students organising information from multiple sources in a coherent and comprehensive manner related to the academic

task at hand. Employing clear and concise language to communicate concepts effectively underscores the essential skill that students should possess in academic writing. The ability to convey ideas in an easily understandable manner is paramount, ensuring that their arguments and perspectives are accurately conveyed to the intended audience. However, the findings of this study revealed that Nigerian students experienced challenges in arranging their ideas thematically within the context of their academic work. This emphasised the need for introducing additional information literacy support that prioritised information presentation and thematic synthesis skills for the purposes of academic essay and report writing. Recommended strategies for supporting Nigerian students to address this area are described below.

7.3.3 Thematic Organisation and Structure Workshops

University academic support departments could offer extended and specialised information literacy workshops for Nigerian students, placing emphasis on the process of academic writing early in a study programme, including how to write academic papers, follow a coherent structure, incorporate background information, summarise key points, and formulate arguments. By promoting clear and structured writing, students' capacity to express their thoughts and conclusions persuasively and clearly could lead to a deeper understanding of research topics and overall improvements in reading comprehension and research abilities.

7.4 Conclusion

This chapter explored strategies and ideas that could support Nigerian students in their challenging transition between different educational systems. The socio-cultural perspective acknowledges that these transitions can be quite daunting, given the potential significant variations in teaching and learning styles between the Nigerian and Scottish academic environments. Consequently, higher education institutions in Scotland should offer specialised guidance and support tailored to the distinct requirements of Nigerian students. This encompasses clarifying the differences in educational systems and assisting students in acclimating to new teaching and

learning methods. The strategies proposed highlighted developing information literacy programmes specifically for Nigerian students, clearly linking information literacy skills to academic requirements, such as academic writing expectations, the structure of courses, the assessment methods, and the grading criteria, emphasising the importance of information literacy skills for accomplishing academic learning tasks.

However, the socio-cultural perspective, as this study demonstrated, extends beyond the confines of the classroom, encompassing various facets of students' lives, including securing accommodation, accessing familiar food, and engaging in cultural and religious activities. By integrating socio-cultural aspects into IL instruction, higher education institutions in Scotland can provide students with resources and tools to help them explore social opportunities, find suitable accommodation, engage in cultural events, and connect with places of worship. As discussed earlier, Scottish higher education institutions can utilise a variety of approaches to enrich the Nigerian students' educational experiences and promote their social integration beyond the classroom.

This study highlighted that information literacy is crucial for understanding the structure and interconnections of one's new environment and effectively accessing information and knowledge resources. The findings demonstrated that academic success requires the socio-cultural adaptation of students to their new surroundings, and information literacy is essential for understanding the organisation and connections within the new environment to be able to access information and knowledge resources.

This study therefore advocates that a socio-culturally appropriate information literacy approach encompasses the broader socio-cultural information requirements of students across their everyday life experiences rather than exclusively focusing on the academic environment.

CHAPTER 8 – CONTRIBUTIONS, RECOMMENDATIONS AND CONCLUSION

8.1 Introduction

The primary aim of the study was to investigate the impact of socio-cultural adaptation and information literacy skills challenges on the academic self-efficacy of Nigerian students in Scottish higher education institutions. The following section aims to revisit the study objectives and discuss how they were met.

8.2 Reflection on Objectives

Research Objective 1

The first objective was to investigate the information literacy challenges of Nigerian students in Scottish universities by means of exploring their capabilities for sourcing, evaluating, ethically sharing, and using information for their academic study and everyday life needs.

Nigerian students in this study discussed several challenges related to information literacy. These challenges encompassed various aspects, including difficulties in comprehending lectures, communication barriers with teachers and host students, critical thinking, adapting to a new academic environment, defining information that is needed, challenges with paraphrasing and referencing skills, an inability to search quickly for information, challenges with presenting ideas thematically, difficulties with developing into an independent active learner, a lack of research skills, and adjusting to different teaching and learning methods in the classroom. Participants in the interviews indicated that these challenges had an adverse effect on their academic performance. It was revealed that most of these information literacy challenges were related to a lack of experience in developing independent research skills. These difficulties were deeply rooted in their previous educational experiences in Nigeria, which predominantly employed a teacher-centred learning approach and

gave less prioritisation over the development of research skills. Consequently, the transition to a research-centred academic environment posed a significant hurdle for Nigerian students.

The previous educational experiences of Nigerian students mainly revolved around receiving handouts distributed during lectures and prioritising exam or coursework success rather than fostering a deeper understanding of research abilities. As a result, when Nigerian students arrived in their host countries, where research skills were emphasised, they encountered difficulties in adjusting to this new educational environment. Past research has shown that the absence of effective information literacy skills can impede students' academic performance (Ilogho and Nkiko 2014). Conversely, students equipped with high-quality information literacy skills tend to excel academically, become more self-reliant lifelong learners, acquire knowledge more efficiently, and nurture creative thinking (Mohd, Raja, Ahmad, and Zulkarnain 2011). International students face everyday life, socio-cultural, language, communication, and academic skills challenges, which mount pressure on their academic self-efficacy as they struggle to meet academic and everyday life demands (Apply board 2020).

Additionally, students expressed facing challenges related to everyday life information literacy. These challenges encompassed locating information within the university, their hostel, or their immediate living environment, finding details about accommodation, encountering difficulties in locating Nigerian food, and experiencing a lack of information regarding social opportunities and activities.

Several students mentioned that the challenge of finding suitable accommodation had a detrimental impact on their studies. They explained that the search for permanent accommodation instead consumed the time they should have spent on studying during the initial months. This disruption to their study schedule ultimately affected their academic performance.

In addition, some students pointed out that the inability to find Nigerian food or purchase it at an affordable price had negative consequences. It evoked memories

of home while being in a new country, leading to feelings of homesickness that, in turn, affected their motivation to study and, consequently, affected their academic performance. Interview participants also stated that their inability to socialise had a profound impact on their studies, resulting in feelings of loneliness and homesickness. These emotions, in turn, diminished their interest in academic pursuits, ultimately affecting their academic performance.

Therefore, Nigerian students require tailored everyday life and academic support programmes designed to address their specific needs, with a particular emphasis on cultural and educational appropriateness, in order to address and overcome these information literacy challenges.

Research Objective 2

The second objective of this study was to identify the different levels of academic self-efficacy challenges they experience that can hinder their academic progress or success.

Throughout the interview process, Nigerian students identified various difficulties they encountered regarding their academic self-efficacy. These challenges encompassed their hesitation to ask questions during lectures and a generally low level of personal academic self-efficacy. Some students described their academic self-efficacy using negative terms such as a lack of confidence, feelings of inadequacy, and a diminished sense of academic self-efficacy. A few students also admitted that they occasionally lacked confidence in their capacity to learn and comprehend, resulting in decreased motivation to study, which affected their academic performance.

In summary, self-confidence played a pivotal role in driving student motivation and influencing their learning outcomes. Students who struggled with low self-confidence with regard to their studies faced a range of challenges that hindered their academic success, underscoring the need for attention and support within educational settings. Previous research has also shown how low self-confidence can erect psychological barriers, leading to feelings of insecurity and fearfulness, which can detrimentally

impact a student's classroom performance and even divert their focus from the learning process.

Research Objective 3

The third objective was to examine the nature of socio-cultural adaptation and language and communication challenges they encounter both in their academic and everyday life environment.

The Nigerian students, who participated in the interviews, shared a range of challenges they encountered concerning socio-cultural adaptation and language and communication, both within their academic endeavours and daily lives. The socio-cultural challenges encompassed the need to adapt to the cost of living in Scotland, the high expenses associated with event tickets, adjusting to Scotland's climate, finding affordable Nigerian cuisine, seeking information about places of worship, managing the demands of a full academic calendar, and coping with tight academic schedules, all of which acted as barriers to their social engagement.

Moreover, Nigerian students encountered language and communication challenges, including the need to adapt to a variety of teaching and learning methods in the classroom. They also struggled with comprehending class materials and were often hesitant to participate in class discussions or group tasks. These challenges stemmed from various factors, including the accents of their peers or lecturers, cultural differences, a lack of self-confidence, the fear of providing incorrect answers, individual differences, and accent-related shyness, particularly during class discussions or group work.

These difficulties consistently emerged as primary barriers, further complicating their language and communication skills and their socio-cultural adjustment, impacting both their academic pursuits and daily lives.

Research Objective 4

The fourth research objective of this study was to explore whether there is a relationship between academic self-efficacy, information literacy skills challenges, and socio-cultural challenges experienced by Nigerian students.

The study's findings in the quantitative strand indicated that the majority of the study participants reported high levels of challenges across all the variables examined. Furthermore, the correlation analysis revealed significant associations between academic self-efficacy challenges and all the factors under investigation, which included academic information literacy challenges, everyday life information literacy challenges, academic socio-cultural challenges, everyday life social-cultural challenges, and language and communication challenges. Notably, these variables demonstrated varying degrees of association with academic self-efficacy, ranging from moderate to strong, with the exception of everyday life socio-cultural adaptation challenges, which exhibited a weaker correlation.

Moreover, the multiple regression analysis demonstrated that all the variables, excluding everyday life socio-cultural adaptation challenges, significantly predicted academic self-efficacy challenges. These findings provide insight into the experiences of Nigerian students and underscore the critical role played by academic information literacy challenges, everyday life information literacy challenges, academic socio-cultural challenges, everyday life socio-cultural challenges, and language and communication challenges in predicting academic self-efficacy challenges. The study also indicated that an increase in each of these variables was strongly associated with a notable increase in academic self-efficacy challenges.

In addition, in the interviews, participants mentioned their struggles in articulating the essential information needed for their academic studies, leading to confusion when trying to locate relevant academic resources, which resulted in decreased confidence and frustration about their academic abilities. This common challenge was apparent in how students described their initial research efforts, highlighting their lack of a comprehensive understanding of the task. They went on to describe this experience as hard, confusing, and challenging. The interviewed participants emphasised that while some search results may appear, they may not always align with their specific needs, necessitating ongoing searching and persistence as they struggled with even precisely defining what they needed to search for in relation to their academic tasks.

In addition, interviewees also disclosed a variety of difficulties they encountered regarding their socio-cultural adjustment, affecting both their academic pursuits and daily routines. These socio-cultural challenges included a lack of social opportunities, adjusting to the cost of living in Scotland, the high costs linked to event tickets, adapting to Scotland's climate, locating Nigerian food, gathering information about places of worship, and juggling the demands of a tight academic timetable, all of which acted as a barrier to their social engagement. These students additionally indicated that these challenges ultimately had an adverse effect on their academic achievements.

Research Objective 5

To propose support mechanisms by which educational institutions can assist Nigerian students to address information literacy, socio-cultural adaptation, everyday life challenges, and language and communication challenges.

This research proposed a set of both academic and socio-cultural recommendations as support mechanisms to mitigate the challenges faced by Nigerian students in higher education institutions in Scotland.

The recommendations for academic support regarding information literacy skills included integrating information literacy classes into the curriculum, fostering study groups, providing multilingual information literacy resources, conducting awareness campaigns, incorporating African scholarship, and establishing cultural bridge networks. Additionally, unique transcription services were suggested to alleviate challenges faced by Nigerian students due to accent difficulties. For instance, the recommended solutions for transcription services encompass multilingual transcription services, transcripts tailored for different accents, interactive transcripts, and a lecture captioning and translation service.

In terms of addressing socio-cultural challenges, the proposed measures included appointing Nigerian social ambassadors, distributing pre-departure handouts via emails before arrival in the host country, fostering language exchange partnerships, implementing flexible academic scheduling, creating social opportunities and

networks, and providing fast and longer duration of accommodation by the university collaborating with local landlords.

