Transient Migrants' Information-Seeking Journey: The Case of Saudi Arabian Female International Students

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Submitted in total fulfilment of the requirements for the degree of
Doctor of Philosophy

School of Computing and Information Systems

University of Melbourne, Australia

January 2018

ABSTRACT

The number of transient migrants around the world is increasing, and with it a corresponding growth in research publications. This is particularly the case for a specific group of transient migrants, international students, who face a particular challenge namely, *ineffective information seeking*. This research focuses on the information-seeking behaviour (ISB) journey of Saudi Arabian Female International Students (SFIS) as they transition between Saudi Arabia and Australia.

SFIS represent a culturally and digitally unique population of transient migrants. SFIS represent a culturally and digitally unique population of transient migrants. Coming from Saudi Arabia, a nation with distinct cultural norms, SFIS face many academic and everyday cultural and digital journey adjustments, as well as the challenges of reading, writing, and conducting research in a foreign language.

Despite research on international students' information needs and ISB, there is little research on SFIS' ISB experiences, hence the rationale for this study. The data collection comprised two qualitative studies: Study 1 explored the challenges and changes SFIS faced in the first stage of their ISB journey (from Saudi Arabia to Australia). Study 2 explored the ISB challenges and changes SFIS faced on their return to Saudi Arabia some years later. The findings of this research shed more light on the impact of both transitions on SFIS' ISB.

Recent arrivals' language and ISB difficulties are exacerbated by their unfamiliarity with many online technologies commonly used in the western society, ignorance of Western learning and research methods, inexperience of mixing freely with males, and an almost total dependence on their male relatives. Over time, these initial challenges turn into opportunities including enhanced online ISB and research skills, increased confidence interacting with males, and more independence. This maturity, however, creates its own readjustment ISB challenges on their return back to their home country. Returnees found that Saudi Arabia lags behind other societies in professional online communication technologies, and there are few up-to-date reliable sources in Arabic.

Little effort has been made to explore the theoretical underpinnings of transient migrants' ISB, as existing ISB models do not address these journeys. Through the case study work of SFIS, this longitudinal research has three main contributions:

- providing new evidence demonstrating how the transition between different cultural and digital environments challenges and changes the ISB of transient migrants living and studying in an open society such as Australia,

- presenting a better understanding of the post-study ISB experiences of returned transient migrants when they return to their home country's cultural and digital environment, and

- proposing an explanatory ISB model that extends Decomposed Theory of Planned Behaviour (DTPB) taking account the key factors that affect the ISB of transient migrants when moving back and forth between their home and their host countries' cultural and digital environments.

DECLARATION

This is to certify that:

i. The thesis comprises only my original work towards the PhD;

ii. Due acknowledgment has been made in the text to all other material used; and

iii. The thesis is less than 100,000 words in length, exclusive of tables, figures, bibliographies and appendices.

ACKNOWLEDGEMENTS

DEDICATION

I dedicate this thesis to my husband, Khalid and my children. I couldn't have done this without you. You are always my inspiration. Thank you for supporting me all the way.

PUBLICATIONS DURING CANDIDATURE

Binsahl, H. & Chang, S. (2012, 4-7 December). International Saudi female students in Australia and social networking sites: What are the motivations and barriers to communication. In *the 23rd International Student Advisers Network of Australis's International Academy Association Conference*, Auckland, New Zealand.

Binsahl, H., Chang, S. and Bosua, R. (2015a). Identity and belonging: Saudi female international students and their use of social networking sites. *Crossings: Journal of Migration and Culture, 6*(1), 81-102.

Binsahl, H., Chang, S and Bosua, R. (2015b). Exploring the factors that impact on Saudi female international students' use of social technologies as an information source. *PACIS Pacific Asian Conference on Information Systems 2015 Proceedings*. Singapore. AISeL paper 201.

Binsahl, H, Chang, S and Bosua, R. (2015c). Information seeking challenges when moving across cultures: The case of Saudi Female International Student in Australia. *ISANA International Academy Association Conference*. Melbourne, Australia. Awarded Best Conference Paper.

PRESENTATIONS DURING CANDIDATURE

Navigating the social networks of Saudi female international students in Australia. *Transient Migration in the Asia-Pacific: Identities, Social Networks and Media Symposium*, RMIT University, 9-12 November 2015.

Information seeking challenges when moving across cultures: The case of Saudi female international students in Australia. *ISANA: 26th International Education Association Conference*, The Pullman on the Park, Melbourne, 1 - 4 December 2015.

Saudi female international students in Australia: The information seeking challenges, Latrobe University, Melbourne, Australia, 26th September 2016.

The cultural and digital transition of Saudi female international students in Australia, *ISANA: 28TH International Education Association Conference,* Gold Coast, Australia, 5-8 December 2017.

ABBREVIATIONS

Abbreviation	Definition
AEI	Australian Education International
CoE	Confirmation of Enrolment
DTPB	Decomposed Theory of Planned Behaviour
ELICOS	English Language Intensive Courses for Overseas Student
ELIS	Everyday Life Information-Seeking
F2F	Face to Face
FB	Facebook
IDP	A recognized International students' educational agent
IL	Information Literacy
IS	Information Systems
ISB	Information Seeking Behaviour
IT	Information Technologies
KASP	King Abdullah Scholarship Program
SACM	Saudi Arabian Cultural Mission
SAIM	Saudi Association in Melbourne
SFIS (SFIS')	Saudi Female International Student(s) (SFIS possessive case)
SNS	Social Networking Sites
UK	United Kingdom
US	United States of America

DEFINITIONS

Term	Definition
CoE (Confirmation of Enrolment)	An official letter issued by an Australian educational institution that provides evidence of an international students' enrolment with the university. This evidence is a precondition before the Department of Immigration and Border Protection (DIBP) will issue a student visa.
Everyday life information seeking (ELIS)	A term proposed by Savolainen (1995:266) to differentiate between job/school-related information and information related to our daily lives, such as shopping, taking care of our homes, and pursuing our hobbies and other personal interests.
Graduate SFIS	A Saudi female who has been an international student who has successfully completed a degree and has permanently returned to Saudi Arabia.
Information needs	A state when a person recognises a gap between the information and knowledge available or they possess to solve a problem or a concern (Case, 2012). In this study, the term includes various information requisites (e.g. topics, types and formats) (Alzougool, 2010).
Information-Seeking Behaviour (ISB)	The complete range of human behaviour as it relates to search for information in a purposeful way to meet an information gap or need (Wilson, 2000:49).
International student	A person admitted to a country other than their own, usually under special permits or visas, for the specific purpose of following a particular course of study in an accredited institution of the host country. International students do not hold citizenship of the host country (OECD, 2003).
Offline information sources	The traditional information sources that are neither online or nor available through social media: for example, printed media such as brochures and prospectuses; road shows, centres and exhibitions; friends, family and counsellors.
Online information sources	Internet-based sources of information: for example, forums, websites, wiki's, blogs and emails.
Recently arrived SFIS	A Saudi female international student who has recently arrived in Australia and is enrolled in an academic course.
Social media information sources	Information made available through social media tools and applications including Social Networking Sites (e.g. Facebook, Twitter, and YouTube) Social Networking Forums (e.g. Academia.com and ResearchGate), and Social Messaging Applications (e.g. WhatsApp and Snapchat).

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PREFACE

I have been very fortunate for most of my life. I am a Saudi female doctoral student who is a member of a family that has always encouraged learning, and always shown openness to other civilisations and cultures. I am married to a man who has continually welcomed and supported my academic and professional career, to the extent that he left his job in order to travel abroad with me during my ten-year study journey—one of the conditions for an overseas Saudi scholarship is the availability of a Mahram (male guardian). I have four beautiful, loving children. I studied the English language and literature (Shakespeare! Dickens! The Brontës!) for my first degree, and in 2008 I was awarded a King Abdullah Scholarship Program (KASP) scholarship to complete a Master's, then a PhD, in Melbourne, Australia (voted in 2017 'the most liveable city in the world' by The Economist for the seventh year in a row).

In 2008, when I was awarded the KASP opportunity, I felt that good fortune had abandoned me as I prepared for my information-seeking journey: finding relevant, reliable and understandable sources of information that answered my particular needs was a frustrating, infuriating, and unnecessarily time-consuming task. Why was it so difficult to get information about academic offers for myself and my eldest son, or information about Arabic schools in Melbourne for my younger children? Why was it such a hurdle to procure a visa for my husband? Could I find accommodation suitable for my large family, or would I arrive homeless in Melbourne? Was there something wrong with me, or my ISB, or with Saudi Arabia?

Part of the difficulty in Saudi Arabia in 2008, was that there were few Arabic online sources, and I had to rely on forums such as Mubt3th and Muktameel where essential information was inadequate. Social media was unpopular and viewed negatively; and although my English was good, I didn't know how to send emails or use search engines. Now, due to the increased number of Saudi scholarship students and the unprecedented widespread presence of social media tools and technologies, Saudi Arabia is rapidly modernising its information resources, but there are still, ten years later, several difficulties for new international students.

As part of my Master's degree, I investigated the use of Facebook by five SFIS in Melbourne as a research project (Binsahl & Chang, 2012) and discovered that SFIS used social media to find information, not just to socialise. This led to a growing interest in the information needs and information-seeking behaviour of Saudi female

students in Australia, especially as I had such challenging experiences myself. My interest became more focused with my first journal article (Binsahl et al., 2015a), examining how Saudi females in Australia use social networking sites in their transient migration; and peaked when a search in the literature to find answers to my questions revealed that no useful studies had been undertaken on SFIS' information needs, sources and use of social media.

Over the years of my research, I have discovered that most Saudi female students (including myself) wrestle with, and eventually overcome, the immense digital and cultural challenges they meet with: advanced educational technologies such as emails, databases and modern libraries well-stocked with computers; males (teachers and students) in close proximity, and the requirement to talk to them; having to make decisions and become self-sufficient instead of having a mahram to do it all—these and other situations are taken for granted in the west.

As a Saudi woman, sharing the language and culture of the participants, I was able to explore the experiences of SFIS, and understand many of their nuances. My experiences as a Saudi female international student provided an additional level of understanding the subtleties of their context and their worlds. Naturally, I met my supervisors at least once a week, and they'd interrogate the data objectively to help me avoid bias.

As a female raised and educated in a conservative, traditional Arab country, I am well aware of the opportunities and challenges facing Saudi females who live overseas. Having a similar background helped me establish good relationships with the study participants, which led to their complete acceptance of me, allowing their responses to be rich, open, and deep. I thank them all.

A final note, while I have been writing up my research, some unprecedented cultural and social changes have been taking place in Saudi Arabia. Most of the changes relate to women, so this research about Saudi international students has become even more important, especially as these women are returning to another new environment. Perhaps this research may shed some light in what it might be like for Saudi women in the coming years.

Chapter 1
Introduction and Overview

The number of transient migrants has increased substantially over the past three to four decades…Transient migration encompasses the global movements of people…International migrants make up 3.3 percept of world's population in 2016….and international students account for visible portion of that group (Chang & Gomes, 2017b, p.44).

Introduction

The term 'transient migrants' refers to individuals who are temporarily out of their birth country (Prescott & Hellstén, 2005). 'Transient migrants' include expatriate workers, diaspora communities, asylum seekers, international students, and others who come from, and go to countries totally unfamiliar to their own, to work and study. Transient migration of individuals and groups is not new—it has been occurring since the first hominids began to populate the earth. The number of individuals moving across borders has increased over recent years: so much so that the University of Cambridge has named this period 'the New Migration Age' (University of Cambridge, 2017). For example, the UK counted over seven million more arrivals in 2016–2017 than in 2015-2016 (United Kingdom Government, 2017) while the European Union estimated that the number of migrants crossing its border in 2016 had increased by nearly 50% from 150 million to over 230 million since 2000 (European Commission, 2016, p.14). Chang and Gomes (2017b) note above that of all transient migrants' groups, international students account for a '*visible portion*', with over four million international students worldwide in 2014 (Australian Department of Education and Training, 2016).

In addition to the more obvious acculturation hurdles international students as transient migrants face such as language, distance from home and family and unfamiliar customs, they also face less obvious challenges to adjust cross-culturally. One significant challenge is ineffective information-seeking behaviour (ISB) (Alzougool, Chang, Gomes & Berry, 2013a; Gomes, Berry, Alzougool & Chang, 2014; Henkin,

2012; Sin & Kim, 2013). International students' ineffective ISB can generate an inability to fulfil their work, study and everyday information needs when entering and residing in their host countries[1]. Effective ISB requires language proficiency, being comfortable with the host country's culture, and being capable of navigating its online systems and other environmental features (Chang & Gomes, 2017a,b).

In response to the increasing need to enhance international students' ISB, host countries' governments and other service providers have started exploiting the benefits of using digital technologies (e.g. social media) in facilitating information dissemination. However, despite the many online and offline local sources provided to transient migrants, researchers find that some transient migrants find it difficult to fulfil their information needs (Chen, 2010; Sin & Kim, 2013; Sin, 2015; Yi, 2007). Explanations for the ISB challenge include, firstly, the lack of adequate linguistic and information-seeking skills due to prior experience, and secondly the lack of awareness of the many online and offline programs, platforms, applications, databases and other information sources that exist in advanced technological societies.

Due to a gap in the literature on the ISB of transient migrants, this research investigates this phenomena of a group of transient migrants, i.e. international students, who need to adjust culturally, digitally, educationally and socially to live, work and study while in their host countries (Gomes et al., 2014; Chang & Gomes, 2017b; Neri & Ville, 2008; Sawir, Marginson, Deumert, Nyland & Ramia, 2008). More specifically, the researcher narrowed her focus to the ISB of a specific group of international students from conservative culture, namely Saudi female Arabian students (SFIS) in Australia.

This chapter begins with a brief introduction to the case study, followed by the statement of the problem. It then describes the research aims and questions, and provides a general account of the research scope. The chapter then highlights the significance of the research and ends with the structure of the thesis.

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[1] Host countries are the countries in which transient migrants temporarily spend a period of time before returning to their 'home' countries.

1.1 Justifying Saudi female international students (SFIS) in Australia as a case study

> *A unique group of students began attending my classes. Saudi women, who abided by the Saudi hijab dress code, and wore the abaya (robes), hijab (headscarf), and niqab (veil), attended my classes but interacted little with me and the other students. In contrast, the male Saudi students were vocal and interactive (Groves, 2015, p.2).*

The number of Saudi Arabian[2] students studying in Australia dramatically increased from fewer than 200 students in 2005 to more than 8000 in 2014 (Saudi Arabian Cultural Mission (SACM) to Australia, 2016a). Surprisingly, SFIS[3] (Saudi female international students) represented 60% of Saudi students studying in Australia in 2011 (Australian Education International (AEI), 2012) while they constituted 62.3% of all Saudi international students worldwide (Hassan, 2015). Australia's multicultural society and excellent educational system are main reasons Saudi females choose Australia as a more popular study destination than other western countries (Al-Qarni, 2011).

As with all transient migrants, SFIS encounter a number of cultural, social and educational challenges that impact their migration experience, even though their stay overseas is temporary (Alhazmi & Nyland, 2011, 2013; Lefdahl-Davis & Perrone-McGovern, 2015; Sandekian, Weddington, Birnbaum & Keen, 2015).

This thesis proposes that in addition to the typical cultural and social challenges, SFIS encounter specific challenges to their information seeking. In this research, there are three key motivations to choose SFIS in Australia as the case study of this research:

(i) Saudi females come from a cultural and digital background that is very different from that of Australia, and their transition experiences are not only different from the local students and other international students but are even different from their Saudi male counterparts, owing to their unique position (described in detail in Chapter 2). Given the unique cultural and digital backgrounds of SFIS, the researcher assumed they would exhibit different information needs and ISB challenges and opportunities, to ISB other transient migrants might encounter to

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[2] 'Saudi' and 'Saudi Arabian' are interchangeable terms. This thesis mostly uses 'Saudi' for the adjective and Saudi Arabia for the country.

[3] Throughout this thesis, the abbreviation SFIS refers to Saudi female international students.

some degree. Hence, the research into SFIS would add substantively to transient migrants' ISB literature.

(ii) The researcher, a Saudi female herself, has a good understanding of the finer nuances of Saudi Arabian culture, social values and language, which enabled her to fully engage with the research context and develop a deeper association with the research participants (Hamid, 2013).