Considering the recommendations put forth by interview participants, it becomes paramount for higher education institutions in Scotland to offer support services for Nigerian students, as social support plays a pivotal role in bolstering students' confidence in successfully fulfilling their academic requirements (Akanni and Oduaran 2018).

8.3 Contributions to Knowledge

The investigation into socio-cultural adaptation and information literacy skills challenges and their impact on the academic self-efficacy of Nigerian students in higher education institutions in Scotland has made substantial contributions to existing knowledge in several key aspects:

1. Provided insights into the challenges faced by Nigerian students

The research has illuminated the specific challenges encountered by Nigerian students in Scottish higher education institutions, encompassing information literacy skill challenges, socio-cultural adaptation challenges, language and communication challenges, and everyday life challenges. Through the identification of these challenges, the study has deepened our understanding of the factors influencing the academic self-efficacy of Nigerian students.

2. Highlighted the importance of socio-cultural adaptation

The study underscored the pivotal role of academic socio-cultural adaptation in fostering academic success among Nigerian students in Scotland. By promoting cultural sensitivity and inclusive learning environments to encourage classroom discussions, incorporating courses that prioritise language and communication skills within information literacy (IL) education, balancing academic life and social life for Nigerian students, implementing strategies for enhancing the academic socio-cultural integration of Nigerian students, proposing time management and study skill courses, enhancing cross-cultural academic transition support, and creating robust

feedback support mechanisms, higher education institutions can cultivate an inclusive and welcoming environment that supports the socio-cultural adaptation of Nigerian students.

3. Emphasised the significance of information literacy skills

This research placed a strong emphasis on the significance of information literacy skills for academic achievement, particularly among Nigerian students. By offering academic support services and implementing information literacy skills training such as an active learning/mandatory information literacy class, academic buddy programmes, workshops on study skills and time management, language and communication clubs, multilingual information literacy resources, and cultural bridge network programmes, higher education institutions in Scotland can enhance the information literacy capabilities of Nigerian students, thereby aiding their academic success.

4. Offered supportive mechanisms for improving the academic and socio-cultural challenges of Nigerian students
5. The study developed an increased understanding of the socio-cultural differences of Nigerian students that impact the way in which they develop information literacy skills with reference to the ACRL and the BIG 6 information literacy models.

In conclusion, this research has expanded our understanding of the challenges encountered by Nigerian students in Scottish higher education institutions and has provided practical, evidence-based recommendations for addressing these challenges. The findings from this study can serve as a foundation for shaping policies and implementing interventions aimed at fostering the information literacy skills and socio-cultural adaptation of Nigerian students in Scotland, as well as other international students facing similar circumstances.

Implications for Theory, Research, and Practice

The outcomes of this work have several implications for theory, research, and practice.

Theoretical Implications

This study made significant contributions to the existing body of literature pertaining to academic self-efficacy and the challenges faced by Nigerian students in higher education. Furthermore, it enriched the concept of academic self-efficacy from a socio-cultural perspective, where Nigerian students' beliefs about their self-efficacy based on their existing education and socio-cultural backgrounds profoundly impact their motivation, behaviours, and, ultimately, their academic performance. The findings of this study specifically indicate that language and communication skills, socio-cultural adaptation, and information literacy skills stand out as crucial factors that can shape the academic self-efficacy beliefs of Nigerian students. Thus, this study lends support to the relevance of self-efficacy theory within the context of international student success.

Furthermore, this study offered valuable additions to the current literature, particularly within the context of the ACRL framework and the Big6 model. It introduced a socio-cultural perspective to information literacy referred to as the 'Inclusive Education and Transition Support Framework', and from the basis of this, it offered key practical directions for the integration of socio-culturally appropriate and inclusive teaching and learning strategies as well as academic support. This contribution enhances the comprehensiveness and applicability of these frameworks in the context of Nigerian students learning within higher education institutions in Scotland. However, the study also underscores the need for more research in this area, particularly among other international student populations in different contexts. Future research could investigate the relationships between academic self-efficacy, language and communication skills, socio-cultural adaptation, and information literacy skills among different international student populations and explore the potential moderating effects of other variables.

Practical Implications

The research offers practical implications for higher education institutions in terms of aiding Nigerian students in their academic pursuits and socio-cultural adaptation. The findings indicate that fostering inclusive and culturally responsive resources and support, such as information literacy classes and academic assistance services, and creating a diverse and cross-cultural environment, can significantly enhance the academic self-efficacy of Nigerian students studying in higher education institutions in Scotland.

In summary, this study, which examined the socio-cultural adaptation and information literacy skills challenges impacting the academic self-efficacy of Nigerian students in higher education institutions in Scotland, holds significant implications for theory, research, and practical application. It offers valuable insights into the factors that can influence the information literacy skills and socio-cultural adaptation of Nigerian students, highlighting the vital importance of providing culturally responsive support and resources within higher education institutions in Scotland.

8.4 Recommendations to Universities

This chapter revisits the suggestions offered by the students in this study for improving socio-cultural and academic support, via the earlier survey and interview data analysis, by means of providing an overall synthesis of final recommendations with additional ideas and suggestions. These derive from an initial review of examples from existing practices and programmes that are already in place in Scottish universities. However, it is important to note that a systematic exploration and analysis of current practice and programmes that address Nigerian students' socio-cultural integration was beyond the scope of this study. In the following discussion, some indicative examples of current support are provided on the basis of an initial exploration of current services that were openly available on different university websites, for the purpose of aiding this discussion. Furthermore, it may be the case that some of the suggested recommendations may already be in place but not being visible on the universities' websites. This may indicate that more awareness should be created around currently offered support services, as it was also demonstrated by

the lack of awareness of the participants in this study. If students lack awareness of the existence of support programmes at their universities, this can result in underutilisation of support services, which has also been shown in previous research (Ang and Liamputtong 2008, McKinlay et al 1996, Sawir et al 2009a, 2009b). Therefore, higher education institutions should create increased awareness of the availability of support mechanisms and their importance to students.

Furthermore, an analytical and systematic examination of current support mechanisms would further validate the results of this study and identify further steps to address Nigerian students' academic and everyday socio-cultural challenges.

Language and Communication Clubs

Higher education institutions can establish a weekly language and communication club to support Nigerian students in honing their language skills within academic contexts. This can boost their self-confidence and fluency by means of organising dialogues, debates, and presentations. Furthermore, university administrators and instructors can offer additional avenues for Nigerian students to enhance their English language proficiency across speaking, listening, reading, and writing domains. This might involve improving pronunciation and academic discussion skills, which encourage critical thinking, conducting writing seminars, academic writing on grammatical accuracy, promoting informal conversation partnerships, and integrating more English-speaking and writing assignments into the course curriculum. Examples of existing good practices that are already in place could be more systematically explored. For instance, the University of Edinburgh (2024) offers support mechanisms for both home and international students on speaking, listening, reading, writing, and communication skills.

Academic Buddy Programmes

Establishing an active buddy programme can take the form of pairing incoming Nigerian students with Scottish students, current Nigerian students, or Nigerian alumni. These academic buddies can provide valuable guidance on academic

expectations, leverage campus resources, and assist in community integration, thereby ultimately enhancing the student's capacity to navigate academic challenges effectively. Additionally, this approach allows educational institutions to organise gatherings that foster connections among students and provide a platform for sharing academic experiences. Different universities nationally and internationally already follow that approach. Based on an initial exploration of current services that were openly available on different university websites, no Scottish university was found to have this support mechanism in place. However, the University of York (2024) and the University of Koblenz (2024) offer academic buddy programmes as a supportive mechanism for new international students. Also, the University of Utrecht (2024) in the Netherlands provides an academic buddy programme for international students, pairing them with local counterparts. Academic buddies assist students to familiarise themselves with local academic traditions and practices while also collaborating to enhance language proficiency and intercultural competencies through peer support, communication, and feedback.

Cultural Bridge Network

Higher education institutions in Scotland can enhance the transition process and help Nigerian students overcome academic challenges by inviting guest speakers who are well-versed in both the Nigerian and Scottish educational systems. These speakers can conduct interactive sessions and make suggestions on what to know and expect in the new academic environment, enabling Nigerian students to engage in discussions about cultural differences and their influence on the learning experience. In addition, these can be informative for lecturers to become familiar with cultural differences in teaching and learning, particularly in the context of students from Nigeria whose educational background may be different from those in Western nations. Enhanced understanding of how learning varies across cultures will equip lecturers to cater better to the needs of Nigerian students. This, in turn, will facilitate student's academic adjustment and contribute to improved academic performance. After initially exploring the current services openly available on various university websites in Scotland, it was discovered that no Scottish university had implemented

this support mechanism. However, other universities beyond Scotland offer a programme similar to this. For example, at the University of Southampton (2024), lecturers provide English language and cultural learning for international students.

Designate Nigerian Students as Social Ambassadors

Higher education institutions in Scotland can recruit current Nigerian students with substantial experience living in Scotland who are enthusiastic about assisting new Nigerian students. These ambassadors should be trained to offer valuable guidance across a range of areas, such as events, places of worship, finding Nigerian cuisine, socialising opportunities, and adapting to the new cultural environment. As soon as newcomers arrive on campus, they can easily join this programme if they are interested. There are some universities in England that have already implemented this practice and useful examples could be drawn. For instance, the University of Portsmouth offers a platform for empowering present international students to serve as ambassadors, actively contributing to the enhancement of the student experience. Drawing upon their firsthand experiences of studying in the UK, these ambassadors foster inclusivity within the global student community and contribute significantly to delivering an unparalleled international student experience (University of Portsmouth 2023). Leeds Beckett University (2024) operates a global ambassador programme in collaboration with the International Recruitment and Partnerships team. This programme involves various activities such as facilitating Meet & Greet services for new students at UK airports, organising Welcome Week activities for both September and January arrivals, and assisting in running events like the Global Village for international students. These events encompass trips and socials throughout the academic year.

While it was observed that no Scottish university currently has Nigerian student ambassadors, a few Scottish universities do provide meet-and-greet services for new students at airports in Scotland.

Pre-Departure Support Services and Resources

It is important that universities provide pre-arrival handouts or booklets encompassing topics such as Scottish cultural values and customs, expectations within Scottish higher education institutions, living and studying in Scotland, immigration regulations, and tailored information to support their transition to everyday life in Scotland. For example, Robert Gordon University (2024) provides communication and support resources for its international students before they arrive in the host country. However, not every university in Scotland provides such support services, and even among those that do, students may not always be aware or well-informed about these resources. Therefore, distributing pre-arrival material to students via email will be a helpful approach to reaching out to students in a timely manner.

Facilitating Accommodation for New Nigerian Students

Universities can simplify the housing process for Nigerian students enrolling in higher education institutions in Scotland by establishing agreements with landlords in collaboration with a respected UK guarantor service like Housing Hand (Housing Hand 2022). This collaborative initiative seeks to reduce the necessity for a guarantor, thus simplifying the housing process. The objective is to reduce stress for Nigerian students and expedite their transition into university life. Some Scottish universities, such as the University of Edinburgh (2023) and the University of Dundee (2023), already offer this scheme. However, as this study demonstrated, students were unaware of them, highlighting the need to further emphasise the importance of creating awareness of these services for students.