(iii) Existing literature on SFIS is scant compared to studies on other transient migrants due to the following:

- Saudi women only recently joined the international student population. Before KASP, most Saudi scholarships were awarded to males, discouraging women to study abroad, expecting their 'fully committed to family and home' (Lefdahl-Davis & Perrone-McGovern, 2015),

- Saudi females legally need male guardians to accompany and stay with them until they complete their studies (Alanazy, 2013). Many male guardians are unable to leave work for prolonged periods of time, and

- Saudi culture is strictly gender-segregated, making it difficult for male researchers to study Saudi female students ('a very hard-to-reach population', Al-Kahtani, Ryan & Jefferson, 2006, p.241).

For these reasons, SFIS offer a good opportunity and valuable case study for exploring the phenomena investigated in this study.

1.2 Statement of the problem

Although transient migrants' ISB is not a new field, a literature review (see Chapter 3) shows several gaps in both empirical ISB studies and conceptual behaviour models:

(i) To date, most existing ISB studies, both theoretical and empirical, examine ISB at a single point of a time at a single location. Few studies take into account the temporal, transitional, and mobile nature of transient migration. A deeper understanding is required about how transient migrants seek their information or how the transition experience affects their ISB throughout their journey from home country to host country and back to their home country. This understanding must take account of the effect on transient migrants' ISB of a total change in culture, learning methods, and technology, often over years in a

host country. Gomes, Alzougool and Lim's (2014) project with migrant workers in Singapore expresses the situation for all transients:

> *Transient migrants are part of the ethnographic landscape of every nation, yet very little is known about how they negotiate everyday life in transience and the impact this has on their identities. [This Singapore] project aims to 'translate impermanence' and interprets everyday life as made up of social networks and the media.*

(ii) Research should also consider the effects of their second transition, when they return from the host country to their home country. Although international students' ISB has been extensively studied by many researchers over the past twenty years, most studies have been conducted on Asian students who constitute the largest group of international students (Gomes, 2015).

(iii) There is little research on the ISB of international students from conservative backgrounds who may have different ISB experiences as they are not only travelling but also moving from totally disparate cultural and digital environment.

(iv) With regard to conceptual ISB models, most models were conducted before the rise of modern information channels, especially social media. Hence they cannot explain how international students seek information in a social networking environment. Additionally, most of the existing ISB models are cross-sectional and do not explain how transition experiences between two vastly different cultural and digital environments may impact international students' ISB over time. Hence, an explanatory ISB model is required incorporating specific factors that impact international migrants' ISB over time.

Consequently, the research recorded in this thesis goes some way towards filling these gaps.

1.3   Research aims and questions

This research has three aims, as follows:

(i) To understand the information needs and information sources of SFIS as a specific group of transient migrants,

(ii) To explain the challenges and changes SFIS faced in their information searches, resulting from their transition experience to and from their host countries, and

(iii) To propose an ISB model that illustrates the factors that impact transient migrants' ISB over time, based on the Decomposed Theory of Planned Behaviour (DTPB).

To achieve these research aims, the following main research question (MQ) was proposed:

MQ: How does the Information Seeking Behaviour (ISB) of Saudi Female International Students (SFIS) change when transitioning to and from their host countries of study?

To answer this question, this researcher explored SFIS' ISB as the students migrate to Australia, stay for three to seven years, and return to Saudi Arabia. The following two sub research questions (SQ) were relevant:

SQ1. What ISB challenges and changes do SFIS face when moving from Saudi Arabia to Australia?

SQ2. What post-study ISB challenges and changes do Saudi female graduates face when moving from Australia back to Saudi Arabia?

Because these research questions required interrogating *how* and *why* transition experiences impact SFIS' ISB, this research employed a qualitative approach. Chapter 4 (Research Design) provides a comprehensive discussion and justification of the chosen research design, paradigm, methods, and methodology.

1.4   Research Scope

The focus of this research is to investigate how the transition between two different environments impacts the information needs and ISB of transient migrants. The research followed a group of SFIS in their information seeking, from the time they were preparing to leave Saudi Arabia for Australia, through the period of their initial ISB challenges in Australia to the time about two years later when their challenges were changing to opportunities. The researcher then followed a different group of graduate SFIS[4] who had returned to Saudi Arabia, only to face new ISB challenges.

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[4] The researcher would have preferred to follow the same SFIS (researched in Australia) back to Saudi Arabia, but this would have taken at least four years, possibly a lot longer, so it was not possible given the time constraints of the PhD candidature.

Throughout the research, the researcher sought the factors that were impacting on their ISB and influencing its changes, mapping these onto a conceptual model that could account for all transient migrants' ISB.

Owing to the ubiquity of information and the variety of ways information can be sought, it is easier to state what is excluded in this research as well as what is included. The scope of the thesis was narrowed as follows:

- Information seeking comprises three stages (Adams & Blandford, 2005): initiation (having an information need to fulfil), facilitation (gathering the information), and interpretation (making sense of the information). This thesis focuses only on how SFIS initiate and facilitate their information.

- Transient migrants' information-seeking behaviour can occur purposefully (e.g. to fulfil a specific gap or concern) (Savolainen, 1995; Wilson, 2000) or serendipitously, for example when an information need is recognised at times of information discovery, rather than information discovery following the recognition of need (Adams & Blandford, 2005; Dantonio, Makri & Blandford, 2012; Makri & Blandford, 2012). Serendipity is important to ISB studies, since serendipitously acquired information is useful and valuable (Makri, Bhuiya, Carthy & Owusu-Bonsu, 2015), but this research does not have the space to examine whether SFIS' ISB was purposeful or serendipitous

- In the digital space, transient migrants can freely engage and interact digitally with various stakeholders and information providers when seeking information (Grand, Holliman, Collins & Adams, 2016). This research does not examine how SFIS digitally engage when seeking their information.

- Further, the transition experience and digital space affect transient migrants' self-identity, which can also influence how they access their host country's sources (Chang & Gomes, 2017b). This research does not focus in depth how transition impact SFIS' self-identity, although some aspects of self-identity were noted in the findings.

- Polymedia contributes to digital studies (Madianou & Miller, 2013) but this field of study remains outside the scope of this research.

- Similarly acknowledged is the research perspective of translocality (or translocation), which has 'come into vogue' (Greiner & Sakdapolrak, 2013, p 2). Greiner and Sakdorak's review shows that translocality has some relevance to this

thesis, insofar as some definitions of the concept include the role of networks in facilitating movement across borders. On the other hand, Greiner and Sakdorak cite other definitions in which 'networks' is seen to have many shortcomings in understanding the phenomena of translocality. Altogether, translocality is a highly complex field of study, which is outside the scope of this research.

1.5   Significance of the research

First, this study contributes knowledge to the transient migrant' literature, particularly international students' ISB literature as it explores to what extent the transition between two different cultural and digital environments impact their information needs and information-seeking behaviour.

Secondly and most importantly, this thesis contributes to theory. Given the fact that existing ISB models tend to be cross-sectional and do not explore how transient migrants' ISB may change over a period of time, this thesis proposes an extension to Decomposed Theory of Planned Behaviour (Taylor & Todd, 1995a, b) to explain the ISB of transient migrants when moving across different environments. The proposed ISB model is presented with several new factors and relationships that influence the journeys of transient migrants over time, and may be a valuable basis for more longitudinal studies focusing on the same topic.

Thirdly, to the best of the researcher's knowledge, this is the first longitudinal study that views and covers transient migrants' ISB experiences in both their host and their home countries. It includes the effect of an entire change of culture, learning methods, and technology on transient migrants' ISB (the challenges, development, changes and opportunities over years in the host country). Moreover, the study explores transient migrants' post-study ISB experiences after they return home as they develop new skills from their first to last experiences. This study's outcomes are useful as they better explain the difficulties and challenges faced by international female students from gender segregated cultures and how they overcome these challenges when they embark on international studies in environments radically different to their home countries.

Fourthly, this study highlights the importance of host countries' information sources for international students. International male and female students need very specific information about their host country as they prepare to migrate temporarily. As a result, agencies, universities and individuals in host countries need to be aware of the

categories of information that need to be made available to new international students coming stay in these countries. Websites need to present the necessary information to ensure that new international studies have a smooth and informed transition upon their arrival.

1.6   Structure of the thesis

This thesis has the following structure:

Chapter 2 describes the unique position of Saudi women with respect to the Saudi culture, education, use of digital media, and the availability of tertiary education scholarships for women.

Chapter 3 examines key literature through a critical review of the ISB literature relevant to international students and SFIS in particular. It reviews ISB models and justifies the choice of the Decomposed Theory of Planned Behaviour to guide the research.

Chapter 4 describes the research design, study samples, data collection, and data analysis.

Chapter 5 presents the context, methods, findings and discussion of Study1.

Chapter 6 presents the specific context, methods, findings and discussion of Study 2

Chapter 7 answers the main research question, maps key factors that emerged from the findings onto a proposed extended model, gives implications and recommendations associated with the research, discusses and presents the contributions and limitations of research, and also offers directions for future research.

Important note: Elements of Chapters 2, 3, 4 and 5 have appeared in the following journal (#) and conference proceedings (*).

*Binsahl, H. & Chang, S. (2012, 4-7 December). International Saudi female students in Australia and social networking sites: What are the motivations and barriers to communication. In the *23rd International Student Advisers Network of Australis's International Academy Association Conference (ISANA)*, Auckland, New Zealand.

#Binsahl, H., Chang, S. and Bosua, R. (2015a). Identity and belonging: Saudi female international students and their use of social networking sites. *Crossings: Journal of Migration and Culture, 6*(1), 81-102.

*Binsahl, H., Chang, S and Bosua, R. (2015b). Exploring the factors that impact on Saudi female international students' use of social technologies as an information source. *PACIS Pacific Asian Conference on Information Systems 2015 Proceedings*. Singapore. AISeL paper 201.

*Binsahl, H, Chang, S and Bosua, R. (2015c). Information seeking challenges when moving across cultures: The case of Saudi Female International Student in Australia. *ISANA International Academy Association Conference.* Melbourne, Australia. Awarded Best Conference Paper.

In summary, the thesis is structured as in Figure 1.1

Chapter 1: Introduction

Overview of Thesis

Chapter 2: Study Context

Gives an outline of Saudi Females in several dimensions.

Chapter 3: Literature Review

A critical review of existing literature on international students' information needs and ISB and SFIS' cross-cultural experience; a review of existing ISB models and IS theories, to identify the most appropriate theoretical background for this research

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Chapter 4: Research Design

Study 1A- Face-to-face semi-structured interviews, 25 SIFS; less than 1 year in Australia

Study 1B- Online interviews with Study 1A's SFIS, two years after Study 1A.

Study 2 - Face-to-face and online semi-structured interviews, 25 graduate ex-ISFS in Saudi.

Chapter 5: Study 1

Context, research methods, findings and discussion of Study 1.

Chapter 6: Study 2

Context, research methodology,findings and discussion of Study 2.

Chapter 7 : Discussion and Conclusion

Discusses the findings in detail with reference to literature and proposes a new model that helps in understanding transient migrant's ISB

Gives implications, recommendations, contributions, limitations, and future research.

Figure 1.1: Overview of Thesis Structure

Chapter 2
Study Context

Introduction

Chapter 2[5] sets the study context describing how Saudi female students differ from other international students, and how their unique cultural, digital and educational backgrounds could significantly influence SFIS information needs and ISB. In particular, this chapter focus attention on the possible implications of Saudi women's cultural, digital and educational background on their ISB. This chapter is structured as follows; Section 2.1 gives an overview of Saudi Arabia using a range of dimensions, providing information about Saudi's geographical location. Section 2.2 then discusses several unique aspects of the Saudi culture focusing on Saudi women's cultural background and the culture's defining traits. Section 2.3 and 2.4 shed light on Saudi women's digital and educational background respectively. Finally, Section 2.5 highlights the critical change in Saudi women's status in the era of King Abdullah.

2.1   Background and a general overview of Saudi Arabia

Saudi Arabia is a constitutional monarchy positioned in the Middle East. A recent report by the Saudi General Authority for Statistics states that of the 30.8 million Saudi residents in 2014, two-thirds were Saudi nationals, with 10.1 million Saudi females (General Saudi Arabian Authority for Statistics, 2016). Due to the centralised availability of government services, the population is confined to a few major centres: the capital Riyadh; the spiritual centres of Makkah and Al-Madinah to the west (collectively known as Hijaz), including Jeddah, the commercial centre on the Red Sea; Dammam to the east which is a region known for its oil industry; and provincial capitals in the remainder of the country (Figure 2.1).

Saudi Arabia's constitution consists of the Qur'an and hadith (teachings of the Prophet Mohammed), and thus Shar'ia law prevails over civil law (Saudilegal, 2016). Saudi

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[5] Elements of this chapter form background information for the researcher's publications listed on page 9, Chapter 1.

Arabia's Shar'ia law is based on Sunni traditions, and its system of *fiqh* (jurisprudence) is that of the Hanbali interpretation of Shar'ia (Butler, 2015). Given that the Hanbali system of jurisprudence focuses on morality and spiritualism, the Basic Law of Governance (Constitution) was implemented in 1992 to codify civil law. In the process, van Geel (2016) noted that women's centrality to the Muslim culture became more apparent, with dress codes more heavily enforced and women-only public places becoming widespread.

Figure 2.1: Saudi provinces and major population centres

(The Saudi Network, 2016)

Saudi Arabia is not a completely homogeneously religious country (Al-Qahtani, 2015). In Saudi society, about one-third of the population, especially Saudis from the northern regions and Riyadh, are highly religious and conservative, while another one-third, mainly Saudis who live in the Hijaz region (western Saudi Arabia, including the two holy sites of Makkah or Mecca and Madinah or Medina) are the least conservative (De

Jong & Moaddel, 2013). Hijazis, as the most liberal group, do not follow the strict teachings of mainstream Wahhabism[6], such as requiring women to wear a niqab or burqa[7] in public (Al-Qahtani, 2015). This is because most Saudis in Hijaz originate from multicultural backgrounds including Turks, Indians, Africans, and Central and South East Asians who first came to perform a religious pilgrimage and subsequently settled in this area over time.

Unlike women from the most conservative Saudi cities such as Riyadh or the Northern regions, Hijazi women have more social and digital freedom (Oshan, 2007). Saudi females may show different ISB and social media use (Al-Qahtani, 2015), as confirmed by Binsahl and Chang (2012) who found that participants from Hijaz exhibited more relaxed attitudes towards communicating with non-related males and posting their personal photos on Facebook—an action described by participants from Riyadh as a line they would not cross. Alqefari (2015) also found that Saudi female students from culturally restrictive regions such as Qassim lack more confidence in mixed-gender classrooms than SFIS from more liberal regions such as Hijaz, who are more exposed to interacting with the world abroad.

It is important to note however, that even with these regional differences, it is impossible to conduct a study on SFIS without referring to their unique cultural, educational and digital backgrounds that influence every aspect of their daily life, and are believed to impact their ISB. The next sections and sub-sections present some of the defining traits of SFIS' cultural, digital and educational traits, and how these aspects affect the information needs and ISB of all Saudi females in the context of this study.

2.2 Saudi women's cultural background and its defining traits

Women in the Kingdom of Saudi Arabia have a unique status compared to other nationalities. Saudi women are described in the literature as being part of one of the most conservative and segregated cultures (Alqefari, 2015; Al-Saggaf, 2004; Alruwaili, 2017; Sandekian et al., 2015). Their movements, customs, beliefs, actions, and attitudes

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[6] *Wahhabism* is an orthodox form of Islam (Al-Qahtani,2015).

[7] *Niqab*: a veil which covers the face from the eyes down. This is in contrast to *hijab*, covering the head and neck but leaving the face exposed, and *burqa* covering the whole face and head including the eyes.

are highly proscribed by society, culture, the government, and Islam. Islam and tribal traditions play critical roles in shaping Saudi culture, society, education and politics (Al-Saggaf, 2004). Hence when examining the information needs and seeking behaviour of Saudi female students, it is crucial to take into consideration the strong impact of the Saudi religion and culture on their ISB. In seeking information for instance, the researcher assumed that religion, gender segregation, or anything to do with women's legal and social aspects are main factors that might impact their needs and ISB. The following are three of the defining traits of the Saudi culture, which are in stark contrast to Western societies and cultures: (i) the strong influence of Islam, (ii) the importance of family ties and male guardianship, and (iii) gender-segregation.

2.2.1   The strong influence of Islam

Saudi culture mainly derives from Islam, so any attempt to understand the academic and cultural challenges faced by SFIS must be supported by an understanding of how deeply Islam is embedded into and affects their lives (Hall, 2013). Islam is the most important and defining trait of the Saudi culture, which ultimately dictates everyday routine as well as norms, values and practices, including domestic and foreign policies that exercise a strict interpretation of the Islamic law within the country (Alhazmi & Nyland, 2011; Al-Saggaf, 2004; Bronson, 2005). The cultural and social values are so deeply intertwined with Islamic teachings in the Saudi context, that identifying or differentiating between social and religious values is virtually impossible (Al-Lily, 2011).

SFIS predominantly view themselves as Muslims who strictly obey all of Allah's commands; such as eating halal food, praying five times a day and the wearing of face or head coverings. In Saudi Arabia, women must wear a hijab in public as a symbol of modesty and morality (Almakrami, 2015 p.30); this is a fundamental tenet of governmental law. In addition, SFIS are restrained from publishing online any photographs of themselves with unveiled faces on the internet (Al-Saggaf, 2011, 2016). Finally, in Saudi culture, women are expected to remain modest and respectful. They seldom discuss politics or health-related topics such as sex (Al-Zahrani, 2010) as a gesture of obeying cultural norms. As a result, SFIS prefer using offline sources such as friends or family when sharing personal or health-related information, especially when accessing relatives through social media accounts.

2.2.2   Family ties and male guardianship

- **Family ties**

According to Islam, Muslims have to care for their families and maintain strong family ties. 'Family' is the pivotal concern for Arabs in general and Saudis in particular (El-Banyan, 1974), with each individual having a designated role within the family. The primary breadwinner in the Saudi family is the father, who also possesses most of the legal power and authority (Al-Khateeb, 1998), while the mother assumes the role of homemaker (Pharaon, 2004; Baki, 2004). Saudi women are *oura*[8] (Arebi, 1994; Alhazmi & Nyland, 2011); they maintain the honour of their respective families, and loss of family honour is a serious and irreparable disgrace (Al-Saggaf, 2011; Oshan, 2007). They are instructed to avoid face-to-face contact with unrelated males in order to prevent any opportunity for illicit relationships that could damage family reputation (Al-Saggaf, 2016.p, 4). The distribution of photographs of Saudi women is also forbidden, as it can lead to blackmailing from Saudi males, which is considered another form of an attack on a family's reputation (Al-Saggaf & Weckert, 2011; Al-Saggaf, 2016).

- **Male guardianship**

Male guardianship is a prominent feature of the Saudi cultural norm. In contrast to any other women in the world, Saudi women are expected to be accompanied by their *'mahram'*[9] when not at home (Al-Kahtani et al., 2006) Until recently, the male guardianship policy dictated that Saudi women are required to obtain their mahram's permission for most of their commercial, civil, and external activities, including shopping, applying for a job or university, travelling, filing a court case, jogging, or playing football in public areas (Hall, 2013). More importantly, their freedom is even further restricted because they are not allowed to drive (Raghavan, 2017). In April 2017, King Salman changed the male guardianship policy, decreeing that women should be allowed access to government services even if they do not have a male guardian's consent, unless existing regulations require it. However, these changes have not yet (as of September 2017) been officially implemented. Moreover, the decree

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[8]*Oura*: Something extremely private to be protected from the public and kept within the safety of homes.

[9]*Mahram*: a male guardian (e.g. an adult brother, father, husband, or son).

excludes many activities like travelling abroad or applying for a scholarship. In fact, a pre-condition for a female to accept a government scholarship to study overseas is her signed consent to travel with a mahram. This condition makes it impossible for many Saudi women to apply for overseas studies, especially when their male guardians cannot take leave from work to accompany them (Al-Zahrani, 2010).

The male guardianship policy led the researcher to assume that SFIS overseas would, out of cultural habit, rely on their husbands or mahrams when it came to fulfilling many of their external needs. In addition, because they did not have to pay for their study, financial and career information would not feature among their concerns, but they would probably have other concerns related to their accompanying family members.

2.2.3   Gender-segregation

In Saudi culture, any form of interaction and communication between a woman and an unrelated male is prohibited (Al-Saggaf, 2011; Oshan, 2007). A tarnished reputation in Saudi culture has more serious consequences for Saudi women and their families than for males (Almakrami, 2015), so SFIS are expected to be respectful and avoid talking to males other than immediate family members. To avoid adultery and prevent other males from violating the male honour of the family, restrictions are imposed on Saudi women.

One prominent example of a restriction is the gender segregation policy (Alhazmi & Nyland, 2013; Al-Munajjed, 1997; Al-Saggaf, 2016). It is only in Saudi society that a restricted gender segregation policy interferes with most people's social, academic, work, and political activities (Al-Saggaf & Begg, 2004). Alhazmi and Nyland (2013) argue that gender segregation stems from secular norms of Saudi Arabia that have become one of the major aspects of Saudi cultural identity. Unlike other Muslim countries, males and women in Saudi Arabia are segregated in most public spaces (e.g. banks, restaurants, schools), and rules are enforced by the presence of religious police (called the *Hayaah*) (Rajkhan, 2014). Saudi women can only communicate with unrelated males for professional purposes, such as buying and selling, and asking teachers or instructors for information or advice (Madini, 2012, cited in Al-Saggaf, 2016).

To comply with the Saudi segregation policy, most if not all public and private facilities have two separate physical areas. For instance, all restaurants serving both

males and women have gender-partitioned ordering counters and divided eating areas, one for 'singles', which means males, and one for 'families', which means women, plus children and any males in their parties who are close relatives (Alyami, 2016). Males and women not tied by blood or marriage can pretend they are related, but they risk punitive measures by the religious police, since the law and social regulations prohibit them from being seated together.

In Saudi society until recently, women working outside the home are employed in strictly gender-segregated jobs like teaching and healthcare (e.g. nursing), although nursing is not preferred (Moghadam, 2013), whilst more 'suitable' occupations have been opened for women. The Ministry of Labour continues to enforce dress codes and gender separation (Alhamdan, 2015). Arabian Business (2016) reported that the Ministry was pursuing 100% 'feminisation' of shops that sold women's wear and baby paraphernalia. Other retailers and gender-mixed workplaces must provide line-of-sight barriers between male and female employees.

Saudi Arabia also has a completely segregated system of female education, with separate administrative structures and physical facilities for women (El-Sanabary, 1994). Male teachers are not allowed in women's schools or colleges, and vice-versa, while a system of closed-circuit television transmits lectures by male teachers to female students (El-Sanabary, 1994), with the exception of medical schools and exceptional cases such as the King Abdullah University (KAUST), which is built in a secure compound (Alyami, 2016).

The extreme precautions by Saudi males to protect the honour of their women along with physical concealment, veiling of women (Al-Munajjed, 1997) and male-female segregation have forced all Saudi males to deal predominantly with the public life while females take care of household matters (Baki, 2004).

2.2.4   Implications of Saudi culture for SFIS' ISB

As transient migrants, when Saudi females travel abroad for study, they need to become acculturated into their host countries. This research assumes that the cultural features given above may make a large difference to SFIS' ISB. Saudi Arabia's cultural form of Islam, male guardianship and gender segregation are uncommon in many of the western university cities that Saudi students travel to, so Saudi females may face some challenges. First, Islam, for example, requires them to conform to a dress code, diet,

and regular prayer times, so they may face difficulties finding out where they can obtain and practice these requirements. Second, male guardianship will have to be abandoned for the purpose of attending classes, prescribed outings, and information searches for their assignments and other academic tasks, which may prove difficult for individuals who don't normally make their own decisions. Finally, Saudi female international students will have to become accustomed to being in the presence of male students and teachers, and thus seeking their information from them may create ISB difficulties. It is highly likely then, that there will be challenges and changes to females' ISB.

2.3   Saudi women's digital background

Saudi Arabia has also been criticised for its highly strict and censored online environment (Al-Saggaf & Begg, 2004). Public internet access only commenced in 1999, which is late compared to other countries, even Gulf Cooperation Council (GCC) countries (Al-Kahtani et al., 2006). This delayed introduction of internet services is due to Saudi's cultural, religious and political policies, including its government's desire to use filtering systems to censor internet content to prevent the arrival of undesirable material (Al-Saggaf, 2004). It is only in Saudi Arabia where many medical sites with content related to private body parts are considered illegal and blocked. Other examples of censored and blocked websites in Saudi Arabia are those to do with religions other than Islam, human rights, pornography, drugs, western media and specifically anything related to Israel and the Jews (Danielewicz-Betz, 2013, p.218). When trying to access any of these 'forbidden' sites, one would be directed to the automatic warning message shown in Figure 2.2.

Figure 2.2: Automatic warning page when trying to access a 'forbidden' site

Many online websites and applications are blocked, since freedom of expression is limited (Al-Saggaf, Himma & Kharabsheh, 2008), which is an attempt to control the free open nature of online applications where messages, advertisements and videos can spread rapidly to reach an audience of millions (Vie, 2008). In 2013, Saudi Arabia blocked Viber and threatened to ban other similar online applications such as Skype and WhatsApp (Jamjoom, 2013). In fact, by 2016 several other messaging sites had been completely or partially blocked, including FaceTime, Snapchat, Telegram, Skype, Line, Google Hangouts and Facebook Messenger, as well as Viber. A recent headline in Global Voice (2016) states:

> *Angered By Mobile App Censorship, Saudis Ask: 'What's The Point Of Having Internet?' (Abrougui, 7 September 2016)*

However, despite the heavy online censorship, the advent of social media and smart phones is radically changing the way Saudi society views internet technology. Recently, Saudi Arabia has witnessed a rapid growth in the number of Saudis using the latest Information and Communication Technologies (Al- Saggaf & Weckert, 2011). One reason for the growth is that 60 % of the Saudi population comprises teenagers and young adults who are adapting to new technologies faster than expected (Central Department of Statistics, 2005, cited in (Al-Subaihi, 2008). Additionally, many religious scholars who have previously called for a clamp-down or complete ban on these networks, referring to them as 'pornographic networking sites' (Taha, 2013). However, Mohammad al-Arefi, a well-known cleric and scholar represent the top tweeters in the country with millions of followers (Rizwan, 2014). Nowadays, many young Saudis have become dependent on online social networks (OSNs) mainly as a tool for communication, expression and accessing information (Taha, 2013). According to a recent report by the Dubai School of Government (2013), the number of Twitter memberships in Saudi Arabia has grown dramatically from 115,000 in March 2011 to over 1.9 million registered users in May 2013, making Riyadh the tenth active Twitter city globally, accounting for 2.3 per cent of all tweets (Semiocast, 2012).

With a focus on Saudi women and social media, scholars have described the advent of social media as the era of 'social reforms' and 'women empowerment' (Dubai School of Government, 2011; Tomlin, 2012). Al-Saggaf (2016) reported that according to a survey of 3,000 people in Saudi Arabia conducted in 2014 by the Saudi Arabian Communications and Information Technology Commission (CICT), 96% of females

used the Internet compared to 89% males, and 94% of females used mobile broadband compared to 86% males. These statistics suggest that women are well represented online (Al-Saggaf, 2016). Tomlin (2012) argued that it is only through the use of social media that Arab women's participation in economic and political life has progressed. In fact, the increasing use of social media allows females to increase their self-expression and promote social change in their society. Social media tools expose aspects related to Saudi women's daily lives and thus affect the way women interact with the government, conduct business, and engage in civil society movements (Tomlin, 2012).

Social media can provide Saudi women with a safe avenue to make their voices heard and discuss their problems and concerns (Al-Saggaf, 2011; Saleh, 2014). Their ability to express opinions on social and political matters was cited as a major reason for SFIS' use of Facebook (Binsahl & Chang, 2012). A well-known example of the Saudi women's use of SNS was the 'Women2Drive' campaign launched in 2011. In their Facebook and Twitter accounts, Saudi women for the first time turned their private complaints about their lack of driving rights into a public discussion (Dubai School of Government, 2011). Although the campaign did not succeed and was blocked for some time by the government (Dubai School of Government, 2011), it has recently (September 2017) been announced that women will be officially able to drive in 2018.

Researchers also argue that due to the anonymity aspect, social media and online communities violate the Saudi gender segregation norms allowing Saudi women to freely communicate with the opposite gender (Al-Saggaf, 2011; Madini, 2012), which improved direct communication and interaction between the two genders in Saudi Arabia (Madini & De Nooy, 2013). However, recent studies on Saudi women's social media use also showed they still preferred to maintain their Saudi traditions by avoiding communicating with Saudi males (Madini, 2012) and limiting their communication with males to only the discussion of opinions (Alruwaili, 2017; Al-Saggaf, 2016). Madani (2012) found very little cross-gender communication between Saudi doctoral students in an online discussion forum: the students felt they were representing Saudi Arabia (they had been sponsored by the Saudi government) and wanted to maintain Saudi traditions. Madani also found that even though these students knew each other on the university campus, they believed their online behaviour might be monitored by the Saudi embassy.

2.3.1 Implications of SFIS' digital background on ISB

Reflecting on the above digital background, the researcher suggests that as SFIS start their digital journey in Australia they will seek and use information based on their Saudi traditions, such as avoiding the sharing of personal photos. Furthermore, many internet and social media sites are proscribed by the government for religious/cultural reasons, which is likely to narrow down their information sources. At the same time while in Australia, SFIS will experience a culture of greater digital freedom and will have access to a wider range of online sources and technologies, including websites that are currently blocked in Saudi Arabia. This may lead to changes in their online behaviour, including changes in the kind of information they seek and use.

2.4 Saudi women's educational background

The educational system in Saudi Arabia is different to those in native-English countries such as Australia. For instance, the Saudi educational system still relies on a teacher-centred method of teaching, requiring students to rely on memorising textbooks and recalling memorised text in class and during examinations (Altamimi, 2014; Hamdan, 2005; Razek & Coyner, 2013). Another prominent feature of the Saudi educational system is the contrast to western college students who start using computers from their early childhood (Jones & Madden, 2002). Saudi female students were not granted internet access from public university labs until 2004 (Harden & Al Beayeyz, 2012).

 In Saudi Arabia, the Ministry of Education's priority since 2004 has been to replace textbooks with computer technology and reorient the focus of pedagogy from the teacher to the student (Almazroa & Al-Shamrani, 2015; Wiseman, Astiz & Baker, 2013). Recently, the ministry also admitted the importance of preparing school students and graduates' competency levels in technology use an important attribute 'to face international competition both at the scientific as well as technological levels to be able to meaningfully participate in overall growth and development' (UNESCO-IBE, 2007). Despite this, 10 per cent of institutions were still not providing internet access to students in 2014, whilst only 26 per cent provided access to more than 80 per cent of students (Saudi Arabian Communications and Information Technology Commission, 2016).

According to Al-Alwani (2005) science teachers encountered numerous practical issues in using the new Saudi-wide educational system Tatweer[10]: lack of resources, training, assistance in setting up class activities, use of keyboards, sharing computer resources with competing classes, and internet speed. Hence, despite the recent educational and digital changes and improvements in Saudi education, it is important to note that not all Saudi women benefit from these changes, especially older women and those from rural and small towns.

Finally, in Saudi Arabia, Arabic is the national language, receiving prominence in all Saudi communications. Elyas and Picard (2010) noted that English has only been taught in primary schools since 2003, and this lack of early training significantly influences future language fluency, although the Internet may influence this assessment. Nevertheless, language proficiency and the accent of non-native speakers teaching in a foreign language may impact fluency. English language taught in Saudi schools differs greatly from that encountered by Saudis when overseas with respect to accents, phrasing, grammar, and idioms. Therefore, for Saudi students, learning English can be a greater challenge than it is for other international students, such as those who speak Roman or Germanic languages, because the differences between Arabic and English are so stark (Heyn, 2013). This consequential language barrier affects the Saudi's confidence in communicating with others (Al-Qahtani, 2015) and adjustment to the Western educational system (Lefdahl-Davis & Perrone-McGovern, 2015; Sandekian et al., 2015).