Nigerian Students' Social Club

Interview students in this study were members of the Nigerian Students' Association, yet they indicated that the association rarely held physical meetings or gatherings for social activities. Consequently, promoting the establishment of Nigerian cultural or social groups on campus specifically for Nigerian students, organising regular physical events, cultural events, and excursions could be offered to enhance

acclimatisation and the understanding of the new socio-cultural environment. Although there are examples of similar services already available, such as the University of Dundee Nigerian Student Association (2023) and the University of Edinburgh Nigerian Student Society (2021) organising events such as games nights, field trips, and workshops on their websites, it is still crucial to increase awareness among Nigerian students on campus, as some students may not be aware of these programs. Additionally, it will be important for other Scottish universities to embrace similar initiatives. By incorporating these types of social events, connections among Nigerian students could be better facilitated, contributing to their overall adaptation process.

Language Exchange Partnerships

Higher education institutions in Scotland can facilitate connections between local Scottish students and Nigerian students for a language exchange programme. In this programme, Nigerian students can share aspects of their culture and teach their native languages, while Scottish students can reciprocate. Such initiatives that foster cross-cultural dialogue, acclimatisation, and friendships are already available by some Scottish universities, including the University of Stirling (2024) and the University of Edinburgh (2023), that offer language exchange programs for both domestic and international students. However, there is a need for implementation of these services in other Scottish universities too.

Collaborative Art and Music Events

The university can organise annual collaborative artistic and musical performances that celebrate the creative expressions of both Scottish and Nigerian cultures. To foster cultural interaction and social bonds, universities can extend invitations to Nigerian students for active participation in attendance at these events. This initiative aims to alleviate homesickness and cultivate a sense of home for Nigerian students in a new country. One university that already offers a good example of this approach is The University of Glasgow (2024), organising events centered on food, music, art, and film festivals. It is, however, advisable to raise awareness among students about

these events, and other Scottish universities should also aim to adopt similar support programmes.

Flexible Academic Scheduling

The university can implement a flexible academic schedule that provides students with one or two weekdays or evening breaks, allowing them to engage in social activities. Institutions can also ensure that academic timetables take into account cultural and religious obligations through effective coordination with the faculty. It was discovered that no Scottish university had implemented this support mechanism. Nevertheless, the University of Lynn (2022) in the United States allows students to customise their learning experience with block scheduling. This system enables them to structure their semester according to personal requirements and immerse themselves in one or two subjects at a time. Moreover, students enjoy the flexibility of finishing the semester early, starting later, taking breaks in between, or participating in all four sessions.

These suggestions centre on offering specifically customised social assistance to Nigerian students during their early phases of acclimatisation, taking into account their unique need for housing, places of worship, and social possibilities. Institutions may make it easier for Nigerian students to adjust to a new academic and cultural environment by implementing these initiatives.

Feedback Mechanisms

Higher education institutions in Scotland can explore the following approaches to develop feedback systems tailored to provide socio-cultural support to Nigerian students.

- Nigerian Student Liaison Officer

This could involve designating dedicated Student Liaison Officers with a deep understanding of Nigerian culture and a keen awareness of the needs of Nigerian students. These officers should act as the primary contact for Nigerian students.

- Regular Check-Ins

This could involve Nigerian students in regular one-on-one or group feedback sessions to get their insights on the socio-cultural support they have received. These sessions can be conducted in a welcoming and culturally sensitive environment.

- Feedback surveys

Customised surveys could be regularly administered to Nigerian students, with a focus on capturing their experiences and socio-cultural support need, with the survey results annually analysed to identify trends and potential areas for improvement. For example, numerous universities in Scotland have implemented a general feedback survey program, which is not specifically tailored for Nigerian students but rather intended for all students. For instance, the University of Aberdeen (2024) and the University of Strathclyde (2024) have feedback surveys aimed at their entire student population. It is crucial to provide Nigerian students with tailored feedback surveys because their experiences and sociocultural differences vary. Consequently, treating them as a homogeneous group would be unrealistic.

By creating a feedback mechanism that considers the socio-cultural experiences of Nigerian students, the institution can enhance the sense of belonging among Nigerian students and cultivate a more inclusive and supportive academic environment, thereby eradicating these challenges experienced by Nigerian students.

This study offered a detailed and optimal approach for supporting new Nigerian students in their transitions to Scottish education. However, it is understandable that not all of these recommendations may be feasible or attainable due to the financial and resource limitations of individual universities. Where appropriate, some of these recommendations could be implemented. Additionally, it is important to note that Nigerian students constitute a significant proportion of international students recruited in Scotland, suggesting that some key recommendations could be implemented further. In addition, these recommendations could be applied to a

certain degree to other groups of highly recruited international student cohorts, potentially opening new avenues for research into their relevance and implementation with these groups.

8.5 Conclusion

The study's research findings revealed that Nigerian students enrolled in higher education institutions in Scotland face a variety of information literacy skill challenges. These encompass issues related to critical thinking skills, adapting to diverse teaching and learning approaches in the classroom, struggles with comprehending lectures, encountering communication barriers with both instructors and fellow students, defining their information needs, facing challenges with paraphrasing and referencing, inability to conduct rapid information searches, challenges with presenting ideas coherently, and difficulties in developing into an active independent learner. Importantly, these challenges have a significant impact on the academic performance of Nigerian students, ultimately influencing their academic self-efficacy.

In addition, the study's findings unveiled distinct levels of academic self-efficacy challenges faced by Nigerian students, significantly impacting their academic progress and success. These challenges encompassed the inability to engage in active participation during lectures, an overall sense of low personal academic self-efficacy intertwined with diminished confidence, feelings of demotivation, and, in certain instances, a lack of clarity stemming from uncertainty about academic requirements.

In addition, certain students admitted to occasionally lacking confidence regarding their learning abilities. This decrease in self-confidence led to a reduction in their motivation for academic endeavours, consequently impacting their overall academic performance.

In addition, the study revealed that socio-cultural challenges faced by Nigerian students included high cost of living, expensive event tickets, difficulties in adapting to the Scottish climate, challenges in finding affordable Nigerian food, lack of

knowledge regarding information about social and religious opportunities, and challenges with securing accommodation, all of which exerted substantial influences on the academic performance of these students. It was also noted that the inability to engage in social activities had a profound impact on their studies, resulting in feelings of loneliness and homesickness, ultimately diminishing their interest in academic pursuits and adversely affecting their academic performance.

Lastly, the findings from this study demonstrated that Nigerian students encountered language and communication challenges, including the need to adapt to a variety of teaching and learning methods in the classroom. They also struggled with comprehending class materials and were often hesitant to participate in class discussions or group tasks. These challenges stemmed from various factors, including the accents of their peers or lecturers, cultural differences, a lack of self-confidence, the fear of providing incorrect answers, individual differences, and accent-related shyness, particularly during class discussions or group work.

The study also proposed supportive mechanisms in the form of recommendations by which policymakers, administrators, and higher education institutions in Scotland can help eradicate these challenges encountered by Nigerian students.

This research study highlights various challenges faced by Nigerian students studying in higher education institutions in Scotland. These challenges encompass information literacy skill challenges, such as critical thinking, comprehension, and independent learning difficulties, which significantly affect their academic self-efficacy. Additionally, socio-cultural challenges, such as high cost of living, climate adaptation issues, and difficulties accessing familiar food and social opportunities, impact academic performance due to feelings of loneliness and homesickness. Furthermore, language and communication barriers, stemming from accents, cultural differences, and lack of confidence, hinder comprehension and participation in class discussions and group work. In addition, the study recommends supportive mechanisms by which policymakers and institutions can address these challenges to improve the academic experience of Nigerian students studying in Scotland.

Finally, the discourse on information poverty emphasises the critical importance of equitable access to information resources and the role of information professionals in promoting fairness and inclusivity within society. It underscores the need to address disparities in information access to foster societal equity and inclusivity. The concept of informational justice highlights the foundational principle of equitable access to information as essential for individuals' rights as seekers, sources, and subjects of information. These perspectives enrich our understanding of the multifaceted nature of information poverty and underscore the urgency of tailored interventions to ensure all individuals, including Nigerian students in Scottish higher education institutions, have the resources they need to succeed academically and contribute meaningfully to society.

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APPENDICES

APPENDIX 1

SOCIO-CULTURAL AND ACADEMIC INFLUENCES SURVEY (copy)

Page 1: INTRODUCTION TO THE PROJECT

Exploring the impact of socio-cultural adaptation and information literacy skills challenges on the academic self-efficacy of HE Nigerian Students - Survey

Introduction to the project

Academic self-efficacy refers to a student's belief that they can achieve a designated level of success in their academic tasks or attain their specific academic goals. It is concerned with a student's belief that they can accomplish a given task.

Dear Participant,

The research aim of this study is to investigate the socio-cultural adaptation and the information literacy skills challenges Nigerian students in Scottish universities experience and how these may impact their academic self-efficacy.

Socio-cultural adaptation is concerned with the behavioural skills that enable an individual to fit into a foreign society or communicate with others in their new socio-cultural environment. Socio-cultural adaptation may be influenced by language proficiency, environmental adjustment, demographic characteristics, and communication challenges.

Information literacy consists of capabilities that enable an individual to recognize which information is required, comprehend how the information is structured, recognize the most appropriate sources of information for a particular problem, search within these sources, assess the information retrieved, and share information ethically.

The following questionnaire will take about 20-25 minutes to complete. There is no cost to be imposed on the research participant or any potential harm.

For confidentiality to be maintained, this will be an anonymous survey. If you decide to participate in this project, please return the completed questionnaire on time. Participation in this project is strictly voluntary and you can choose to opt-out at any time.

What are the benefits of taking part in this research project?

1 / 24

The findings of this study will propose effective mechanisms to support the process of how students search, retrieve, and use information and to overcome socio-cultural and academic challenges in their academic and everyday life. Additionally, the results will assist educational institutions in Scotland to better understand the challenges faced by Nigerian students and propose recommendations for developing supportive mechanisms and appropriate policies.

By completing and returning the questionnaire, you have consented to participate in this study.

Thank you for participating in this study

PROJECT DESCRIPTION

What is this research about?

This study investigates the socio-cultural adaptation and information literacy skills challenges of Nigerian students in Scottish universities and how these may impact their academic self-efficacy. This survey has been developed using the following documents:

Developing the information literacy self-efficacy scale.

[Students' information literacy self-efficacy: An exploratory study \(sagepub.com\)](#)

Academic-self efficacy scale

[UNIVERSITY OF CALICUT \(researchgate.net\)](#)

The measurement of socio-cultural adaptation

[The measurement of socio-cultural adaptation | Semantic Scholar](#)

Resident university students' everyday-life information seeking behaviour in Pakistan

[IRELISPaper \(2\).pdf](#)

How will your information be used?

Data will be collected anonymously and only for the purposes of this study. The data from this study will be kept confidential. All transcripts, data, and hard files will be kept in a safe place. Electronic data responses from participants will be kept in an encrypted storage device and destroyed at the end of the project.

Can I withdraw from the study at any time?

There is no risk or harm associated with participation in this survey. You are allowed to withdraw at any

☐ Female

☐ Male

time during the survey. However, once the questionnaire has been submitted your responses will be added to the anonymous pool of data.

The following section takes you to the consent page

Page 2: CONSENT FORM

By ticking the consent box below, I am confirming that I have understood the information provided in the introduction of this project, and I consent to participate in this research study. I confirm I am at least 18 years old and I am aware that the participation is voluntary. I approve that the collection of my responses will be anonymous through this survey and the responses provided will be stored in an encrypted device. I am aware that my responses will only be used for the sole purpose of this study and that data will be destroyed at the end of this project

Page 3: DEMOGRAPHIC DIFFERENCES

What is your sex? * *Required*

What generation do you belong to? * *Required*

What generation do you belong to?