2.4.1   Implications of SFIS' educational background on ISB

Reflecting on the above educational background, this thesis assumes that by moving to the advanced Australian online-based educational system which routinely employs innovative technologies such as social media tools, wikis, and blogs into their curriculum (Gray, Chang & Kennedy, 2010) and its vast online information dissemination though these technologies (Alzougool et al., 2013a), SFIS are likely to experience a digital transitional challenge. This is a direct result of women who are not

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[10] *Tatweer* Arabic word meaning 'development'. It is the name of the King Abdullah bin Abdul-Aziz Project for Public Education Development which was established to reform the Saudi educational system in 2007 (Alyami,2014, p.1515).

adequately proficient in English and skilled in the use of information and communication technologies (Alruwaili, 2017; Dubai School of Government, 2013). This researcher suggests that as SFIS begin their education journey in Australia, a number of questions will arise such as: how do SFIS navigate the educational environment when they do go overseas and are exposed to different learning styles and education technologies they need to use to fulfil their academic needs?

2.5 The King Abdullah Bin-Abdulaziz era

2.5.1 Saudi women in the era of King Abdullah Bin Abdul-Aziz

Since 2005, King Abdullah (d. 2015) tended to address some of the divisions between the genders, allowing women to stand for elections and vote in municipal advisory bodies, while also opening up more job opportunities (Rahman, 2014). In fact, King Abdullah's period has been described as the 'era of women empowerment' and he was described as a 'Women's' Rights Advocate' as he pushed to pass laws giving women more rights, often arguing with the religious establishment (Florcruz, 2015, p.1). It was during this period that Saudi women were issued national identity cards, while policy and legislation were passed in their interests and many new jobs opened up for woman. In 2009, the first Saudi woman to hold a government position was the then appointed Deputy Minister of Education, while another woman was appointed University Director for the Princess Noura bint Abdul Rahman University (cited in Rajkhan, 2014, p.16). For the first time seats in the Majlis Al-Shoura[11] were assigned to thirty Saudi women (Shura Council, 2016). In addition, the government dedicated significant financial resources to train women for employment addressing their long-standing issues regarding employment. These initiatives have resulted in further strengthening of the gender separation policy resulting in more job opportunities for the semi-skilled female workforce.

2.5.2 King Abdullah Bin-Abdulaziz Scholarship (KASP)

Another outstanding feature of King Abdullah's era was his unprecedented support for Saudi females to study abroad through the King Abdullah Scholarship Program

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[11] Majlis Al-Shoura is The Council of Ministers, comprised of advisers appointed for four years from business, the public sector, society and the various factions of religious and tribal representatives.

(KASP). This program is also known as the Custodian of the Two Holy Mosques Scholarship (Arab News, 2014; Saudi Arabian Ministry of Education, 2016). It should be noted that although there are a number of other scholarship programs, for example ones provided by public sectors (e.g. universities, agencies) for their employees, KASP is the largest most significant scholarship program in the history of Saudi Arabia (Hall, 2013; Murphy, 2013). The aim of KASP is to provide an immersive learning experience to Saudi citizens particularly in the sciences and is open to women and males (Bukhari & Denman, 2013). KASP has created new opportunities for Saudi females to study at overseas universities enabling them to receive high quality education and enrol in areas of study currently unavailable for females in Saudi universities, such as engineering (Alanazy, 2013). During the 2013–2014 academic year, almost 200,000 Saudi students were studying overseas with the United States the host country for the largest influx of Saudi students followed by the UK, Canada and Australia (Ahmed, 2015). Under all Saudi scholarships including KASP, SFIS and their accompanying family members or mahram (male guardian) are provided significant financial and academic support for all tuition and living costs during their stay abroad (Hall, 2013). If the mahram academically qualifies for a scholarship he is also accepted into the program (Murphy, 2013).

KASP was introduced in 2005 and initially intended to last only 5 years but when concluded at the end of 2010 it was extended for another five years to 2014, and then again for another five-years, which ends after the end of the 2019 fiscal year (Saudi Arabian Cultural Mission (SACM) to Australia, 2016a). Scholarships have been designed to build substantial Saudi expertise and experience in disciplines where Saudi Arabia at present has to employ large numbers of foreign professionals (Alotaibi, 2015). This move reinforces long-standing 'Saudisation' policies directed to removing foreign workers who form a significant black market and whose wages and profits to their home countries have begun to affect Saudi foreign reserves (Ramady, 2013). Hence approved undergraduate qualifications are restricted to healthcare professions, reflecting the proportions of overseas staff in the country particularly physicians and medical specialists. Similarly, approved Master's and PhD qualifications include engineering, information and communications technologies, pure sciences, management and business administration (Saudi Arabian Ministry of Education, 2016). Saudi students know their stay in Australia is temporary (Shepherd & Rane, 2012).

When they finish their studies, returning to the conservative Saudi culture is inevitable unless students can extend their scholarship to obtain a higher degree (Hall, 2013). This is unlike other international students who may be motivated to study in Australia with the intention of getting permanent residency.

To support Saudi students academically, financially, and socially during their study abroad, a number of Saudi Arabian Cultural Missions (SACMs) were established in different host countries. SACM established its office in Canberra Australia in 2004. SACM monitors students' progress and facilitates communication between the Saudi sponsors the students and the Australian universities where they study (SACM, 2016a). SACM has published a number of informational links on their website and social media channels to help prospective and current students find their way around Australia, with information covering issues such as transport, healthcare, transferring to another university or course, Saudi Clubs for social interests, and on-campus branches for academic support[12] (Saudi Arabian Cultural Mission to Australia, 2016b) (Appendix 1 has a list of SACM initiatives supporting Saudi students).

2.6   SFIS and their international transition experience challenges

As mentioned before, SFIS face significant cultural and educational differences while studying overseas such as being taught by male faculty members, attending classes with male students, being able to drive a car and having no gender segregation in public settings (Lefdahl-Davis & Perrone-McGovern, 2015; Razek & Coyner, 2011). For instance, recent studies on SFIS' sojourn experiences identify transitioning into the mixed-gender educational environment as the first and foremost challenge that negatively affects their cross-cultural and academic adaptation especially for those who recently arrived in Australia (Alhazmi & Nyland, 2013; Al Murshidi, 2014; Sandekian et al., 2015). On the educational level, language adjustment is another common cross-cultural challenge among SFIS (Sandekian et al., 2015). SFIS also face different educational challenges emerging from changes occurring in their learning styles, for instance SFIS reported their unfamiliarity with their host country's student-centred

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[12] Since 2017 (too late for this thesis except as a footnote), SACM has announced additional academic and ELIS initiatives to help their Saudi students.

methods that involve a large amount of self-learning (Al-Sheikhly, 2012; Razek & Coyner, 2013).

However, researchers also found that the longer SFIS are exposed to Western educational and cultural environments, the more change they experienced (Alhazmi & Nyland, 2011; 2013; Lefdahl-Davis & Perrone-McGovern, 2015). In fact, most SFIS identified the experience of being an international student an opportunity for greater personal freedom, self-discovery, and increased assertiveness, independence, confidence, and cultural awareness, which significantly influence their information needs and ISB (Alruwaili, 2017; Lefdahl-Davis & Perrone-McGovern, 2015). These are unique challenges SFIS faced during their transition experience are further discussed in the next chapter.

Chapter summary

This chapter justified the choice of SFIS as a case study in this thesis by presenting the background of SFIS in general and unique challenges they face when transitioning to Australia. First, it describes the unique cultural, digital and educational background that makes Saudi women a unique group of international students. Next, using this background context, this chapter elaborates on the major changes that have occurred due to King Abdullah's KASP program that focuses on international scholarships for Saudi student. Then it briefly discusses the challenges SFIS experience during their educational journey resulting from their unique cultural background. The next chapter, the Literature Review, captures and synthesises academic literature on international students' information needs and ISB, and examines relevant theories that are used to explore students' ISB.

Chapter 3
Literature Review and Theoretical Background

Introduction

As mentioned in Chapter 1, this research focuses on the ISB journey of transient migrants when moving between different countries, narrowed down to the ISB of Saudi female international students. Chapter 2 identified the study context and explained why SFIS were chosen as a case study for this research. This chapter[13] critically reviews existing literature on international students' (including Saudi students') information needs and ISB. It also critically reviews current conceptual ISB models intended to explain and understand students' information-seeking behaviour. Some of studies surveyed in this review were published over a decade ago, and may be considered out of date given the changes and advances in communication and information technology over the past ten years. Yet the same barriers to successful ISB are still being encountered—many of the older studies are still relevant, and are cited by many recent researchers including Case and Given (2016), whose seminal work on information-seeking is now in its fourth edition.

Information-seeking behaviour (ISB) is directly related to the topic of information needs in that individuals' ISB can be justified by the requirements of different types and frequency of their information needs. This relationship dictates the structure of this review. Therefore, after describing how the literature was collected for review (Section 3.1), this chapter introduces the term "information needs" and its relationship with ISB in Section 3.2. Then, Section 3.3 describes the literature on international students' ISB journey followed by academic and everyday life information seeking (ELIS) as drivers of international students' ISB as well as information sources of international students. Next, Section 3.4 discusses the literature on the ISB challenges facing international students in general and SFIS in particular. Section 3.5 highlights gaps found in the empirical research followed by the research questions in Section 3.6. Sections 3.7 and

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[13] Elements of this chapter appear in the researcher's publications listed on page 9, Chapter 1.

3.8 provides ISB models and theoretical behaviour models respectively followed by a refined version of the DTPB (Section 3.9) highlighting the assumptions and propositions that guide this research.

3.1 The literature review process

Key ISB literature was collected from reliable online and offline resources: peer-reviewed journal articles, conference papers from internationally recognised institutions and researchers, PhD and Masters research dissertations and theses from reputable institutions. Databases searched included Elsevier, Emerald, Google Scholar, ProQuest, and the Melbourne University library, using the following keywords/search terms: information needs, information-seeking behaviour, information-seeking behaviour of transient migrants, information-seeking behaviour of international students, Saudi female international students' cross-cultural experience, and Saudi students' information needs. The three criteria that impacted the selection of papers were:

(i) quality—internationally recognised peer-reviewed conference and journal papers

(ii) relevance—directly related to one or more of the major research areas

(iii) currency—the selected papers should be no more than 10 years old, unless they are seminal works or contained useful research/conclusions that are still relevant.

3.2 Information needs and ISB definition

ISB is the behaviour or activities that people perform in order to find specific situational information they need (Wilson, 2000). ISB research focuses on people's information needs: how they seek, manage, give and use information, both purposefully and passively in the varied roles that comprise their everyday live (Fisher & Julien, 2009).

There are many reasons why people search for information including answering queries, solving problems, helping make decisions, and satisfy curiosity. These information-seeking drivers or motivations can collectively be explained by the 'information need' construct. However, defining 'information need' is problematic. Studies propose different definitions for understanding or explaining the concept. For example, Cole (2012) defines information need as 'the motivation people think and feel

to seek information' (Cole, 2012, p. 3). Alzougool, Chang & Gray (2013b, p.5) define information need as the type of information that is essential to individuals 'as a result of the context in which they act'. Case (2002, p.5) defines information need as 'a recognition that your knowledge is inadequate to satisfy a goal that you have'. Case and Given (2016) argue that despite there being a critical relationship between a need and what one does about it (that is, ISB), it is problematic 'to assume that one's actions are *solely* caused by an internal 'need' (p. 82, italics in original)—information seeking can also occur due to curiosity (Case, 2012) and through serendipity (Dantonio, Makri & Blandford, 2012; Foster & Ford; 2003; Makri & Blandford, 2012). Hence some researchers (e.g. Alzougool, Chang & Gray, 2008; Alzougool et al., 2013b; Case & Given, 2016; Wilson & Walsh, 1996) argue that the term 'information need' lacks a clear definition, which in turn indicates a lack of adequate understanding or clarity.

As it is beyond the scope of this research to inquire into the linguistic, philosophical, psychological and social meanings and definitions of the term 'need' or find out whether the information was found purposefully or serendipitously, this thesis accepts Case's (2012) definition of information need as a state when a person recognises that there is a gap between the information and knowledge available or they possess to solve a problem or a concern. For this study, the term includes various information requisites such as types and formats of information, in accordance with Alzougool (2010).

Many of the ISB challenges faced by international students are created not simply by their recognition of this gap, but more importantly by how they set about closing the gap using the knowledge they already possess or using what is available. Learning what to do with the knowledge and information they already possess, finding out what more is available and learning how to access information constitute their ISB journeys.

3.3   International students' ISB as a transitional journey

Once they have moved overseas, international students (including SFIS) encounter a number of challenges that affect both their academic and cross-cultural adaption success. Evidence from numerous studies (e.g. Cemalcilar, Falbo & Stapleton, 2005, Gomes et al., 2014a, b; Kashima & Loh, 2006; Sawir et al., 2008) indicates that the social and emotional support that students lack from their now remote friends and family leads to most of the transitional challenges faced by international students.

Ineffective information acquisition or the inability to fulfil information needs can also cause transitional challenges in terms of cross-cultural adjustment to a new environment (Chang & Gomes, 2017a; Sin & Kim, 2013; Sin, 2015; Smith, Nayda & Rankin, 2011). The importance of helping international students to fulfil their information needs has been emphasised by scholars (Alzougool et al., 2013a; Chang & Gomes, 2017a; Hughes, 2013; Sin, Kim, Yang, Park & Laugheed, 2011; Sin & Kim, 2013).

Since most international students are considered 'netizens' (Chang & Gomes, 2017a, p. 308), there has been more interest in understanding how these students access and seek information they need in the digital age. Currently, in an attempt to provide international students with the necessary information, educational institutions provide multiple offline (e.g. orientation programs) and online (e.g. social media) information channels. However, the benefits of such systems cannot be realised if students fail to use them and it seems to be the case that most international students fail to access their host country's offline and online resources (Alzougool et al., 2013a). International students still find it hard to find the information they need (Alzougool et al., 2013a; Chang & Gomes, 2017a; Hambrecht, 2006; Mehra & Bilal, 2007; Sin, 2015; Sin & Kim, 2013; Sin et al., 2011). Instead, students prefer their home country's sources (Alzougool et al., 2013a; Chang & Gomes, 2017a). Possible explanations for the poor use of a host country's online portals and ISB in general include:

- students' lack of awareness that universities offer a wide range of online services to meet the information needs of all students, including alumni services for graduates (Hambrecht, 2006; Lawson, 2012; Mehra & Bilal, 2007),
- some students' preference to access their home country sources rather than international or local sources for socio- cultural constraints (e.g. negative cultural perceptions regarding embarrassment and loss of face when seen to be requiring help) (Hambrecht, 2006; Lefdahl-Davis & Perrone-McGovern, 2015),
- the information provided by educational establishments does not take into account that students from different countries have different needs (Alzougool et al., 2013a; Sin, 2015) and different preferred information sources (Chang et al., 2014; Saw et al.,2013),
- students' poor language and internet search skills and lack of familiarity with their host countries' online sources and applications (Chang & Gomes, 2017a;

Hughes, 2013), *and*

- service providers and website designers' lack of understanding how international students seek their information in the rapidly changing digital and social media age (Alzougool et al., 2013a; Chang at el., 2014; Chang & Gomes, 2017a).

Consequently, since helping international students in their ISB journey has become an educational and governmental concern in the digital age, it is essential to understand how international students from different cultural and digital backgrounds seek their information when transitioning between different countries (Alzougool et al., 2013a; Chang & Gomes, 2017a; Sin & Kim, 2013). In order to investigate the impact of the transition experience on transient migrants' ISB journey (SFIS in this case), the following sections discuss the information needs, information sources and challenges faced by international students, as reported in the literature.

3.3.1 Information needs of international students

Throughout their transitional experience, international students report different information needs and ISB depending on (a) their culture and countries of origin (Kim, 2013; Komlodi & Carline, 2004; Liao, Finn & Lu, 2007; Liu & Redfern, 1997; Liu & Winn, 2009; Song, 2005; Yi, 2007), (b) language levels (Hughes, 2013; Liu & Redfern, 1997; Yi, 2007), and (c) prior digital experience and library use in their home country (Hughes, 2013; Mehra & Bilal, 2007; Song, 2004). Consequently, in this thesis the researcher assumed that SFIS would experience specific culturally based subjective perceptions of their information needs in Australia.