What is your mode of study? * *Required*

What is your mode of study?

Generation Z (born 1997-2012)

Millennial Generation (born 1981-1996)

Generation X (born 1965 -1980)

Baby Boomer (born 1946 -1964)

- ☐ Generation Z (born 1997-2012)
- ☐ Millennial Generation (born 1981-1996)
- ☐ Baby boomer (1946 to 1964)

- ☐
- ☐
- ☐
- ☐

- ☐ Online
- ☐ Campus

- ☐ On-campus
- ☐ Online

What is your marital status?

- ☐ Single
- ☐ Married/Domestic Partner
- ☐ Widowed
- ☐ Divorced/Separated

What is your current level of study?

- ☐ Undergraduate University Study (3 years or longer: e.g. BA, BEd, BSc)
- ☐ Postgraduate Studies (PG Certificate, PG Diploma, MA, MSc)
- ☐ Other

If you selected Other, please specify:

What is your year of study?

- ☐ 1st year
- ☐ 2nd year
- ☐ 3rd year
- ☐ 4th year
- ☐ 5th or more

What is your current course of study?

What is your geographical region in Nigeria? * *Required*

Page 4: ACADEMIC SELF-EFFICACY CHALLENGES

Below are statements concerning your Academic Self-efficacy challenges while studying in Scotland. Please tick the statement in the column, which best describes the extent of challenges you experience: 1 = Not at all challenging; 2 = Slightly challenging; 3 = Moderately challenging; 4 = Very challenging; 5 = Extremely challenging. Please read each statement carefully.

Please don't select more than 1 answer(s) per row.

Please select at least 15 answer(s).

	1.Not at all challenging;	2.Slightly challenging;	3.Moderately challenging;	4.Very challenging;	5.Extremely challenging
I ask questions during lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I respond to questions during lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I plan my time for examinations /course work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I explain subject matters to my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I meet the deadlines for my assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I express my opinion when I do not understand the lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I make sense of feedback on my examinations/coursework	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I am competent in learning, irrespective of the subject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can find out solutions when I am confronted with problems in my study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can recollect what I have learnt during examinations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I comprehend the actual meaning of what I study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I deal efficiently with unexpected problems in my study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I complete the homework myself without any help from guidebooks, previous notes, etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When a test is required without prior notice, I can answer all questions accurately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I spend a sufficient amount of time on my study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any other challenges you encounter with regards to your academic self efficacy?

* *Required*

Are there any other challenges you face with regards to your academic studies? * *Required*

How did you address the academic challenges you just mentioned?

Page 5: ACADEMIC INFORMATION LITERACY CHALLENGES

Below are statements concerning your information literacy challenges while studying in Scotland. Please tick the statement in the column, which best describes the extent of challenges you experience with the following statements: (1 = Not at all challenging; 2= Slightly challenging; 3= Moderately challenging; 4 = Very challenging; 5 = Extremely challenging). Please read each statement carefully.

Please don't select more than 1 answer(s) per row.

Please select at least 17 answer(s).

	1.Not at all challenging;	2.Slightly challenging;	3.Moderately challenging;	4.Very challenging;	5.Extremely challenging
Defining the information I need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identifying a variety of potential sources of information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using different kinds of print sources (i.e. books, periodicals, encyclopaedias)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Locating resources in the library using the library catalogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using internet search tools (such as search engines, directories, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Using academic databases (such as Business Source Premier, Emerald, Science Direct, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using a variety of academic sources to conduct research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Initiating search strategies by using Boolean logic (i.e. using syndetic words, AND, OR, and NOT, to combine search terms)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refining search strategies by subject, language, and date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selecting information most appropriate to my information needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interpreting visual information (i.e. graphs, tables, diagrams)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Putting together ideas to organise your coursework thematically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Following report-writing/presentation conventions (e.g. formatting different parts, i.e. introduction, conclusion)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creating reference lists for different kinds of materials (i.e. books, articles, theses, papers, web pages)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making citations and using quotations within the text	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding academic integrity/honesty when accessing & using	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organizing the digital information, I find for my learning through folders, bookmarks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Page 6: EVERYDAY LIFE INFORMATION LITERACY CHALLENGES

Below are statements concerning your everyday life challenges while studying in Scotland. Please tick the statement in the column, which best describes the extent of challenges you experience with the following statements: (1 = Not at all challenging; 2 = Slightly challenging; 3 = Moderately challenging; 4 = Very challenging; 5 = Extremely challenging). Please read each statement carefully.

Please don't select more than 1 answer(s) per row.

Please select at least 9 answer(s).

	1. Not at all challenging;	2. Slightly challenging;	3. Moderately challenging;	4. Very challenging;	5. Extremely challenging
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Finding information around the university, hostel, or where you live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding information about accommodation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding information with regards to transportation to campus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding information for a part time job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding information about immigration, student visas, and student registration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding information about financial advice (e.g. finding information on how to apply for a short-term loan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding information about legal advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Finding health information (e.g. registering with a doctor)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding travel information (e.g. booking tickets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

We are organizing a number of interviews with Nigerian students who study in Scottish universities to further explore some of the findings of this study. If you would like to take part please add your name and an email contact address.

Page 7: ACADEMIC SOCIO-CULTURAL CHALLENGES

Below are statements concerning your academic socio-cultural challenges while studying in Scotland. Please tick the statement in the column, which best describes the extent of challenges you experience with the following statements: (1 = Not at all challenging; 2 = Slightly challenging; 3 = Moderately challenging; 4 = Very challenging; 5 = Extremely challenging).

Please read each statement carefully.

Please don't select more than 1 answer(s) per row.

Please select at least 8 answer(s).

	1.Not at all challenging;	2.Slightly challenging;	3.Moderately challenging;	4.Very challenging;	5. Extremely challenging
Adjusting to different teaching/learning methods in the classroom (e.g. tutorials, team-based activities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dealing with staff at the university (e.g. for administration purposes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assimilating and understanding information from academic resources presented to you in lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding what is required from you at the university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coping with academic work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning and managing your academic responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Page 8: EVERYDAY LIFE SOCIO-CULTURAL ADAPTATION CHALLENGES

Below are statements concerning your socio-cultural adaptation challenges while studying in Scotland. Please tick the statement in the column, which best describes the extent of challenges you experience with the following statements: (1 = Not at all challenging ; 2 = Slightly challenging; 3 = Moderately challenging; 4 = Very challenging; 5 = Extremely challenging). Please read each statement carefully.

Please don't select more than 1 answer(s) per row.

Please select at least 9 answer(s).

	1.Not at all challenging	2.Slightly challenging	3.Moderately challenging	4.Very challenging	5. Extremely challenging
Adjusting to the climate in Scotland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participating in socio- cultural activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding the different cultures (e.g. new values, beliefs, customs, and mannerism)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Living independently from your parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Living away from other family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding social norms (how to behave in public, style of clothes, understanding jokes and humour)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building relationships with lecturers and fellow students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Making friends
outside the campus
(social interaction,
what people do to
have fun and relax)

Feeling homesick

Are there any other challenges you face with regards to everyday life context?

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Developing into an independent/active learner

Developing critical thinking in your academic studies

Page 9: LANGUAGE AND COMMUNICATION CHALLENGES

Below are statements concerning your language and communication challenges while studying in Scotland. Please tick the statement in the column, which best describes the extent of challenges you experience with in the following statements: (1 = Not at all challenging; 2 = Slightly challenging; 3 = Moderately challenging; 4 = Very challenging; 5 = Extremely challenging). Please read each statement carefully.

Please don't select more than 1 answer(s) per row.

Please select at least 10 answer(s).

	1.Not at all challenging;	2.Slightly challenging;	3 Moderately challenging;	4.Very challenging;	5.Extremely challenging
Communicating with university lecturers and students during classes (e.g., lectures and tutorials)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding the accent of the Scottish people in everyday conversations/communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changing your tone and accent when speaking to a non-Nigerian person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clearly expressing/conveying your ideas in class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjusting to different communication expectations /style of language (e.g. when interacting with older people)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding different non verbal cues (e.g. mannerism, gestures)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talking about yourself and your culture with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicating your feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Asking for help when you need it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Page 10: SUPPORT MECHANISM

ACADEMIC SELF EFFICACY CHALLENGES

Does the support given by your university enhance your academic self-efficacy? e.g., skills building programmes * *Required*

- ☐ Yes
- ☐ No

Do you consider these skills building programmes effective to improve students' academic self-efficacy? * *Required*

- ☐ Yes
- ☐ No

ACADEMIC INFORMATION LITERACY CHALLENGES

Do you have an information literacy skills support programme available to you at your university? * *Required*

- ☐ Yes
- ☐ No

Are these programmes effective? * *Required*

- ☐ Yes
- ☐ No

EVERYDAY LIFE INFORMATION LITERACY CHALLENGES

Is there any support mechanism put together by your university to help students find information for their everyday life challenges? * *Required*

- ☐ Yes
- ☐ No

Do you find them helpful in overcoming your everyday information needs? * *Required*

- ☐ Yes
- ☐ No

ACADEMIC SOCIO-CULTURAL CHALLENGES

Do you encounter challenges with your academics as a result of socio-cultural differences? * *Required*

- ☐ Yes
- ☐ No

Do they impact on your academic in anyway? * *Required*

- ☐ Yes
- ☐ No

EVERYDAY LIFE SOCIO-CULTURAL ADAPTATION CHALLENGES

Does your university have social groups that can support your adaptation socio-culturally? *

Required

☐ Yes

☐ No

Are these socio groups effective in overcoming your socio-cultural challenges? * *Required*

<input type="radio"/> Yes
<input type="radio"/> No

LANGUAGE AND COMMUNICATION CHALLENGES

In light of the fact that new international students may have some difficulties in understanding the Scottish accent, is there any support provided by your university to help defy these challenges? *

Required

<input type="radio"/> Yes
<input type="radio"/> No

Are these programmes helpful in helping you to adapt to the language and communication challenges you experience? * *Required*