In the literature, information needs are classified in various ways. Alzougool et al. (2013b and Chang and Gomes (2017a) recognise four categories based on what they call the 'state' of the needed information: (i) recognised /demanded, (ii) recognised /un-demanded, (iii) unrecognised/demanded, and (iv) unrecognised/un-demanded. Alzougool et al. (2013a), Savolainen (1995), and Sin and Kim (2013) classify information needs according to the topic. Of these classifications, the most useful for the purposes of this research is Savolainen's classifications of information into (i) 'job- or school-related' and (ii) 'everyday life information-seeking' (ELIS). ELIS is the search for information related to taking care of one's family and home, shopping, pursuing a hobby, checking public transport timetable and routes, and so on. ELIS behaviour is culturally bounded, socially situated and affected by individuals' 'way of

life' and 'mastery of life' (Savolainen, 1995, p. 262).

For this research, the researcher adopted Savolainen's classification of information needs, whereby international students' information needs were classified into academic needs (Savolainen's job/school related needs) such as those related to studying or using the library) and ELIS (non-academic) needs, for example those pertaining to the everyday life of international students while living in Australia. From this point on, the researcher uses the term ELIS for 'non-academic' where appropriate. The following sections review the literature on international students' academic and ELIS needs, followed by the sources used by international students searching to fulfil their needs.

- **Academic information needs of international students**

Academic information needs, in this context, relates to information that help international students fulfil their learning or study obligations. Academic needs can be sub-divided into two categories:

(i) administration and academic-related information to perform academic progress-related tasks: enrolment, rules and regulations, choice of subjects, course requirements, etc. This information can be sought offline (e.g. consulting professors about assessment or asking peers for guidance) and online (e.g. checking the university website or consulting friends via social media), *and*

(ii) academic task completion-related information such as preparing for tutorials or exams, research for assignments, etc. This information can also be sought offline (e.g. consulting librarians for assistance, reading textbooks) and online (e.g. accessing databases).

Most existing research on international students' academic information needs focus on the way students perceive and use libraries for information seeking (Hughes, 2013; Liao et al., 2007; Liu & Redfern, 1997; Song, 2004; Yi, 2007). Most research participants are from China, Japan, and South Korea (Hughes, 2010; Song, 2005; Yi, 2007) studying in the USA, UK, Australia, New Zealand and Ireland, which is not surprising given the considerable majority of international students coming from an East Asian background (Australian Department of Education and Training, 2015; Gomes, 2015).

Within the academic context, online search engines especially Google, aid in finding the right kind of academic information (Alzougool et al, 2013a; Hughes, 2013; Mehra

& Bilal, 2007; Song, 2005). In addition to using search engines, international students use social media websites for academic purposes (Alzougool et al., 2013a; Gray et al., 2010; Hamid, Bukhari, Ravana, Norman & Ijab, 2016), including (but not limited to) social networking sites (SNS) such as Facebook, microblogging sites like Twitter, media-sharing sites such as YouTube and Instagram, and other sites including blogs and wikis (Al-Debei, Al-Lozi & Papazafeiropoulou, 2013).

- **ELIS information needs of international students**

Apart from their academic needs, international students have a variety of different daily needs that drive their ISB. Unlike academic information needs, ELIS information needs are much more complicated, diverse and large in number (Savolainen, 1995; Spink & Cole, 2001) to the extent they may resist classification into further sub-categories. Consequently, this thesis classifies all information needs that do not fit into the 'academic' category as 'ELIS'.

International students' ELIS needs to include pre-departure information about visas, immigration, financial matters, and the host country (Chang et al., 2012; Sawyer, 2011). Participants in Sawyer's study told of their pre-arrival information searches to become familiar with the American way of life and understand American cultural norms and traditions before travelling. Other information essential to transitioning to a foreign country includes cost of living, accommodation (finding, selecting, and renting), health, entertainment, social events, shopping (Alzougool et al., 2013a; Sin, 2015; Sin & Kim, 2013; Smith et al., 2011), and legal/financial information (Mehra & Bilal, 2007; Sin & Kim, 2013; Sin, 2015).

The majority of international students cite ELIS information as the most difficult kind of information to find and researchers agree that more research is needed. Alzougool et al. (2013a) state that what is needed is '…a clearer understanding of the ways in which international students seek information for their basic, every day and specific needs' (p.48)—they even suggest a nation-wide survey. Sin (2015) states that 'students' ELIS is a promising area of research that would benefit our understanding of the information needs and behaviour of our users' (p. 24). Sin & Kim (2013) recommend that 'given the dearth of study about international students' everyday information needs, more research is encouraged to test whether different samples would yield similar results to [their] study', (p. 113). Smith et al. (2011) state that 'additional attention to issues such as finding appropriate accommodation, and food and participating in social activities is

important if students are to study effectively, experience educational satisfaction, be successful graduates, and promote the higher education institution and host country to potential future students' (p. 95). Researchers also agree that successfully sourcing information for ELIS needs is essential for international students because it makes cross-cultural transition easier and contributes to a sense of belonging (Alzougool et al., 2013a; Sin & Kim, 2013; Sin et al., 2011; Smith et al., 2011; Song, 2004).

This thesis aims to add more understanding to both the academic and the ELIS ISB of international students, as identified by previous research.

3.3.2 International students' information sources

Alzougool et al. (2013a) and Song (2005) state that unless there is a better understanding about the information sources used by international students from diverse backgrounds, it will be difficult to develop strategies that meet and also influence these students' expectations and needs. To begin to understand such a complex phenomenon as 'information sources' requires an initial classification.

In the ISB literature, there are different classifications for information sources. For instance, Case (2012) classifies information sources as 'formal' (printed forms, e.g. textbooks, newspapers) and 'informal' (non-printed, e.g. friends, family, TV, online discussion lists, social networking sites). Agarwal (2011) classifies information sources as interpersonal (e.g. colleagues, friends, supervisors, internal and external experts) and impersonal (e.g. documents, manuals, journals, books, libraries, electronic repository, digital libraries, Google). This research adopts Alzougool et al's (2013a) classification of information sources into offline (e.g. word-of-mouth) and online (e.g. Google and social media) categories. The following sections discuss the different types of offline and online information sources accessed by international students to fulfil their information needs.

- **Offline sources of information**

Throughout their ISB journey international students frequently use word-of-mouth as a suitable channel for information about studying and living abroad (Alzougool et al., 2013a; Chen, 2006; Chen & Zimitat, 2006; Ling & Tran, 2015; Sin, 2015): they question peers, relatives, alumni, friends and university agents (Alzougool et al., 2013a; Fallon, 2006; Hambrecht, 2006; Ling & Tran, 2015; Sin, 2015). The role of agents was highlighted by Asian students as critical for filling the gaps in information to assess

their preliminaries to study including advice about courses, help with visa and scholarship applications, and information concerning pre-departure orientation (Dempsey, 2010; Ling & Tran, 2015). On arrival in the host country, interpersonal interactions with local people is invaluable for information regarding everyday tasks such as buying groceries, hiring a television, going to restaurants, or catching the right train (Gomes et al., 2014b; Hendrickson, Rosen & Aune, 2011; Jeong, 2004).

Once they begin studying, offline academic information is obtained from professors and teachers, and although cultural barriers often prevent effective library use, students' ability to find information using offline library sources such as specialist librarians improves considerably, the longer they stay in the host country (Liao et al., 2007; Mehra & Bilal, 2007; Sackers, Secomb & Hulett, 2008).

- **Online sources of information**

Recent digital advancements, especially the introduction of smart phones and social media, have changed the way transient migrants communicate (Chang et al. 2012; Gomes et al., 2014b, Komito, 2011) and access information (Chang & Gomes, 2017a, b; Chen, 2010; Sin & Kim, 2013). Due to digital technology use, information seekers are becoming more adept at traversing boundaries between different resources (e.g. digital libraries, the web, and social media) creating seamless interaction between these resources (Adam & Blandford, 2005).

Recent studies show the use of online sources is surpassing the use of offline sources in every aspect of academic and ELIS ISB for international students (Sin & Kim, 2013; Sin, 2015). The most influential factors for all students' ISB is convenience, minimal effort, and what is perceived to be 'authentic' (Agarwal, 2011; Chang & Gomes, 2017a; Connaway, Dickey & Radford, 2010; Henkin, 2012; Sin, 2015). These findings are supported by studies showing that the general tendency of *all* internet users is to override complex information channels and techniques and engage in simpler information retrieval modes (this tendency is known as Zipf's Law, namely the 'principle of least effort', Zipf, 1948). For convenience and minimal effort Google is usually the preferred first choice when searching for information.

- **Social media as a source of information**

Over the past years, social media have overtaken most other communication channels, not only for socialising. The pedagogic and research potentials of social media are now

popular areas of discussion. Pedagogically, Gray et al. (2010), Hamid (2013) and Sharples et al. (2014, 2016) have focused on students' abilities to integrate specific social media platforms as tools for the development and learning of educational activities. Grand et al. (2016) argue that social media should be encouraged among researchers to engage quick, instant and free interactions with other academic and research stakeholders and communities.

Researchers (e.g. Alzougool et al., 2013a; Chang & Gomes, 2017a; Chen, 2010; Sin & Kim, 2013) also highlight the role of social media as a critical ingredient in supporting and sustaining international students' efforts to fulfil their information needs. Online communication via social media greatly facilitates the exchange and distribution of information between users, and provides the most suitable medium for expressing opinions and exchanging information for international students, including students such as SFIS whose interpersonal interactions with fellow students and teachers might be inhibited. Further, by facilitating the strong ties between international students and their friends and families, social media can help in combatting early cultural adjustment (Lin, Peng, Kim, Kim & LaRose, 2012).

International students report differences in their preferences for social media based on their geographical location (Kim, Sohn & Choi, 2011; Saw, Abbott, Donaghey & McDonald, 2013, Sin & Kim, 2013), information needs (Alzougool et al., 2013a) and longer exposure to their host country (Chen, 2010). Research suggests that each social media site has its own function for international students: Facebook for keeping in touch with others, getting news, and expressing opinions (Alzougool et al., 2013a; Lee & Ma, 2012; Li & Chen, 2014; Saw et al., 2013; Sawyer, 2011), Twitter to track down and share information quickly (Hamid et al., 2016; Lee & Ma, 2012; Saw et al., 2013), and YouTube videos for visual academic information (Alzougool et al., 2013a; Kim, 2013). At the same time, however, individual preferences of international students vary in this regard from one student to another (Saw et al., 2012). For example, while Saw et al. (2012) have reported that Facebook is their study participants' major source of academic information, Majid and Fai's (2012) and Zhang's (2012) participants described Facebook as inappropriate and unreliable when seeking sensitive information related to health issues for example.

Because of such diversity in preferences, researchers have called for more research on international students' information needs, especially with regard to particular influences

concerning a student's nationality and cultural background (Alzougool et al., 2013a; Chang et al., 2012; Kim, 2013). Unless the ways in which international students from different cultural and digital backgrounds seek their information is better understood, it will be difficult to (i) target appropriate communication channels to better engage international students (Alzougool et al., 2013a; Saw et al., 2013), and (ii) encourage these students to adopt useful ISB strategies that meet (and influence) expectations and needs of their diverse backgrounds (Song, 2005).

Finally, research on international students' shows that throughout their ISB journey, multiple ISB challenges are faced when they access information sources (Chang & Gomes, 2017a; Hughes, 2013; Mehra & Bilal, 2007). A wide range of ISB challenges has been highlighted resulting from cultural, language, academic and digital transition (especially faced by Asian students) (Chang & Gomes, 2017a; Hughes, 2013; Liao et al., 2007; Mehra & Bilal, 2007; Yi, 2007). To further identify and understand transient migrants' ISB challenges, the following section discusses these challenges in detail as exemplified by SFIS and other international students.

3.4   International students' ISB challenges

Research has highlighted a wide range of ISB challenges, both academic and ELIS, faced by international students (especially from Asia) resulting from cultural, language, and digital transition (Chang & Gomes, 2017a; Gu, Schweisfurth & Day, 2010; Hughes, 2013; Liao et al., 2007; Mehra & Bilal, 2007; Shahraniza, Tengku & Jalal, 2014; Sin & Kim, 2013; Yi, 2007). However, very few studies have researched the experiences of SFIS in Australia in general and their online behaviour in particular (Madini, 2012), which warrants further empirical enquiry. This thesis assumes that the literature on the ISB experiences of other international students in other English-speaking countries could contribute to a better understanding of how SFIS in Australia search for information— as international students, Saudi females in particular face similar ISB challenges. However, SFIS' ISB is not necessarily shared to the same degree by students from other countries, owing to SFIS' unique background (Alhazmi & Nyland, 2011; Al-Qahtani, 2015).

The rising numbers of SFIS in Western countries has led to the emergence of studies

examining different aspects of SFIS' education experiences, mostly in the US and UK[14], with a few studies set in Australia and New Zealand. While some of the studies include both male and female participants, males far outnumber females. Research about educational experiences focuses on issues arising from studying in a co-education environment (Alhazmi, 2013; Alhazmi & Nyland, 2011, 2013; Alqefari, 2013; Sandekian et al., 2015), lack of familiarity with student-centric education, and language deficiency issues (Altamimi, 2014; Razek & Coyn, 2013), and communication issues (Al Morshedi, 2011; Al Murshidi, 2014; Al-Musaiteer, 2015; Al-Qahtani, 2015; Lefdahl-Davis & Perrone-McGovern, 2015; Orth, 2015; Sandekian et al., 2015). However, a critical examination of the various information needs and information-seeking behaviour of Saudi international students is severely lacking.

All these issues are assumed by this thesis to have the potential to impede and prevent the fulfilment of SFIS' information needs essential for functioning normally within a foreign country. The following sections explore literature on academic and ELIS problems, noting differences between international students in general and SFIS in particular where these occur.

3.4.1 Academic ISB challenges

Literature identifies four major types of barrier that hinder successful academic ISB: (i) linguistic (including academic and research terminology, and communication skills); (ii) technological (such as unfamiliar educational technologies, and low awareness of online services to students); (iii) cultural (including the unfamiliar culture of learning and research practices); and (iv) emotional and psychological (such as isolation, homesickness, and lack of confidence) (Hughes, 2013; Liao et al., 2007; Liu & Winn, 2009; Mehra & Bilal, 2007; Yi, 2007). These four barrier types are explained in more detail below.

- **Linguistic barriers**

Language limitations lead to challenges in terms of searching for the right academic information, reducing students' capabilities to effectively consume information, but also affect the relationship between international students and their peers and lecturers,

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[14] The United States has the highest population of Saudi international students, and the UK has the second highest.

which can have a significant detrimental impact on their academic performance (Al Murshedi, 2013; Al-Qahtani, 2015; Al-Sheikhly, 2012; Esfahani & Chang, 2012; Hall, 2013; Hughes, 2013; Lefdahl-Davis & Perrone-McGovern, 2015; Mehra & Bilal, 2007; Mu, 2007; Orth, 2015; Razek & Coyner, 2013; Sandekian et al., 2015). Studies reporting challenges of international students in Western countries have found that their poor linguistic and communication skills, along with unfamiliarity with academic search terms and bibliographic jargon, severely impede these students' ability to effectively utilise library resources (Hughes, 2010; Mu, 2007; Onwuegbuzie & Jiao 1997; Wang & Frank, 2002; Wang, 2006).

A decade ago, some researchers suggested that the negative impact of language deficiency on international students' academic ISB had become less of a barrier (e.g. Liao et al., 2007; Liu & Winn, 2009; Yi, 2007). They argued that since most developing countries start to teach their students English from primary school level, continuing improvement in English fluency could be expected. However, this prediction has yet to be fulfilled; the increasing call for programs such as ESL (English as a second language), EAL (English as an additional language) and ELICOS in universities refutes this argument. Leddahl-Davis and Perrone-McGovern (2015, p. 20) estimate that 40% of Saudi students in the US have to take English language courses before commencing their degrees, and according to a recent report published by the Australian Department of Education and Training (2015), the ELICOS (English Language Intensive Courses for Overseas Students) sector is a necessary preliminary for Australian university entry for nearly 60% of international students, including SFIS.

- **Technological barriers**

A common belief is that most international students grow up using technology such as computers, mobile phones, and the internet (Prensky, 2001), especially as their use of online sources such as search engines, blogs and online networking has increased globally (Alzougool et al., 2013a; Liao et al., 2007; Sin et al., 2011). Yet many international students including SFIS face difficulties in this area (for example Hughes, 2013 and Mehra & Bilal, 2007 on Chinese students' unfamiliarity and general lack of understanding the appropriate use of host countries' digital academic sources). In addition, challenges faced by international students include lack of knowledge and awareness regarding library services such as reference services, inter-library loans, library orientation and consultation sessions (Jackson, 2005; Liao et al., 2007; Liu

&Winn, 2009).