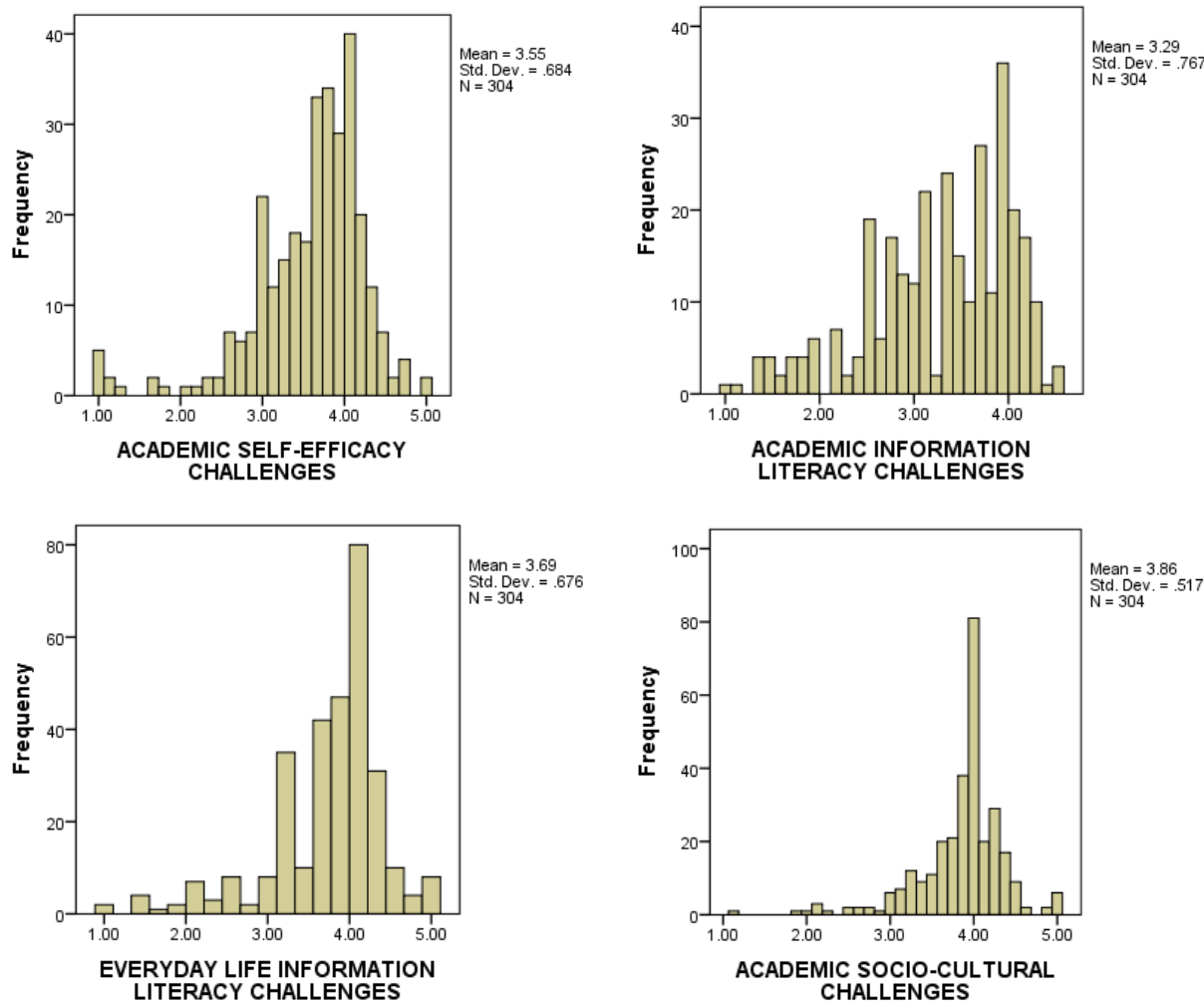
<input type="radio"/> Yes
<input type="radio"/> No

Page 11: Final page

THIS IS THE END OF THE ONLINE SURVEY. THANK YOU VERY MUCH FOR YOUR TIME AND PARTICIPATION.

Appendix 2

The histogram plot below (Figure 1) shows the frequency distribution of the various variables (Academic Self-Efficacy Challenges, Academic Information Literacy Challenges, Everyday Life Information Literacy Challenges, Academic Socio-cultural Challenges, Everyday Life Socio-cultural Adaptation Challenges, and Language and Communication Challenges), included in this study.



Appendix 3

Academic Self efficacy Challenges

Variables	Questions	Items	Frequency	Percentage
Academic Self-Efficacy Challenges (ASE)	Q1_ASE	I ask questions during lectures	18	5.9
	Q14_ASE	When a test is required without prior notice, I can answer all questions accurately	35	11.5

Academic Information Literacy Challenges

Variables	Questions	Items	Frequency	Percentage
Academic Information Literacy Challenges (AIL)	Q1_AIL	Defining the information, I need	9	3.0
	Q12_AIL	Putting together ideas to organise your course work thematically	33	10.9

Everyday life Information Literacy Challenges

Variables	Questions	Items	Frequency	Percentage
Academic Information Literacy Challenges (AIL)	Q1_AIL	Finding information around the university, hostel and where I live	22	7.2
	Q2_AIL	Finding information about accommodation	51	16.8

Academic Socio-Cultural Challenges

Variables	Questions	Items	Frequency	Percentage
Academic Socio-Cultural Challenges (ASC)	Q1_ASC	Adjusting to different teaching/ learning methods in the class room. (e.g tutorials, term -based activities.	21	6.9
	Q7_AIL	Developing into an independent active learner.	34	11.2
	Q8_AIL	developing critical thinking in academic studies”	77	25.3

Everyday life Socio-Cultural Adaptation Challenges

Variables	Questions	Items	Frequency	Percentage
Everyday life Socio-Cultural	Q1_ELSC	Adjusting to the climate in Scotland	56	18.4

Adaptation Challenges (ELSC)	Q7_ELSC	Participating in socio-cultural activities	61	20.1
	Q4_ELSC	Living independently from your parents	52	17.1

Language and Communication Challenges

Variables	Questions	Items	Frequency	Percentage
Language and Communication Challenges (LC)	Q1_LC	Communicating with university lecturer and students during classes	14	4.6
	Q2_LC	Understanding the accent of the Scottish people in everyday conversation and communication Clearly expressing/conveying your ideas in class	38	12.5
	Q4_LC		36	11.8

Appendix 4

Participant 1

Female

SEMI STRUCTURED INTERVIEW QUESTIONS

Demographic Differences

Definition: Demographic is the study of a population based on factors such as age, race, and sex.

Interviewer: Which generation do you belong to?

Participant: Millennial generation

Interviewer: How long have you been studying in Scotland?

Participant: I arrived in Scotland three months ago.

Interviewer: In what school or faculty are you studying?

Participant: Law

Interviewer: What is your mode of study?

Participant: Campus

Interviewer: Which geographical location are you from in Nigeria?

Participant: Rivers State

Interviewer: Where did you study before coming to Scotland?

Participant: Kano state, Nigeria

Interviewer: Did you have access to the internet whilst you were schooling in Nigeria?

Participant: Of course, I did...

Interviewer: Did you have any issues with the internet connection? If yes, please explain

Participant: No, I didn't have any issues with internet connectivity.

ACADEMIC SELF-EFFICACY

Definition: Academic self-efficacy refers to a student's belief that they can achieve a designated level of success in their academic tasks or attain specific academic goals. It is concerned with a student's belief that they can accomplish a given task.

Questions

Interviewer: Do you experience any issues with your academic self-efficacy?

Participant: *Yes, I do. You know some times; you don't even feel confident about your academic capabilities or how to attain your academic goals. So, I am really not confident some times. But that is why we keep learning.*

Interviewer: Has your academic self-efficacy impacted your information searching skills and academic performance?

Participant: *ummm... Yes, it has. You know as a student, if you don't have confidence or maybe you feel lost or feel you are not good enough, it can affect how you feel about your ability to search for information to complete an assignment or to even prepare for an examination.*

Interviewer: Have your information searching skills impacted your academic performance and academic self-efficacy?

Participant: *Yes. For example, searching for information can be really difficult. you can't even define what exactly you are looking for. Let's say you were asked to complete an assignment, if you don't understand the task, you don't even know what to search for. I must also state that my information searching skills aren't that great as I am trying to improve in that aspect.*

Interviewer: Can you share with me how you go about organising your coursework on a daily/weekly/monthly basis? What is the process you follow to make sure you are on track?

Participant: *oh....[laughs] Is there a thing such as that? I don't think I have ever organized my course work. I just pick up my reading materials when it's time to prepare for exams.*

Interviewer: Is there anything you do not feel confident about when it comes to fulfilling your academic requirements? In any ways?

Participant: *I do not feel confident about my ability to paraphrase accurately. Sometimes I also get the referencing wrong but I am getting better at it. I think it's really different from the way we referenced at my university way back in Nigeria.*

Interviewer: According to our recent survey, carried out on Nigerian students studying in Scotland, students reported difficulty in organizing their coursework and asking questions during lectures. What do you think the university could do to offer a solution to these problems?

Participant: *I think when it comes to asking questions in class, I really don't like to ask questions in class because you don't want to come across as someone who is not*

intellectually sound. That is how I see it. People might think you are asking dumb questions. That is why I don't like asking questions during classes.

Academic Self-efficacy challenges (Support mechanisms)

Interviewer: Can you share with me the strategies you've been employing to enhance your academic self-efficacy?

Participant1: I just try to be consistent in my studies and I also try not to wait till the last minute before preparing for my exams as this will give me confidence to address any issues before the examination date.

Interviewer: Some Nigerian students indicated in a recent survey that the university should develop new support mechanisms to boost academic self-efficacy among the students. Is this your opinion, and if so, what do you recommend?

Participant1: Well, If the school can support students in this aspect, that will be of great help. Having a session where students can be taught time management skills can help boost academic self-efficacy as this will enable them plan effectively for each of their courses.

ACADEMIC INFORMATION LITERACY CHALLENGES

Definition: Information literacy consist of capabilities that enable an individual to recognise which information is required, comprehend how the information is structured, recognize the most appropriate sources of information for a particular problem, search within these sources, assess the information retrieved, and share information ethically.

Questions

Interviewer: In your previous study, did you have access to online academic information sources?

Participant1: Yes, I did

Interviewer: Can you name some examples of academic databases you have used in the past?

Participant 1: I use google scholar a lot and Science direct

Interviewer: How do you feel about your academic information literacy skills?

Participant1: I don't feel too confident as there are many rooms for improvement. For example, I need to improve on how I present my arguments in a logical and concise manner. I also need to know how to paraphrase without losing the content I am trying to convey.

Interviewer: Have you experienced any challenges with regards to your information literacy skills?

Participant1: Evaluating different sources of information critically is one area I need to improve on.

Interviewer: Can you share with me some examples of key online sources of academic literature you regularly use and academic databases?

Participant1: Academic journal articles and books

Interviewer: How do you conduct your research/find information for your coursework?

Particiapnt1: I use Websites, journals, books, internet sources, social media `

Interviewer: Can you describe the most effective method you have adopted in your search for online information?

Participant1: Using specific keywords

Interviewer: Have your information literacy skills helped you to address any of these challenges in your academic work. If yes, how?

Participant1: Yes, because I can use my information literacy skills to plan an effective online search. Although I struggle with this sometimes.

Interviewer: In our recent survey carried out on Nigerian students studying in Scotland, students stated that they had difficulty identifying the information that they needed for their academic work and conducting research from various academic sources. Why do you think this is the case? Do you have any suggestions on how the university can support students in meeting these challenges?

Partiicpant1: I think the university can come up with an information literacy skills class for all students. These can be done on one- one basis and anonymous as well. My school have one in place but I don't really like going there because the time is always conflicting with my lectures.

Interviewer: Can you give me an example of any key incidence that happened during your studies that was challenging? How did you handle this issue? How do you think the university can help to eradicate these challenges?

Participant1: Hmmm, I have had several challenging times but one that I can remember happened a few weeks ago when we had a group presentation but I couldn't participate as I didn't even have the confidence to present my work. I don't know how possible it's for the university to give us free course on public speaking as this is a major concern for international students.

Academic Information Literacy challenges (support mechanisms)

Questions

Interviewer: What are the most effective academic information literacy support programmes available to you at your university?

Participant: We have essay writing classes

Interviewer: A recent survey of Nigerian students indicated that the information literacy support available to them is not effective. How can the university improve these services?

Participant: I think it's not effective because students deliberately shy away from such sessions as they do not want to be seen as someone who lack such skills. The best way the university can improve such services will be to include information literacy skills as part of the teaching curriculum.

EVERYDAY LIFE INFORMATION LITERACY CHALLENGES

Definition: Everyday life information literacy is the ability to address a range of information needs such as financial, health, legal etc that relate to everyday practices as well as making informed decisions that are of significant value to individuals and communities.

Questions

Interviewer: Do you experience any challenges regarding your everyday life information needs?

Participant: Yes

Interviewer: Can you please share with me the most common problems/obstacles that you encountered while seeking information that you needed for everyday life?

Participant: I find it difficult to communicate with some Scottish people because of the accent. Most times I rarely hear what they are saying, I just nod my head in order for the conversation to continue. This is usually the case with people who have strong Scottish accent. It's not every Scottish person that speaks this way.

Interviewer: Do you seek support from anywhere with regards to your everyday information needs? If yes, can you mention your sources of support and, if no, what measures did you use to overcome these challenges?

Participant: I hardly ask for support to get the needed information for my everyday needs as I do not even know where to turn to for assistance. I have just been managing and taking each day as it comes. Some other times, I ask my class mates for information.

Interviewer: During our recent survey carried out on Nigerian students studying in Scotland, students indicated it was very challenging participating in socio-cultural activities. What do you think is the reason behind this?

Participant: The main reason for this is that as a student, I do not have the information on where to go to for these activities. And even if I do, my course work makes it difficult to socialize. Maybe during the holidays, if I get information on such activities, I will definitely attend.

Interviewer: What activities can the University introduce to support students in overcoming this challenge?

Participant: The university can plan activities during the weekend or holidays for international students to socialize and integrate into the academic environment quickly.

Interviewer: Can you give me an example of any key incidence that happened during the course of searching for information for everyday life? How did you handle this issue? How do you think the university can help to eradicate these challenges?

Participant: There was this time I wanted to attend a concert at a nearby town during the holidays but I didn't know how to get travel guide information. I was lucky to later find someone who was attending the show. The university can have like a concierge service where you can get most of everyday life information from the reception area or any office in the school.

Everyday Life Information Literacy challenges (support mechanisms)

Questions

Interviewer: What are the support mechanisms available at your university for students to cope with everyday life information literacy challenges?

Participants: There are non-presently.

Interviewer: If any, can you explain how effective these programmes are in eradicating these challenges.

Participants: There are no such programmes available at my university.

ACADEMIC SOCIO-CULTURAL CHALLENGES

Definition: The academic socio-cultural adaptation is concerned with the behavioural skills that enable an individual to fit into a foreign society or communicate with others. For example, communicating with lecturers, classmates and other students in their new socio-cultural academic environment.

Questions

Interviewer: When you started your course programme at the university, did you experience any academic challenges? Were these related to any socio-cultural differences? How?

Participants: At the start of my course, I experienced some challenges with my studies and I am still experiencing them. For example, the level of writing required is too much than I anticipated. A lot of research and in-depth writing is required at this level of education. This is not something that I am used to but I am improving gradually.

Interviewer: Since then, have you been experiencing any additional academic socio-cultural challenges?

Participants: I find it difficult to paraphrase sometime depending on the context.

When thinking about your own culture, do you experience any challenges in your academic life on the basis of social or cultural differences? If yes what are these challenges?

Participant: No, I do not

Interviewer: Do you seek support from anywhere in relation to any socio-cultural challenges you may experience/have mentioned? Can you offer details about your main sources of support?

Participant: I really don't have any challenges in these areas.

Interviewer: In our recent survey carried out on Nigerian students studying in Scotland, students indicated it was very challenging to develop critical thinking in their academic studies. What do you think is the reason behind this?

Participant: This is actually true. Critical thinking is not something that is my strong point based on the way I was taught in school way back in Nigeria.

Interviewer: If you were asked to give ideas about possible support programmes to help students to overcome these challenges, what programmes would you include?

Participants: I would suggest that if students can be put in groups throughout the timeline of their course, and they are made to study together, share ideas, critique each other's work positively, contribute, it will go a long way in inculcating some desired skills amongst students because we will definitely learn from each other

Academic Socio-cultural challenges (support mechanisms)

Questions

Interviewer: What are the strategies put in place by your university as support mechanism to cope with academic socio-cultural challenges?

Participants: I am not aware of any support system put in place for such challenges.

Interviewer: Research conducted among Nigerian students revealed that the support available to students to deal with academic socio-cultural challenges was not helpful? What is your opinion? If yes, what strategies should the university implement to eliminate these obstacles?

Participant: The only suggestion I can give will be for lecturers to encourage active participation in class.

EVERYDAY LIFE SOCIO-CULTURAL ADAPTATION CHALLENGES

Definition: The concept of socio-cultural adaptation may be described as encompassing the various possible ways in which an individual respond to a new culture, which may be in the form of totally receiving the social values of the new environment or refusing them.

Questions

Interviewer: Do you experience everyday- life socio-cultural adaptation challenges in Scotland? If yes, what are they?

Participant: Yes, I do. For example, language and communication issue is a major concern for me as I struggle to adapt in this new environment.

Interviewer: Have you been active in attending community events? Could you please offer some examples? How did these help you to adapt to the Scottish culture?

Participant: Not at all. I hardly have the extra time to attend events.

Interviewer: Can you please explain the most common problems/obstacles that you encountered while trying to adjust to everyday life socio-cultural differences?

Participant: Finding places of interest to visit, socializing, making new friends, visa information to travel to other countries during holidays

Interviewer: What has been helpful to you in trying to solve these challenges?

Participant: Nothing has been helpful. I think as time goes on, I will find the balance to socialize more

Interviewer: Do you seek support from anywhere at any point in time?

Participant: I seek support from my classmates sometimes. That is if they can help with the information needed.

Interviewer: In our recent survey which was carried out on Nigerian students studying in Scotland, students indicated it was very challenging participating in socio-cultural activities. What do you think is the reason behind this?

Participant: I think it's because we do not have international groups or maybe Nigerian groups. The only one I know of is on Facebook but it seems not to be active. We need such groups on campus. It will enable Nigerian students come together and socialize more.

Interviewer: What support mechanisms do you think the university can provide to eradicate these challenges?

Participant: If Nigerian students or the university can organize social events for international students or Nigerian students, it will make the adaptation process much easier and faster.

Everyday life Socio-cultural challenges (support mechanisms)

Questions

Interviewer: Has your university put in place any support mechanisms to help students cope with the challenges of everyday life? Have they been effective? If not, what should be included to support students in managing these challenges?

Participants: I don't think my university has support available to Nigerian students or other students in general with regard to these challenges discussed.

Interviewer: From the responses derived from the recent questionnaire survey amongst Nigerian students on everyday life socio-cultural challenges, a few students indicated that the universities do not have social groups to support the adjustment of new international students. What are the reasons for this, and what can the university do to help?

Participants: The best way to solve these issues in my opinion will be for the university to create social groups for international students or to be more specific, Nigerian students. I honestly think there should be balance between learning and having fun.

LANGUAGE AND COMMUNICATION

Definition: Language ability and communication competence are very important aspects of socio-cultural adaptation which are necessary for successful social interaction. Studies in the area of acculturation have illustrated that communication ability in the host-country language positively correlate with adjustment.

Questions

Interviewer: How do you feel about your language and communication competencies? Can you share with me how your communication skills have helped you in relating with your teachers/course mates/friends and people in general?

Participant: The accent here is really difficult to understand. I think that is one of the major problems I face. I try to communicate with my teachers with a clear tone and pick my words slowly so they can hear me. Sometimes, I also send my teachers an email if there is something I need clarity on.

Interviewer: Do you ever encounter problems/barriers in communication with others in your academic studies? If yes in which areas?

Participant: No, I don't.

Interviewer: Does this have any impact on your academic performance or progression? What is that impact?

Participant: No, it doesn't.

Interviewer: Tell me how your level of communication helped you to adjust in Scotland?

Participant: I don't think I will ever adjust communication wise in this environment but I think each day I learn to live with the communication challenges.

Interviewer: In our survey recently carried out on Nigerian students studying in Scotland, we found out that students indicated it was very challenging for them to clearly express/convey their ideas in class. What do you think is the reason behind this?

Participant: I usually do not ask questions or contribute in class, as I am not sure if I am saying the right thing. This may apply to others as well

Interviewer: How best can the universities provide support to help Nigerian students overcome these challenges.

Participant: I feel if the lecturer encourages students to participate in class, it will be great. I remember one time; our lecturer asked us to act a scene based on the topic she was teaching. It really helped to see the relaxed side of everyone and we understood the topic more. Also, I think some people get a better understanding of what is being taught, if they see it in visual forms.

Language and Communication (Support mechanisms)

Questions

Interviewer: Can you share with me the support mechanisms put in place by your university to help students to eradicate language and communication issues?

Participant: These support mechanisms are not available at my university

Interviewer: The results of a recent survey conducted among Nigerian students revealed that they had language and communication challenges when they arrived in Scotland. In addition to the current support mechanisms, what else can the university do to help these students.

Participant: The university can create a non-formal group where students and teachers can interact, discuss, and talk about present happenings in the society. As I believe that the more international students are in contact with how the accent is being spoken, the better they will understand the accent.

Appendix 5

TRANSCRIPT CODING

Participant 1

Coding Transcript and Developing Themes and Sub-themes

THEME	TRANSCRIPT	CODE
Academic self-efficacy	<p>Questions</p> <p>Interviewer: Do you experience any issues with your academic self-efficacy?</p> <p>Participant: <i>Yes, I do. You know some times; you don't even feel confident about your academic capabilities or how to attain your academic goals. So, I am really not confident some times. But that is why we keep learning.</i></p> <p>Interviewer: Has your academic self-efficacy impacted your information searching skills and academic performance?</p> <p>Participant: <i>ummm... Yes, it has. You know as a student, if you don't have confidence or maybe you feel lost or feel you are not good enough, it can affect how you feel about your ability to search for</i></p>	<p>Lack of confidence</p> <p>Interest in personal development</p> <p>Lack confidence</p> <p>Not sure of one's ability</p> <p>Not competent</p> <p>Inability to find information</p>

information to complete an assignment or to even prepare for an examination.

Interviewer: Have your information searching skills impacted your academic performance and academic self-efficacy?

Difficulty in finding relevant information

Participant: Yes. For example, *searching for information can be really difficult. you can't even define what exactly you are looking for. Let's say you were asked to complete an assignment, if you don't understand the task, you don't even know what to search for. I must also state that my information searching skills aren't that great as I am trying to improve in that aspect.*

Confirmation of lack of information searching skills

Interviewer: Can you share with me how you go about organising your coursework on a daily/weekly/monthly basis? What is the process you follow to make sure you are on track?

Lack of awareness

Participant: oh....[laughs] *Is there a thing such as that? I don't think I have ever organized*

Lack of time management skills

my course work. I just pick up my reading materials when it's time to prepare for exams.

Interviewer Is there anything you do not feel confident about when it comes to fulfilling your academic requirements? In any ways?

Participant: I do not feel confident about my ability to paraphrase accurately.

Sometimes I also get the referencing wrong but I am getting better at it. I think it's really different from the way we referenced at my university way back in Nigeria.