Most students prefer to access their home online sources, Google, or family and friends for their various information needs (Alzougool et al., 2013a; Chang & Gomes, 2017a; Hambrecht, 2006; Hughes, 2013; Kennedy, Judd, Churchward, Gray & Krause, 2008; Liao et al., 2007; Mehra & Bilal, 2007; Saw et al., 2013). This limitation of information sources, together with poor academic English language and digital skills, increases their difficulty in using their host country's academic digital interfaces (Hughes, 2013; Mehra & Bilal, 2007).

Chang and Gomes (2017a) further emphasise the need to consider the 'digital journeys' students experience when moving from information sources in their home country to new, different information platforms in their host countries. This transition may impact their ISB and capacity to utilise their host country's sources.

- **Cultural barriers**

International students report different academic ISB challenges based on their culture (Kim, 2013; Liao et al., 2007; Liu & Redfern; 1997; Wang, 2006; Mu, 2007; Yi, 2007; Song, 2005). Researchers suggest multiple cultural reasons, especially loss of face, for Chinese students' disinclination to use a library for academic purposes, which prevents them from gaining necessary help and assistance, and impedes their overall academic performance (Liao et al., 2007; Ling & Tran, 2015; Mu, 2007; Song, 2005).

The educational culture of their home countries is another issue negatively affecting international students' academic ISB (Hughes, 2013; Mehra & Bilal, 2007; Sawir, 2005). Hughes's (2013) participants from cultures as contrasting as Poland, China and Indonesia said they found the emphasis on self-directed learning and online resources hard, being used to teacher- and textbook-centred learning. SFIS, too, are accustomed to a passive learning culture, and face challenges stemming from a lack of adequate preparation for tertiary education (Razek & Coyner, 2013).

Specific SFIS cultural challenges have already been introduced in Chapter 2, especially mixed-gender classrooms, difficulty of being in the presence of members of the opposite sex, and male and female Saudi students' mutual discomfort when communicating with each other (Alhazmi & Nyland, 2013; Sandekian et al., 2015). The mixing of genders significantly impacts SFIS academic ISB, both online and offline: even online forum behaviour reveals very little cross-gender communication (Madani,

2012), due to the fear of being monitored by Saudi embassy staff and feelings that they should represent their cultural traditions and norms[15] (Alruwaili, 2017).

- **Emotional and psychological barriers**

Students' inability to break through the linguistic, technological and cultural barriers to successful ISB can cause problems such as anxiety, depression, loneliness, confusion, avoidance of intercultural interaction, culture shock, a sense of alienation, and ghettoisation (Liu & Redfern, 1997; Jeong, 2004), which exacerbate their difficulties by becoming further barriers themselves. SFIS have stated that they suffer from emotional and psychological distress when seeking academic information, due to inadequate preparation for study abroad (Abdul Razek, 2012; Al-Musaiteer, 2015; Al-Nusair, 2000; Altamimi, 2014; Hall, 2013; Razek & Coyner, 2013). Other barriers to information seeking in their early weeks in Australia are lack of self-confidence, the Saudi approach to learning, and other personality traits (Geramian, Mashayekhi & Ninggal, 2012; Hewett & McRae, 2007; Hughes, 2005).

3.4.2 ELIS ISB challenges

Compared to academic ISB challenges, ELIS challenges faced by international students have remained under-researched (Alzougool et al., 2013a; Sin & Kim, 2013; Sin, 2015). Difficulties with everyday life information-seeking (ELIS) can impede international students' cross-cultural transitioning and sense of belonging (Sin et al., 2011; Sin & Kim, 2013). International students report considerable difficulty in obtaining housing, work, career, health and financial information (Sin & Kim, 2013; Sin et al., 2011; Sin, 2015). In fact, international students consider obtaining ELIS more challenging and difficult than academic information (Hambrecht, 2006; Mehra & Bilal, 2007; Sin, 2015). This difficulty is attributed to limited social interactions with locals due to lack of familiarity with their host country's language and norms (Jeong, 2004); and difficulty in finding information on financial, health or legal matters (Hambrecht, 2006; Mehra & Bilal, 2007; Sin, 2015).

Inability to assess high quality, authentic and reliable daily life-based life information is an additional challenge international students face (Head & Eisenberg, 2011; Mehra &

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[15] Some SFIS in the present research were alienated by other SFIS if they flouted the norms, such as discarding a head covering.

Bilal, 2007; Sin, 2015). Sin (2015) suggests the increased need for Information Literacy (IL) training in everyday information-seeking, and recommends that 'IL educators may help identify different reputable non-academic information sources and provide more training on ways to assess the credibility of non-academic sources' (p. 22). The absence of fluent language skills, and living in environments with unfamiliar religious, social, personal and cultural norms, international students can easily cause adjustment issues and ISB difficulties (Hamid et al., 2016; Jeong, 2004). Jeong (2004) attributed South Korean international graduate students' challenges to survive in the United States to language deficiencies causing an inability to fulfil important daily life information.

Some international students, due to their cultural norms, equate seeking help for emotional and health issues with shame, further preventing health and well being ISB (Flum, 2006; Hambrecht, 2006; Zhang & Dixon, 2003). This is the case with SFIS who, due to their collectivist and conservative culture, usually seek friends and family for social and emotional support and information (Leddahl-Davis & Perrone-McGovern, 2015). They refer to their host country's counselling services unwillingly, and only if issues are extremely serious and they are unable to cope with them. According to one of Leddahl-Davis and Perrone-McGovern's (2015, p. 16) Saudi participants:

> *[Counselling] is available in Saudi Arabia, but the person who goes there, we usually call him crazy…. Yeah, so usually if someone is going, usually he will not say that to anyone.*

Russell, Thomson and Rosenthal (2008), Lawson (2012) and Mehra and Bilal (2007) also concluded that international students are generally ignorant about university health and counselling services, despite the increased number of information platforms provided by institutions and service providers. Hambrecht's (2006) participants attributed their avoidance of their institutions' online support services due to the lack of anonymity (as well as the fact that often the information did not answer their questions).

A unique challenge for SFIS is the unavoidable reversal of gender roles when they study abroad especially with regards to ELIS (Al Morshedi, 2011). Saudi males who are traditionally only concerned with external affairs (tasks and duties performed outside their homes) face enormous challenge to learn and perform domestic chores. In their host countries, females who are traditionally confined to the household

environment need to perform tasks and make decisions outside the comfort of their homes, often without a male guardian.

Midgley's (2010) investigation of Saudis studying overseas describes the role of a Saudi wife from his (male) point of view:

> *It seems perfectly logical that in a cultural environment [Saudi Arabia] in which women are less independent, they must therefore be more dependent on someone. Isolated from their families and home communities as partners to international students living abroad, the wives of these Saudi males seem to have only their husbands to depend upon (Midgley, 2010, p. 98).*

When wives are students and their male guardian is less fluent in English, women are forced to take on tasks initially considered intimidating and challenging male tasks (Clerehan, McCall, McKenna& Alshahrani, 2012). Scholarships, bank accounts, and visas are in their names. Many Saudi males are financially dependent on their womenfolk and must look after the children, make shopping lists, and do the washing for the first time in their lives. Likewise, Saudi women are responsible for all finance and travel decisions. To perform and function normally in their daily lives in a foreign country, SFIS acquire new information needs and new corresponding ISB. Contrary to Midgley's assumptions, Saudi women can and do adapt.

Based on the above empirical studies, the researcher was able to form some initial assumptions that informed the studies in this research as outlined in the following section.

3.4.3 Assumptions of SFIS' ISB

When viewing Saudi female international students (SFIS) as international students and foreigners living in a different socio-cultural environment, considerable-overlapping themes emerge. However, the primary differences between international and SFIS are due to the unique cultural and national identity of Saudi Arabians. Similarities and differences are based on variations within factors: personal factors (e.g., country of origin, education level, length of stay, language fluency, ability to assimilate within the local population), cultural factors (norms and values of home and host countries) and educational background factors (e.g., teaching and learning practices, ISB, research strategies) (Chang et al., 2012; Hughes, 2013; Liao et al., 2007; Liu & Redfern, 1997; Sawir et al., 2008; Yi, 2007).

For the exploration of the ISB of SFIS, the researcher assumed that SFIS had characteristics in common with other international students, namely, SFIS:

- are in a new academic setting, leading to issues related to academic information-seeking (Alhazmi & Nyland, 2013; Al-Qahtani, 2015; Hughes, 2013; Lefdahl-Davis & Perrone-McGovern, 2015; Mehra & Bilal, 2007),

- lack fluent language, making it difficult to communicate with peers, teachers and professors, preventing fulfilment of academic information needs and adversely affecting their academic performance (Al Murshidi, 2013; Lefdahl-Davis & Perrone-McGovern, 2015; Sandekian et al., 2015),

- are in a new socio-cultural environment, bringing ELIS challenges to information-seeking (Hambrecht, 2006; Midgley, 2010; Shepherd & Rane, 2012),

- have prior educational and learning styles, which interfere with their academic ISB (Alhazmi & Nyland, 2011; Al Murshidi, 2013; Al-Sheikhly, 2012; Razek & Coyner, 2013), *and*

- over time, experience personal and educational changes resulting from their increased self-confidence and improved language and digital skills (Alhazmi & Nyland, 2013; Clerehan et al., 2012; Gu et al., 2010; Lefdahl-Davis & Perrone-McGovern, 2015; Shepherd & Rane, 2012).

All international students describe varying cultural challenges depending on the cultural norms of their host country (Razek & Coyner, 2013). Hofstede's (1991) cultural model and its four dimensions (power distance, individualism, masculinity and uncertainty avoidance) can explain variations between home and host cultures. The researcher assumed the following differences affect the ISB of SFIS:

- Most SFIS in Australia are sponsored, so they do not have course fee or accommodation expenses due to financial security and do not have to find part-time employment (Alhazmi & Nyland 2011, p. 2). In contrast, Sin and Kim's (2013) participants identified financial information as the second most important type of information required. Being sponsored students, SFIS are well aware of time constraints within which they must complete their studies and hence avoid events such as writing workshops or library tours perceived as a waste of time (Shepherd & Rane, 2012).

- SFIS know their overseas transition with all its benefits and challenges is

temporary and return to their conservative culture is inevitable, unlike many other international students whose stay in Australia is extendable (Hall 2013; Shepherd & Rane, 2012).

- SFIS have to be accompanied by a male guardian requiring permission to perform most activities in Saudi Arabia. This can lead to difficulties in Australia where they are expected to act independently (Altamimi, 2014). Additionally, being accompanied by family members requires finding larger accommodation and taking on more responsibilities and needs (Clerehan et al., 2012).

- The issue of gender segregation and strictly defined gender roles prohibits the intermingling of women and males in different spheres of private and public life at home (Al-Lily, 2011; Al-Saggaf, 2004; Madini, 2012). In Australia, women are forced to work outside their comfort zones, which causes considerable issues and challenges for both genders (Clerehan et al., 2012), leading to different ISB SFIS may avoid seeking information from Saudi males and prefer asking friends or family.

- SFIS display a perceived responsibility towards their religion and culture (Alruwaili, 2017; Razek & Coyner, 2013), and have reported many issues in this regard e.g. finding halal food, problems with dress code, discrimination, racism, and marginalisation while overseas (Al-Qahtani, 2015; Razek & Coyner, 2013; Shaw, 2009; Shepherd & Rane, 2012).

3.5 Gaps in the empirical research

Table 3-1 lists key studies in the international students' ISB literature from which specific ISB gaps can be identified as described beneath the table.

As seen in Table 3-1 above, specific gaps of the current research on international students' information needs and ISB that have not been adequately addressed are the following:

- Most research is cross-sectional, addressing groups of international students in one place at one time (i.e. while international students are in their host country).

- No research focuses on changes in international students' ISB, yet given the rapid growth in the number of digital sources and technologies (SNS), users have no difficulty moving between online programs to find information (Park & Lee 2010, cited by Hsu et al., 2014).

Table 3-1: A summary of studies on international students' ISB

Authors	Focus	Method	Sample	Location
Chang & Gomes (2017)	International students' ISB digital journey	Conceptual paper	None	International
Hamid et al. (2016)	International students' academic and ELIS needs through social media	A systematic literature review	None	International
Ling & Trang (2015)	How vocational education and training international students seek help before and after arrival at host country.	Qualitative	30 Chinese international students	Australia
Sin (2015)	International students' ELIS	Quantitative	International students from diverse backgrounds	USA
Chang et al. (2014)	International students' ELIS	Qualitative	International students from diverse backgrounds	Australia
Alzougool et al. (2013)	International students' ELIS	Qualitative	International students, mostly Asian	Australia
Saw et al. (2013)	International students' use of SNS for socialising/information	Quantitative	International students with majority from US, Canada, and China	Australia
Sin & Kim (2013)	International students' use of social media for ELIS	Quantitative	International students with majority from Asia	USA
Mehra & Bilal (2007)	International students' perceptions of their ISB strategies	Mixed methods	Asian international students	USA
Kim (2013)	Cultural differences in perception and information call	Quantitative	Domestic and international students from Korea	USA
Esfahani & Chang (2012)	Factors impacting international students' academic ISB	Conceptual paper	None	International
Smith et al. (2011)	International students' Information needs	Quantitative	Nursing international students	Australia
Sin et al. (2011)	Examining international students' academic and ELIS	Quantitative	International students, mostly Asians	USA
Hughes (2013)	Library ISB	Qualitative	International students from diverse backgrounds	Australia
Liao et al. (2007)	International and domestic students' library use	Quantitative	Domestic and international students mainly Asian	USA
Yi (2007)	Academic needs and ISB	Quantitative	International students majority from India	USA

Authors	Focus	Method	Sample	Location
Hambrecht (2006)	International students' use of support services by international students	Qualitative	International students, mostly Asians	Australia
Song (2005)	A comparative study on domestic and international students' library use	Quantitative	Domestic and international students mainly Asians	USA
Jeong (2004)	ELIS of Korean students	Qualitative	8 Korean students	USA

- No research addresses international students' post-study ISB after they return to their home countries. This gap needs to be addressed given the fact that the longer a transient migrant stays in a host country, the greater the changes in language, social interaction, personality (Gu et al., 2010), and tendency to access the host country's sources (Chen, 2010) and thus the more readjustment challenges they may face when moving back to their home countries' cultural and digital environment.

- None of the above research explicitly states Information Systems (IS) or ISB theoretical concepts or assumptions to underpin findings.

- A majority of ISB study participants are from Asian cultures e.g. China, Japan, and South Korea (Hughes, 2010, 2013; Jeong, 2004; Liao et al., 2007; Mehra & Bilal, 2007; Mu, 2007; Song, 2005). Thus, findings cannot be generalised to other international students such as SFIS.

- Studies on Saudi international students mostly focus on general educational experience, acculturative and adjustment issues (Alhazmi & Nyland, 2013; Al Murshidi, 2014; Al-Musaiteer, 2015; Heyn, 2009; Orth, 2015), ignoring information needs of SFIS in particular (see Appendix 2). One reason for the obscurity of SFIS within the larger group of international students is that until recently, only a small number have had the opportunity to study abroad (Lefdahl-Davis & Perrone-McGovern, 2015). Now that their number is increasing, a study of their information needs and ISB has become essential.

- SFIS studies focus on their experiences while in the host country, noting that most students become acculturated to Western mixed-gender environments and freedom of movement over time (Alhazmi & Nyland, 2013; Clerehan et al., 2012; Lefdahl-Davis & Perrone-McGovern, 2015). However, no research explores SFIS' post-study experience when back in the Saudi cultural and digital environment following several years of exposure to Western life. This gap was

stressed in Starks & Nicholas' citation (2017, p.249):

> *...we know relatively little about how changes are retained, negotiated and lost when those who study abroad return to their home context, and we have little understanding about how to conceptualise this at a theoretical level.*

- The majority of existing studies focusing on international students' information needs and ISB are quantitative (Liao et al., 2007; Sin & Kim, 2013; Sin, 2015; Tsai, 2011), requiring rich new insights of challenges and hurdles faced by the SFIS as they search for information.