Interviewer: According to our recent pilot study , carried out on Nigerian students studying in Scotland, students reported difficulty in organizing their coursework and asking questions during lectures. What do you think the university could do to offer a solution to these problems? Do you ever have problems

Participant: I think when it comes to asking questions in

Writing skills

No referencing skills

Improvement on referencing skills

Wrong perception about one's intellectual abilities

	<p>class, <i>I really don't like to ask questions in class because you don't want to come across as someone who is not intellectually sound.</i> That is how I see it. People might think you are asking dumb questions. That is why I don't like asking questions during classes.</p>	
<p><u>Academic self-efficacy (support mechanisms)</u></p>	<p>Questions</p> <p>Interviewer: Can you share with me the strategies you've been employing to enhance your academic self-efficacy?</p> <p><i>Participant1: I just try to be consistent in my studies and I also try not to wait till the last minute before preparing for my exams as this will give me confidence to address any issues before the examination date.</i></p> <p>Interviewer: Some Nigerian students indicated in our recent pilot study that the university should develop new support mechanisms to boost academic self-efficacy among the students. Is this your opinion, and if so, what do you recommend?</p> <p><i>Participant1: Well, If the school can support students in this aspect, that will be of great help. Having a session where students can be taught time management skills can help boost academic self-efficacy as this will enable</i></p>	<p>Consistency Exam readiness and preparation</p> <p>Improve confidence</p> <p>Support group</p> <p>Teach time management skills</p>

	<p>them plan effectively for each of their courses.</p>	<p>Improve academic confidence</p> <p>Develop organizational skills</p>
Academic information literacy	<p>Questions</p> <p>Interviewer: In your previous study, did you have access to online academic information sources?</p> <p><i>Participant1: Yes, I did</i></p> <p>Interviewer: Can you name some examples of academic databases you have used in the past?</p> <p><i>Participant 1: I use google scholar a lot and Science direct</i></p> <p>Interviewer: How do you feel about your academic information literacy skills?</p> <p><i>Participant1: I don't feel too confident as there are many rooms for improvement. For example, I need to improve on how I present my arguments in a logical and concise manner. I also need to know how to paraphrase without losing the content I am trying to convey.</i></p> <p>Interviewer: Have you experienced any challenges with regards to your information literacy skills?</p>	<p>Knowledge of academic database</p> <p>Lack of confidence</p> <p>Need for improvement</p> <p>Need to demonstrate critical thinking and the ability to paraphrase</p>

	<p>Participant1: <i>Evaluating different sources of information critically is one area I need to improve on.</i></p> <p>Interviewer: Can you share with me some examples of key online sources of academic literature you regularly use and academic databases?</p> <p>Participant1: <i>Academic journal articles and books</i></p> <p>Interviewer: How do you conduct your research/find information for your coursework?</p> <p>Participant1: <i>I use Websites, journals, books, internet sources, social media</i></p> <p>Interviewer: Can you describe the most effective method you have adopted in your search for online information?</p> <p>Participant1: <i>Using specific keywords</i></p> <p>Interviewer: Have your information literacy skills helped you to address any of these challenges in your academic work. If yes, how?</p>	<p>Needs improvement in evaluating different sources of information</p> <p>Regular use of academic online sources</p> <p>List of online information sources</p> <p>Effective search method</p> <p>Confirmation of information literacy skills</p> <p>Online search</p>
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	<p>Participant1: Yes, because I can use my information literacy skills to plan an effective online search. Although I struggle with this sometimes.</p> <p>Interviewer: In our recent survey carried out on Nigerian students studying in Scotland, students stated that they had difficulty identifying the information that they needed for their academic work and conducting research from various academic sources. Why do you think this is the case? Do you have any suggestions on how the university can support students in meeting these challenges?</p> <p>Participant1: I think the university can come up with an information literacy skills class for all students. These can be done on one- one basis and anonymous as well. My school have one in place but I don't really like going there because the time is always conflicting with my lectures.</p> <p>Interviewer: Can you give me an example of any key incidence that happened during your</p>	<p>Needs improvement on searching skills</p> <p>Suggestion on introducing an information literacy class Access to skills development opportunity</p> <p>Lack of interest</p> <p>Conflicting schedule</p>
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	<p>studies that was challenging? How did you handle this issue? How do you think the university can help to eradicate these challenges?</p> <p><i>Participant1: Hmmm, I have had several challenging times but one that I can remember happened a few weeks ago when we had a group presentation but I couldn't participate as I didn't even have the confidence to present my work. I don't know how possible it's for the university to give us free course on public speaking as this is a major concern for international students</i></p>	<p>Lack of participation</p> <p>Lack of confidence</p> <p>Recommendations on Public speaking classes</p> <p>Confirmation of academic writing programmes</p>
Academic information literacy challenges (support mechanisms)	<p>Questions</p> <p>Interviewer: What are the most effective academic information literacy support programmes available to you at your university?</p> <p><i>Participant: We have essay writing classes</i></p> <p>Interviewer: A recent survey of Nigerian students indicated that the information literacy support available to them is not effective. How can the university improve these services?</p> <p><i>Participant: I think it's not effective because students deliberately shy away from such sessions as they do not want to be seen as someone who lack such skills. The best way the university can improve such services will be to include information literacy skills as part of the teaching curriculum.</i></p>	<p>Recommendations on academic writing classes</p>

<p>Everyday life information literacy challenges</p>	<p>Questions</p> <p>Interviewer: Do you experience any challenges regarding your everyday life information needs?</p> <p><i>Participant:</i> Yes</p> <p><i>Interviewer:</i> Can you please share with me the most common problems/obstacles that you encountered while seeking information that you needed for everyday life?</p> <p><i>Participant:</i> I find it difficult to communicate with some Scottish people because of the accent. Most times I rarely hear what they are saying, I just nod my head in order for the conversation to continue. This is usually the case with people who have strong Scottish accent. It's not every Scottish person that speaks this way.</p> <p>Interviewer: Do you seek support from anywhere with regards to your everyday information needs? If yes, can you mention your sources of support and, if no, what</p>	<p>Confirmation of everyday life challenges</p> <p>Communication challenges</p> <p>Pretence in order to communicate</p> <p>Difficulty in understanding Scottish accent</p> <p>Rarely ask for assistance</p>
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	<p>measures did you use to overcome these challenges?</p> <p>Participant: <i>I hardly ask for support to get the needed information for my everyday needs as I do not even know where to turn to for assistance. I have just been managing and taking each day as it comes. Some other times, I ask my class mates for information.</i></p> <p>Interviewer: During our recent survey carried out on Nigerian students studying in Scotland, students indicated it was very challenging participating in socio-cultural activities. What do you think is the reason behind this?</p> <p>Participant: <i>The main reason for this is that as a student, I do not have the information on where to go to for these activities. And even if I do, my course work makes it difficult to socialize. Maybe during the holidays, if I get information on such activities, I will definitely attend.</i></p> <p>Interviewer: What activities can the University introduce to</p>	<p>Lack awareness to access information sources</p> <p>Trying to survive</p> <p>Support from course mates</p> <p>Lack of information</p> <p>Tight schedule</p> <p>Social event for international students</p>
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support students in overcoming this challenge?

Participant: The university can plan activities during the weekend or holidays for international students to socialize and integrate into the academic environment quickly.

Interviewer: Can you give me an example of any key incidence that happened during the course of searching for information for everyday life? How did you handle this issue? How do you think the university can help to eradicate these challenges?

Lack of information

Participant: There was this time I wanted to attend a concert at a nearby town during the holidays but I didn't know how to get travel guide information. I was lucky to later find someone who was attending the show. The university can have like a concierge service where you can get

Support services

	<p><i>most of everyday life information from the reception area or any office in the school.</i></p>	
<p>Everyday life information literacy challenges (support mechanisms)</p>	<p>Questions</p> <p>Interviewer: What are the support mechanisms available at your university for students to cope with everyday life information literacy challenges?</p> <p><i>Participants: There are non-presently.</i></p> <p>Interviewer: If any, can you explain how effective these programmes are in eradicating these challenges.</p> <p><i>Participants: There are no such programmes available at my university.</i></p>	<p>Lack of support</p>

Academic socio-cultural challenges	<p>Questions</p> <p>Interviewer: When you started your course programme at the university, did you experience any academic challenges? Were these related to any socio-cultural differences? How?</p> <p><i>Participants: At the start of my course, I experienced some challenges with my studies and I am still experiencing them. For example, the level of writing required is too much than I anticipated. A lot of research and in-depth writing is required at this level of education. This is not something that I am used to but I am improving gradually.</i></p> <p>Interviewer: Since then, have you been experiencing any additional academic socio-cultural challenges?</p> <p><i>Participants: I find it difficult to paraphrase sometime depending on the context.</i></p>	<p>Academic challenges</p> <p>Writing skills</p> <p>Lack of writing skills</p>

Interviewer: When thinking about your own culture, do you experience any challenges in your academic life on the basis of social or cultural differences? If yes what are these challenges?

Participant: No, I do not

Interviewer: Do you seek support from anywhere in relation to any socio-cultural challenges you may experience/have mentioned? Can you offer details about your main sources of support?

Participant: I really don't have any challenges in these areas.

Interviewer: In our recent survey carried out on Nigerian students studying in Scotland, students indicated it was very challenging to develop critical thinking in their academic studies. What do you think is the reason behind this?

Participant: This is actually true. Critical thinking is

	<p><i>not something that is my strong point based on the way I was taught in school way back in Nigeria.</i></p> <p>Interviewer: If you were asked to give ideas about possible support programmes to help students to overcome these challenges, what programmes would you include?</p> <p><i>Participants: I would suggest that if students can be put in groups throughout the time line of their course, and they are made to study together, share ideas, critique each other's work positively, it will go a long way in inculcating some desired skills amongst students because we will definitely learn from each other</i></p>	<p>New Educational System</p> <p>Peer learning</p>
Academic socio-cultural challenges (support mechanisms)	<p>Questions</p> <p>Interviewer: What are the strategies put in place by your university as support mechanism to cope with academic socio-cultural challenges?</p> <p><i>Participants: I am not aware of any support system put in place for such challenges.</i></p> <p>Interviewer: Research conducted among Nigerian students</p>	<p>Lack of awareness</p>

	<p>revealed that the support available to students to deal with academic socio-cultural challenges was not helpful? What is your opinion? If yes, what strategies should the university implement to eliminate these obstacles?</p> <p>Participant: <i>The only suggestion I can give will be for lecturers to encourage active participation in class.</i></p>	<p>Classroom engagement</p>
<p>Everyday life socio-cultural adaptation challenges</p>	<p>Questions</p> <p>Interviewer: Do you experience everyday- life socio cultural adaptation challenges in Scotland? If yes, what are they?</p> <p>Participant: <i>Yes, I do. For example, language and communication issue is a major concern for me as I struggle to adapt in this new environment.</i></p> <ul style="list-style-type: none"> • Interviewer: Have you been active in attending community events? Could you please offer some examples? How did these help you to adapt to the Scottish culture? 	<p>Everyday Challenges</p> <p>Tight schedule</p>

	<p><i>Participant: Not at all. I hardly have the extra time to attend events.</i></p> <p><i>Interviewer: Can you please explain the most common problems/obstacles that you encountered while trying to adjust to everyday life socio-cultural differences?</i></p> <p><i>Participant: Finding places of interest to visit, socializing, making new friends, visa information to travel to other countries during holidays</i></p> <p><i>Interviewer: What has been helpful to you in trying to solve these challenges?</i></p> <p><i>Participant: Nothing has been helpful. I think as time goes on; I will find the balance to socialize more</i></p> <p><i>Interviewer: Do you seek support from anywhere at any point in time?</i></p> <p><i>Participant: I seek support from my class mates sometimes. That</i></p>	<p>Access to information</p> <p>Socialization</p> <p>Lack of solution</p> <p>Ability to socialize</p> <p>Peer Support</p>
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	<p><i>is if they can help with the information needed.</i></p> <p>Interviewer: In our recent survey which was carried out on Nigerian students studying in Scotland, students indicated it was very challenging participating in socio cultural activities. What do you think is the reason behind this?</p> <p><i>Participant: I think it's because we do not have international groups or maybe Nigerian groups. The only one I know of is on Facebook but it seems not to be active.</i></p> <p><i>We need such groups on campus as this will enable Nigerian students come together and socialize more.</i></p> <p>Interviewer: What support mechanisms do you think the university can provide to eradicate these challenges?</p> <p><i>Participant: If Nigerian students or the university can organize social events for international students or Nigerian students, it will</i></p>	<p>Nigerian Association</p> <p>No online presence</p> <p>Socializing</p> <p>Ability to adapt</p>
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	<p><i>make the adaptation process much easier and faster.</i></p>	
<p>Everyday life socio-cultural adaptation challenges (support mechanisms)</p>	<p>Questions</p> <p>Interviewer: Has your university put in place any support mechanisms to help students cope with the challenges of everyday life? Have they been effective? If not, what should be included to support students in managing these challenges?</p> <p><i>Participants: I don't think my university has support available to Nigerian students or other students in general with regard to these challenges discussed.</i></p> <p>Interviewer: From the responses derived from the recent questionnaire survey amongst Nigerian students on everyday life socio-cultural challenges, a few students indicated that the universities do not have social groups to support the adjustment of new international students. What are the reasons for this, and what can the university do to help?</p> <p><i>Participants: The best way to solve these issues in my opinion will be for the university to create social groups for international students or to be more specific, Nigerian students. I also think that there should be</i></p>	<p>Confirmation of no support mechanisms</p> <p>Establish social groups for international student</p> <p>Learning and leisure</p>

	<p><i>a balance between learning and having fun.</i></p>	
<p>Language and communication challenges</p>	<p>Questions</p> <p>Interviewer: How do you feel about your language and communication competencies? Can you share with me how your communication skills have helped you in relating with your teachers/course mates/friends and people in general?</p> <p><i>Participant: The accent here is really difficult to understand. I think that is one of the major problems I face. I try to communicate with my teachers with a clear tone and pick my words slowly so they can hear me. Sometimes, I also send my teachers an email if there is something I need clarity on.</i></p> <p>Interviewer: Do you ever encounter problems/barriers in communication with others in</p>	<p>Language difficulties</p> <p>Communication strategies</p>

your academic studies? If yes in which areas?

Participant: No, I don't.

Interviewer: Does this have any impact on your academic performance or progression? What is that impact?

Participant: No, it doesn't.

Interviewer: Tell me how your level of communication helped you to adjust in Scotland?

Participant: I don't think I will ever adjust communication wise in this environment but I think each day I learn to live with the communication challenges.

Interviewer: In our survey recently carried out on Nigerian students studying in Scotland, we found out that students indicated it was very challenging for them to clearly express/convey their ideas in class.

Lack of communication skills

Lack of confidence

	<p>What do you think is the reason behind this?</p> <p><i>Participant: I usually do not ask questions or contribute in class, as I am not sure if I am saying the right thing. This may apply to others as well</i></p>	Academic support
	<p>Interviewer: How best can the universities provide support to help Nigerian students overcome these challenges.</p> <p><i>Participant: I feel if the lecturer encourages students to participate in class, it will be great. I remember one time; our lecturer asked us to act a scene based on the topic she was teaching. It really helped to see the relaxed side of everyone and we understood the topic more. Also, I think some people get a better understanding of what is being taught, if they see it in visual forms.</i></p>	<p>Learning format</p> <p>Visual learning</p>

Language and communication challenges (support mechanisms)	<p>Question</p> <p>Interviewer: Can you share with me the support mechanisms put in place by your university to help students to eradicate language and communication issues?</p> <p><i>Participant: These support mechanisms are not available at my university</i></p> <p><i>Interviewer: The results of a recent survey conducted among Nigerian students revealed that they had language and communication challenges when they arrived in Scotland. In addition to the current support mechanisms, what else can the university do to help these students.</i></p> <p><i>Participant: The university can create a non-formal group where students and teachers can interact, discuss, and talk about present happenings in the society. As I believe that the more international students are in contact with how the accent is being spoken, the better they will understand the accent.</i></p>	<p>Confirmation of no support mechanisms</p> <p>Recommendations for support mechanisms</p> <p>Reason for recommendations</p>

Themes and Sub-themes

1. Academic self-efficacy challenges

- No confidence
- Interest in learning hard skills
- Lack of competency
- Lack of organizational skills
- Not knowledgeable
- Lack of information searching skills
- Wrong perception

Academic self-efficacy challenges (support mechanisms)

- Consistency
- Proactiveness
- Becoming confident

2. Academic information literacy challenges

- Academic sources
- Lack of confidence
- Need to learn and develop skills
- Inability to evaluate
- Awareness of Information sources
- Searching skills
- Information literacy
- Needs to improve on online searching skills
- Learning opportunities
- Dislike
- Unavailable
- Lack of confidence
- Recommendations on public speaking

Academic information literacy challenges (support mechanisms)

- Essay classes
- Recommendations

3. Everyday life information literacy changes

- Everyday challenges
- Lack of communication
- Difficulties in socializing
- Self help
- Ability to cope
- Support system
- Reason for non-participation

Balancing studies and work life
Social event recommendations
Lack of information
Support service Recommendation

Everyday life information literacy challenges (support mechanisms)

Lack of support

4. Academic socio-cultural challenges

Work load
Difficulties in paraphrasing
Lack of critical thinking skills
Learning recommendations
Change in academics
Importance of teamwork

Academic socio-cultural challenges (support mechanisms)

Lack of awareness
Active participation

5. Everyday life socio-cultural adaptation challenges

Balancing between studies and socializing
Everyday issues
No positive change
Chance to socialize
Assistance
No social groups
Not active
Recommendations
Chance to socialize
Recommendations
Adaptability

Everyday life socio-cultural adaptation challenges (support mechanisms)

No support available
Recommendations
Balancing studies with having fun

6. Language and communication challenges

Accent

Communication
 Uncertainty
 Lack of confidence
 Recommendations
 Learning recommendation

Language and communication challenges (support mechanisms)

Confirmation of no support available
 Recommendation

Illustrating Themes and Sub-themes Using Direct Quotes

<i>Themes</i>	<i>Sub-Themes</i>	<i>Quotation</i>
<i>ACADEMIC SELF EFFICACY</i>	No confidence	"Sometimes you don't even feel confident about your capabilities"
	Interest in learning hard skills	"I am really not confident sometimes. but that is why we keep learning"
	Lack of competency	"You feel lost or you feel you are not good enough"
	Lack of information literacy skills	"It can affect how you feel about your ability to search for information" "I do not feel confident about my ability to paraphrase" "I also get the referencing wrong " "My information literacy skills aren't that great"
	Lack of organizational skills	"I just pick up my reading materials when its tie to prepare for exams"
	Wrong perception	"I really don't like to ask questions in class because you don't want to come across as someone who is not intellectually sound."
<i>Academic self-efficacy (support mechanisms)</i>		"I just try to be consistent in my studies"
	Consistency	
	Proactiveness	"I also try not to wait till the last minute before preparing for my exams"

	Becoming confident	"As this will give me more confidence"
<i>Academic information literacy challenges</i>		
	Academic sources	"I use google scholar a lot and science direct"
	Lack of confidence	"I don't feel confident"
	Improvement	"There are many rooms for improvement"
	Need to learn and develop skills	"I need to improve on how I present my arguments in a logical and concise manner"
	Inability to evaluate Sources of information	"I also need to know how I paraphrase"
	Awareness of information sources	"Evaluating different sources of information"
	Searching skills	"Websites, Journals, books, internet sources, social media"
	Information literacy	"Using specific keywords"
	Needs to improve on online searching skills	"I can use my information literacy skills to plan effective online search". "I struggle with this sometimes"
	Learning opportunities	"I think the university should come up with an information literacy skills class"
	Unavailable	"My school has one in place but I don't really like going there because the time is always conflicting with my lectures"
	Lack of confidence	"I could remember a few weeks ago when we had a group presentation but I

	Recommendations on public speaking	couldn't participate as I didn't even have the confidence to present my work" "I don't know how possible it's for the university to give us free courses on public speaking as this is a major concern for international students."
<i>Academic information literacy (support mechanisms)</i>	Essay classes	"We have essay writing classes"
	Recommendations	"The best way the university can improve such services will be to include information literacy skills as part of the teaching curriculum"
<i>Everyday life information literacy challenges</i>	Lack of communication	"I find it difficult to communicate with some Scottish people"
	Difficulties in socializing	"I rarely hear what they are saying"
	Self help	"I just nod my head in order for the conversation to continue."
	Lack of awareness	"I rarely ask for support"

	Ability to cope	"I do not even know where to turn to for assistance"
	Support	"I have been managing the situation and taking each day as it comes"
		"I ask my classmates for information "
	Reason for non-participation	
	Balancing studies and work life	"I do not have the information on where to go for these activities."
	Social event recommendations	"My course work makes it difficult to socialize"
	Lack of information	"The university should plan events during the weekend or holidays"
	Support service Recommendation	"But I didn't know how to get travel guide information"
		"The university can get like a concierge service where you can get information from"
<i>Everyday information literacy challenges (support mechanisms)</i>	Lack of support	"There is no support available"
<i>Academic social cultural challenges</i>		

	Workload	"I experience some challenges with my studies and I am still experiencing them" for example, the amount of writing required is too much than anticipated".
	Difficulties in paraphrasing	"I find it difficult to paraphrase"
	Lack of critical thinking skills	"Critical thinking is not something that is my strong point based on the way I was taught in school way back in Nigeria"
	Importance of teamwork	"I would suggest that students should be put in groups, made to study together, share ideas, critique each other's work positively". "Lecturers should also encourage active participation in class".
<i>Academic social cultural challenges (support system)</i>	Lack of awareness	"I am not aware of any support system put in place for such challenges."
	Active participation	"The only suggestion I can give will be for lecturers to encourage active participation in class."
<i>Everyday life social cultural adaptation challenges</i>	Everyday Challenges	"Yes, I do. For example, language and communication issues".
	Balancing between studies and socializing	"I hardly have the extra time to attend events"
	Everyday issues	"Finding places of interest to visit, socializing", making new friends, visa information to travel to other countries during holidays".
	No positive change Chance to socialize	"Nothing has been helpful" "I think as time goes on. I will find the balance to socialize more."

	Assistance	"I seek support from my classmates"
	No social groups	" it's because we do not have international or maybe Nigerian groups"
	Not active	"The only one I know of is on Facebook but it seems not to be active".
	Chance to socialize	"We need such groups on campus as this will enable Nigerian students come together and socialize more.
	Recommendations	"The university can organize social events for international students or Nigerian students"
	Adaptability	"It will make the process much easier and faster"
<i>Everyday life social cultural adaptation challenges (support mechanisms)</i>	No support available	"I don't think my university has support available to Nigerian students"
	Recommendations	"The best way to solve these issues in my opinion will be for the university to create social groups for international students or to be more specific, Nigerian students. I also think that there should be a balance between learning and having fun".
	Balancing studies with having fun	"I also think there should be a balance between learning and having fun"

<i>Language and communication challenges</i>	Accent	"The accent here is really difficult to understand"
	Communication	"I try to communicate with my teachers in a clear tone and pick my words slowly so they can hear me". " Sometimes I also send my teachers emails if there is something I need clarity on"
	Uncertainty	"I don't think I will ever adjust communication wise in this environment"
	Lack of confidence	"I usually do not ask questions or contribute in class as I am not sure if I am saying the right thing"
	Recommendations	"I feel if the lecturer encourages students to participate in class, it will be great"
	Learning recommendation	"Also, I think some people get a better understanding of what is being taught if they see it in visual forms."
<i>Language and communication challenges (support mechanisms)</i>	No support available	"These support mechanisms are not available at my university"
	Recommendations	"The university can create a non-formal group where students and teachers can interact, discuss, and talk about present happenings in the society"