Based on all of these gaps, researchers have expressed the need for longitudinal studies investigating the ISB in a changing digital space, and to identify factors that affect users' digital intentions, which is a crucial in both academia and industry (Chang & Gomes, 2017a; Hsu, Yu & Wu, 2014; Kim, 2011; Shi, Lee, Cheung & Chen, 2010).

3.6   Research questions

As mentioned in Chapter 1, in order to explore transient migrants' ISB when moving to and from host countries, this thesis proposed the following main research question (MQ)

MQ: How does the Information Seeking Behaviour (ISB) of Saudi Female International Students (SFIS), change when transitioning to and from their host countries of study?

To be able to answer the main research question, the following research sub-questions were proposed:

SQ1. What ISB challenges and changes do SFIS face when moving from Saudi Arabia to Australia?

The first research sub-question has two major aims:

- to investigate the information needs and ISB challenges SFIS faced when they first move from Saudi Arabia's religious, conservative, cultural and digital environment to Australian's secular, liberal and open environment, and
- to explore ISB changes SFIS experienced over time resulting from their longer exposure to the Australian environment

SQ2. What post-study ISB challenges and changes do Saudi female graduates face

when moving from Australia back to Saudi Arabia?

This research question aims to explore post-study ISB of returned SFIS in terms of challenges experienced and changes in ISB when back in the Saudi Arabian conservative, cultural digital environment.

In order to ground the empirical research and deepen the analysis of SFIS' ISB, a solid theoretical foundation is required. The next section critically describes four relevant ISB models.

3.7   A critical review of existing ISB models

Several models have been proposed to explore individual's ISB (e.g. Byström & Järvelin, 1995; Kuhlthau, 1991; Wilson, 1999). However, only four models have been used to test students' ISB (Wilson, 1999; Urquhart & Rowley, 2007; Al Muomen, Morris & Mynard, 2012; Esfahani & Chang, 2012). The following sections briefly discuss these models.

3.7.1   Wilson (1999)

The earliest and most widely used model to investigate students' ISB is Wilson's revised model (1996, 1999). This model proposed that ISB is broken down into four constituent parts for different modes of information searching: passive attention, passive search, active search and ongoing searching. These parts can be affected by five intervening variables: psychological, demographic, role-related or interpersonal, environmental (e.g. resources available), and source characteristics (e.g. accessibility and credibility). Wilson provides steps that underlie individuals' ISB until the need has been fulfilled: information need and context, internal activating mechanism (stress/coping theory), influence of various intervening variables, activating mechanism (risk/reward theory and social learning theory), information search process (passive attention, passive search, active search, and on-going search), and finally information processing and usage (Figure 3.1).
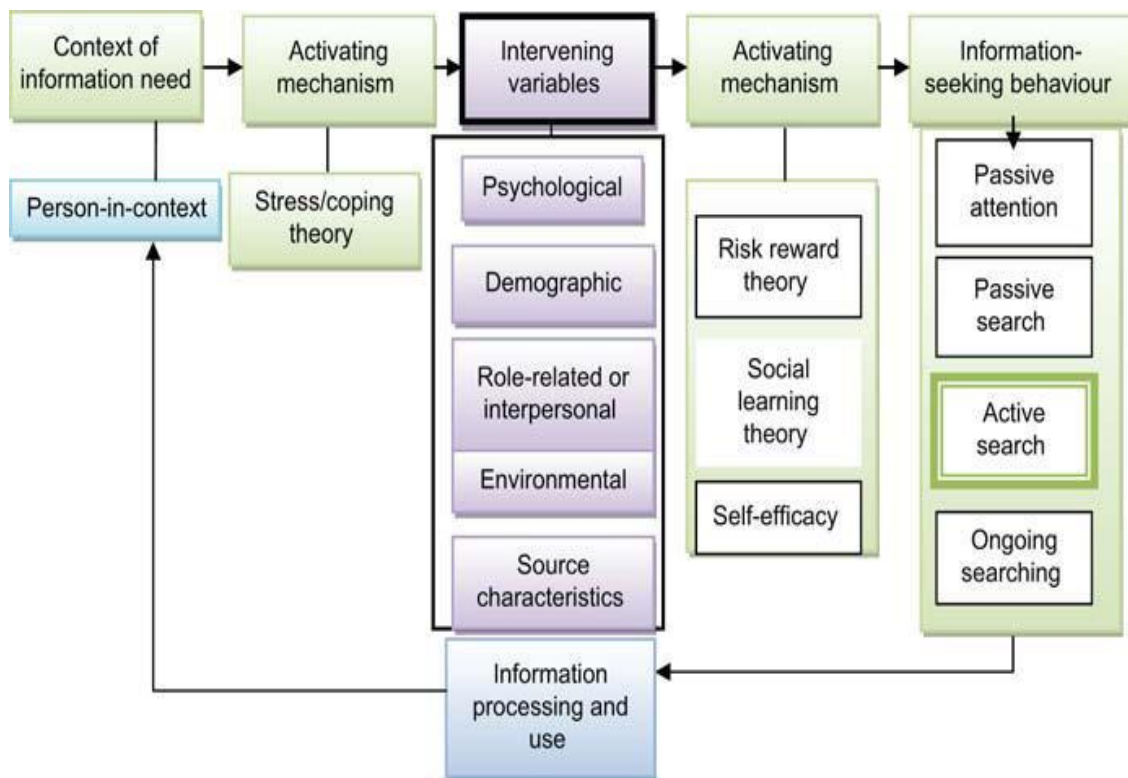
Source: Wilson (1999, p. 257)

Figure 3.1: Wilson's (1996) information-seeking model

(in Al-Muomen et al., 2012, p. 257)

3.7.2 Urquhart and Rowley (2007)

Urquhart and Rowley's (2007) information behaviour model represents students' unique activities related to using electronic information resources and was the first to focus on students' information needs and ISB (Al Muomen et al., 2012). This model (See Figure 3.2) identifies micro and macro factors that affect students' ISB. Macro factors include information resource design, availability, and constraints to access, information learning technology infrastructure, policies and funding, and organisational knowledge and culture. Micro factors directly affecting students' information behaviour include; information literacy, search strategy, support and training, pedagogy, academics' information behaviour, and discipline and curriculum).
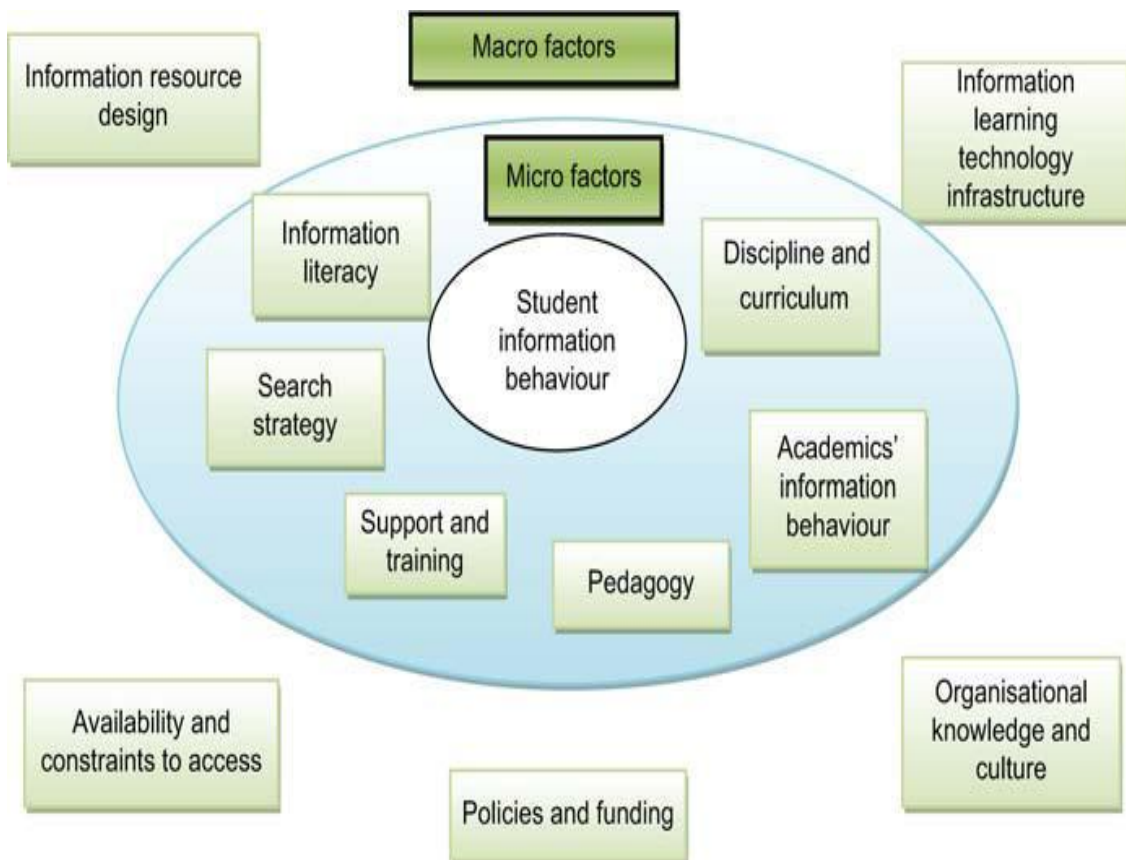
Source: Urquhart and Rowley (2007)

Figure 3.2: Urquhart and Rowley's information behaviour model

(in Al-Muomen et al., 2012, p. 436)

3.7.3 Al-Muomen et al. (2012)

Al-Muomen et al. (2012) investigated the academic and library ISB of students in Kuwait and extended and combined aspects of Wilson and Urquhart and Rowley's models. Their ISB model for students highlights a number of micro- and macro-factors. Critical micro-factors reflect students' IT skills and information literacy, demographic details, and psychological and cultural factors, while macro-factors outline external factors surrounding the students' environment (Figure 3.3).
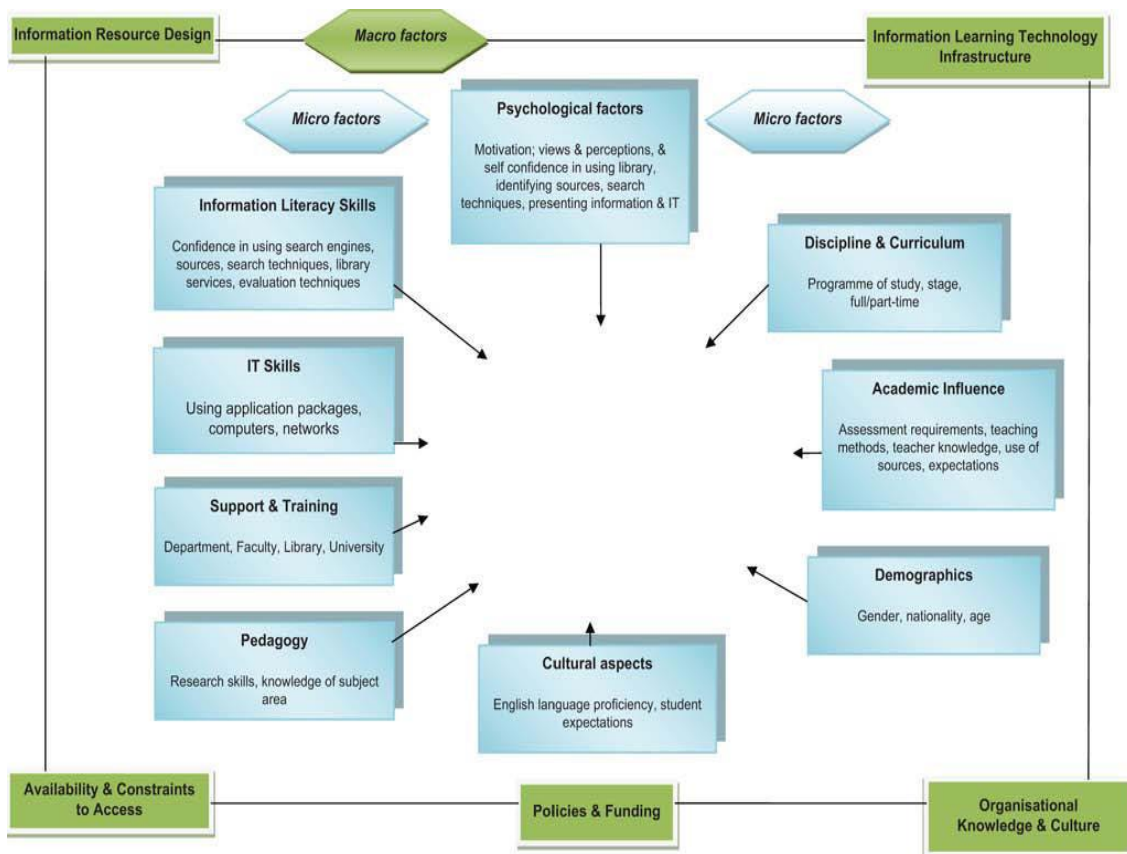
Figure 3.3: Al-Muomen et al.'s conceptual model [16]

(Al-Muomen et al., 2012, p.436)

3.7.4 Esfahani and Chang (2012)

Esfahani and Chang's (2012) predictive model is informed by factors that impact international students' ISB identified in the relevant literature but not through empirical evidence (Esfahani & Chang, 2012; Chang & Gomes, 2017a). The model's factors are classified into three levels of contextual interactions (adopted from a model devised by Foster, 2005): (i) internal context, (ii) external context, and (iii) cognitive approach (Figure 3.4). The model omits social media sources, which is one of the model's limitations.

Esfahani and Chang's model relies on evidence from other studies and can be described as descriptive (focusing on questions that begin with 'what?') rather than predictive

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[16] Al-Muomen et al's model is shown as it appears in their article, with an empty space in the centre to which all the arrows point.

(examining issues by posing questions beginning with 'how?' and 'why?'). The model highlights factors that influence international student' academic ISB, then analyses the acquired information using macro-aspects of ISB—one external and two internal (cognitive and internal) factors.
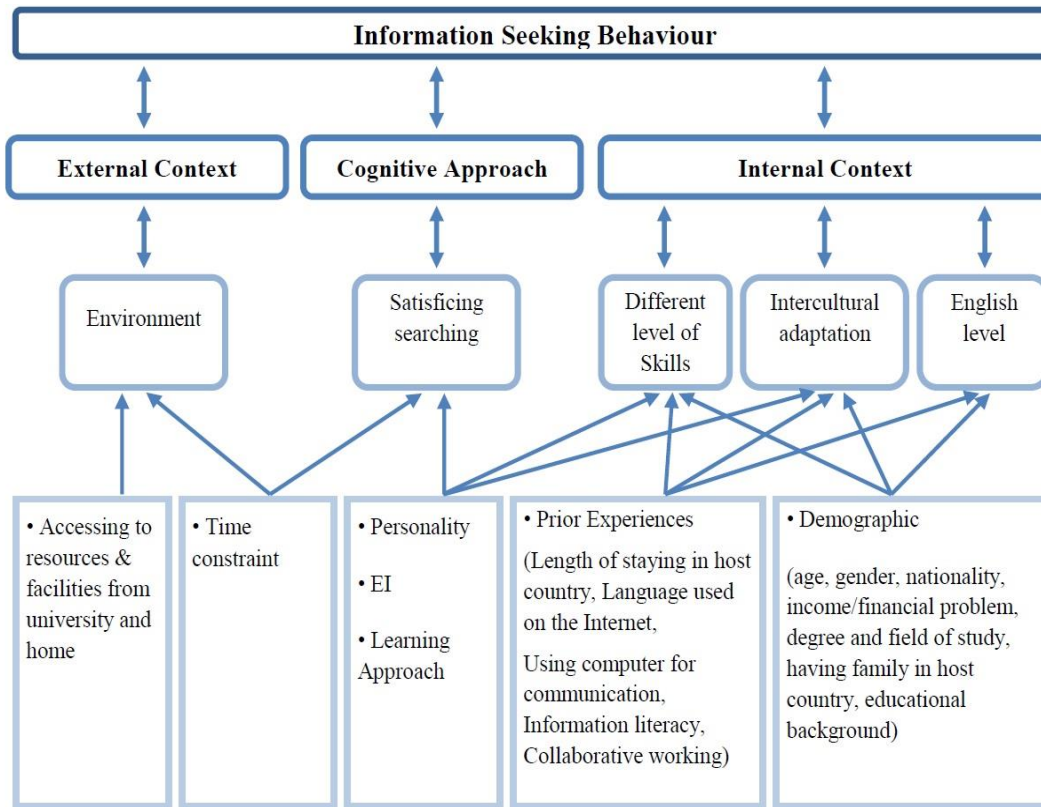
Figure 3.4: Esfahani & Chang's international students' information-seeking model

(Esfahani & Chang, 2012, p.7)

3.7.5   Gaps in the ISB models

Although many of the variables incorporated in the ISB models above are applicable to the current study, a closer look reveals five gaps:

(i) these models focus primarily on work/academic-related information searching; they do not fully encompass all aspects of ISB, social networking (including social media networks) gets little mention,

(ii) most models fail to explain how the transition experience between two very different cultural and digital environments may affect international students' ISB,

(iii) the models do not explain how the transition experience may impact

international students' ISB over time, *and*

(iv) most of the models are positivist-oriented, limiting their applicability to qualitative research.

These gaps limit the range of the models, since they do not address the essential characteristic of transient migration: that is, it involves movement over time and space, and transient migrants undertake not just temporal and geographical journeys, but Chang & Gomes's (2017) metaphorical digital journey as well. Consequently, the researcher believes a suitable ISB model is required that helps in understanding:

- how international students seek academic and ELIS information in offline and online environments, including through social networking,
- how transition experiences of a student's ISB journey from start to finish, affect their ISB, *and*
- how a researcher can interpret meanings from a qualitative method of enquiry.

The following section describes the theoretical foundations underpinning this research that helped to frame the study and data analysis.

3.8   Theoretical foundations

Theories are critical components of any research, as they enable deeper understanding and knowledge of the interconnected nature of the study's surrounding environment (Crotty, 1996; Gregor, 2006; Miner, 2006; Neuman, 2014). Empirical researchers should explicitly state theoretical underpinnings of their research design and clarify initial assumptions, because '…implicit theories impede understanding; they act as blind spots…' (Weick, 1985, p. 113). Consequently, the development of a sound, valid theoretical foundation allows researchers to gain various insights—including explanation, prediction, analysis, and design (Gregor, 2006) to understand the phenomena being researched and making sense of people's behaviour.

As mentioned in Section 3.5, a review of the existing studies on international students' information needs and ISB showed a lack of theoretical background substantiate the insights and results being reported. Conceptually information-seeking behaviour and

information technology (IT)[17] is linked as Lee (2001) describes:

> *Research in the information systems field examines more than just the technological system, or just the social system, or even the two side by side...it investigates the phenomena that merge when the two interact (Lee, 2001, p. iii).*

In other words, information systems research should focus on both technological and human aspects, since technology is ultimately adopted and used by people within their socio-cultural environments. Accordingly, the researcher examined IS and IT theories as potential lenses to investigate the factors that explain the ISB challenges and changes SFIS experience as a result of their cultural and digital transitions. The researcher aimed to base the research on a theoretical foundation that took account of both technical and social (human behavioural) factors related to information-seeking of SFIS.

Several theorists have offered models to explain human behaviour in general (for example, Ajzen and Fishbein's Theory of Reasoned Action in 1980, Bandura's Social Cognitive Theory in 1986, Locke and Latham's Goal-Setting Theory in 1990, Ajzen's Theory of Planned Behaviour (TPB) in 1991, and Taylor and Todd's Decomposed Theory of Planned Behaviour (DTPB) in 1995. In this thesis the two IS theories that influenced this research, TPB and DTPB, are outlined below. The researcher chose DTPB as the most suitable theory for this research. Section 3.8.3 gives the rationale and justification for its selection.

3.8.1 Theory of Planned Behaviour (TPB)

TPB, developed by Ajzen (1991), cater for the existential deficiencies within his own Theory of Reasoned Action (TRA) and Davis, Bagozzi and Warshaw's (1989) TAM. Both theories were constructed on the assumption that individuals have control over their future actions (which, according to Ajzen, stems from Bandura's (1986) popular concept of self-efficacy). TPB proposes that individuals only believe they have control, so for this reason perceived control was included in the theory. According to TPB,

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[17]The domain to which ISB and IT belong is Information Systems (IS), but IS is too broad a topic for the researcher to go into details.

action is guided by three factors: behavioural beliefs, normative beliefs, and control beliefs.

3.8.2 Decomposed Theory of Planned Behaviour (DTPB)

The Decomposed Theory of Planned Behaviour (DTPB) (Taylor & Todd, 1995a, b) is an extension of TPB. It was developed by 'decomposing' or unpacking variables promoted in earlier behaviour theory models—in particular, attitude, subjective norms, and perceived behavioural control—into reduced forms with much more specific dimensions (Kazemi, Nilipour, Kabiry & Hoseini, 2013).

According to the DTPB, technology adoption behaviour is determined by intention-to-use, which in turn is determined by three constructs[18], attitudes towards behaviour (especially perceived usefulness and perceived ease-of-use), subjective norms (such as peer influence and superior's influence), perceived behavioural controls including self-efficacy, and restraining variables of resources and technology (Al-Debei et al., 2013). Taylor and Todd claim that the theory provides 'a fuller understanding of behavioural intention by focusing on the factors that are likely to influence systems use' (1995a, p. 144).

In a review of these theories, Dillon and Morris (1996) observed:

> *Taylor and Todd conclude that if the goal is to predict IT usage, TAM may be better, [but] if the goal is to better understand specific determinants of intention, the Decomposed TPB may offer additional determinant power (Dillon & Morris, 1996, p. 16).*

The DTPB model is shown in Figure 3.5.

An important finding from Taylor and Todd's research is that inexperienced users' intention to use technology is far more dependent on the perceived usefulness of the technology than that of experienced users (Taylor & Todd, 1995b).

After reviewing the above IS theories, the researcher chose DTPB as the most suitable model to explain the ISB of transient migrants in the social media age. The following section critically reviews DTPB by discussing its constructs with reference to the

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[18] In this thesis, the terms '*construct*' and '*factor*' can have the same reference, but are distinguished by their context of use. A construct is a mental abstraction, one of the elements of a theory. The element is termed a factor when it is used as a variable or a constant in an empirical study.

literature reviewed and the research questions. First, the rationale for choosing DTPB as the theoretical foundation is provided; second, DTPB model's fit with the context of ISB is examined; and third, additional factors are proposed for this study.
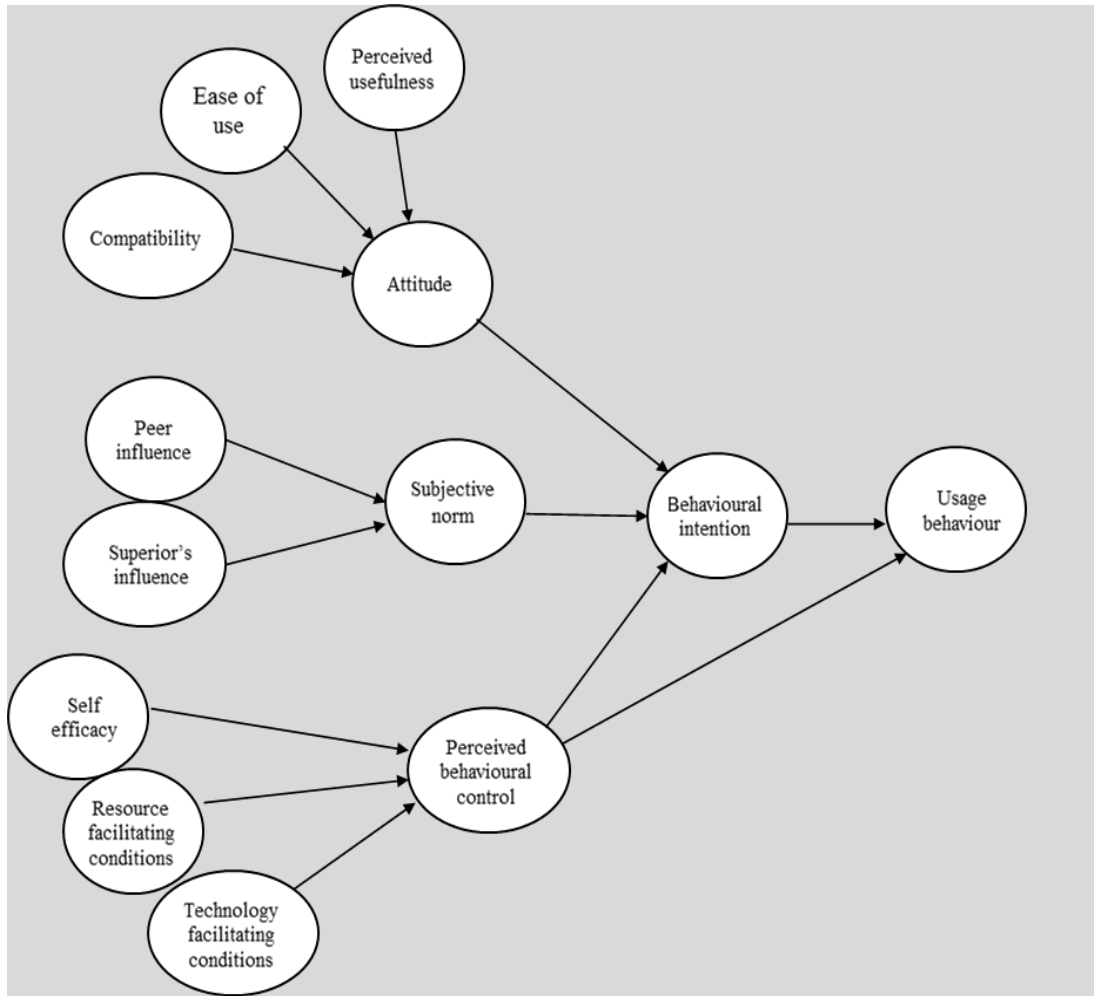
Figure 3.5: Decomposed Theory of Planned Behaviour

(Taylor & Todd, 1995a)

3.8.3 Rationale for using DTPB theoretical model

The rationale for choosing DTPB as the researcher's theoretical foundation is as follows:

- SFIS ISB and use of digital sources are not entirely under their control. Literature on international students' ISB and use of digital technologies identify a number of factors i.e. self-efficacy, time constraints and accessibility, that inhibit international students from using host country's sources and affect their ISB (Alzougool et al., 2013a; Chang & Gomes, 2017a; Hughes, 2013).

- Information seeking through digital technologies such as social media is generally used in social contexts, so the inclusion of peer pressure seems useful for examining SFIS' ISB (Hsu et al., 2014; Kim, 2011).

- DTPB is widely used to explain factors that affect users' decisions to adopt a wide range of technologies. Some empirical studies based on DTPB are summarised in Table 3-2.

As can be seen in Table 3-2, researchers apply DTPB to explain factors that affect users' decision to adopt a wide range of technologies such as e-learning (Ndubisi, 2004) and Web 2.0 technologies (Al-Ghaith, 2016; Hartshorne & Ajjan, 2009; Sadaf et al., 2012). DTPB is also used to understand users' behaviours such as information leaking (Abdul Molok et al., 2010), mobile banking (Al-Majali & Nik Mak, 2010; Kazemi et al., 2013), e-tourism (Sahli & Legohérel, 2014), and government online services (Rana et al., 2015). Recently, researchers have applied DTPB to investigate users' post-adoption intentions to continue using IS including e-services (Hsu & Chiu, 2004) and social networking sites such as Facebook (Al-Debei et al., 2013; Hsu et al., 2014).

Table 3.2: A summary of studies based on DTPB theory

Authors	Study focus	Findings
Abdul Molok, Ahmad & Chang (2010)	Information leaking through social media	Using DTPB to gain a better understanding of factors that drive information leaking through social media. DTPB helped in understanding the international and unintentional influences of information leakage through social media
Al-Debei et al. (2013)	Facebook	Using DTPB to understand factors have a considerable impact on the usage and continued participation of social media users
Al-Ghaith (2016)	The use of social media in Saudi Arabia	(a) Attitude/subjective norms wield a significant effect on participation intention of adopters. (b) Participation intention has significant effect on participation behaviour.
Al-Majali & Nik Mak (2010)	Internet banking in Jordan	Revised TPB constructs show that attitude is a significant factor for intentions for online banking
Authors	Study focus	Findings
Hartshorne & Ajjan (2009)	US students' adopting Web 2.0 technologies	TPB constructs to highlight that attitude and subjective norms were predominant factors.
Hsu & Chiu (2004)	Predicting electronic service continuance with a decomposed theory of planned behaviour	DTPB reveals that users' e-services continuance intention is determined by Internet self-efficacy and satisfaction. Satisfaction, in turn, is jointly determined by interpersonal influence, perceived usefulness, and perceived playfulness.
Kazemi et al. (2013)	Mobile banking adoption in Iran	DTPB revealed that adoption depended on attitude and perceived behavioural control.

Ndubisi (2004)	E-learning intention in Malaysian education	DTPB reveals that attitude, subjective norms and behavioural control were significant determinants to students' e-learning.
Rana, Dwivedi, Lal & Williams (2015)	Adoption of an electronic government (e-government) system called online PAN card registration system (OPCRS) in context of India.	Using DTPB and other variables showed that perceived usefulness and perceived trust influenced attitude to use e-government services
Sadaf, Newby& Ertmer (2012)	US teachers' use of Web 2.0.	Adapted DTPB found attitude/perceived usefulness were the determinants towards adoption.
Sahli & Legohérel (2014)	Consumers' behavioural intention to book tourism products online.	The study has confirmed the explanatory power of the DTPB model in accounting for consumers' behavioural intention in the context of e-tourism

3.8.4   Examining the fit of DTPB in the context of ISB research

According to DTPB, the three primary factors affecting technology adoption are attitude, subjective norms, and perceived behavioural control through individuals' behavioural intentions (Ajzen, 1991). Al-Debei et al. (2013) and Al-Ghaith (2016) have reported that these three factors have considerable impact on the usage and continued participation of social media users. Consequently, with the aim of selecting and justifying DTPB's in understanding the factors affecting ISB of transient migrants when moving across different cultural and digital environments, the following sections explore these three factors in detail to examine the phenomena under investigation.

- **Attitude and ISB**

The 'attitude' construct can be defined broadly as an individual's positive or negative perception towards performing a particular behaviour (Ajzen, 1991). In this study, attitude is defined as the overall appraisal of a transient migrant (e.g. SFIS) concerning the use of a specific information source for information-seeking activities. DTPB constructs that determine the attitude of individuals include perceived ease-of-use (usability), perceived usefulness, and compatibility.

(i) *Perceived ease of use.* Studies examining ISB identify perceived ease-of-use as an important criterion for selecting an appropriate information source (Agarwal, 2011; Lampe, Vitak, Gray & Ellison, 2012; Savolainen, 1995; Weiler, 2005; Zhang, 2012). Researchers found that usability has an impact on international students' selection of information from the internet (Chang & Gomes, 2017a). Morris, Teevan and Panovich

(2010) attributed the popularity of social media as information sources to their ease of accessibility for everyone, as they only require internet access via a computer, smartphone or any other digital device. Perceived ease-of-use has also been identified as a significant factor affecting users' intentions to continue using social networking sites (Hsu et al., 2014). Wikipedia is popular among international students for obtaining information for academic assignments easily and quickly (Chang & Gomes, 2017a). In this regard, Chang and Gomes (2017a) note that these information sources have user-friendly interfaces for sharing and exchanging information, which enhance their usage and adoption.

(ii) *Perceived usefulness.* Using digital sources (e.g. social media) for information seeking depends on the perception that the information acquired is useful, relevant, informative and reliable to some extent, which points to the perceived usefulness of an information source (Sin, 2015). Studies have stressed the perceived usefulness of digital sources, especially social media for international students' ISB, with respect to seeking and accessing different kinds of academic and ELIS information, keeping in touch with family and friends, and expressing their thoughts (Chang & Gomes, 2017a; Gomes et al., 2014; Sin & Kim, 2013; Sin, 2015; Zhang, He & Sang, 2013).

 (iii) *Compatibility* refers to the level of fit between the innovative technology and the user's existing values, norms, and beliefs in relation to the technology usage (Taylor & Todd, 1995a,b). In this regard, Al-Ghaith, Sanzogni and Sandhu (2010) revealed that compatibility played a major role towards Saudi users' intention to adopt and use online services. This factor was closely linked to students' cultural and educational background (Kim, 2013; Kim et al., 2011). For instance, while South Korean students found some information in visual form compatible with their collectivist or group-oriented culture, international students from the individualist United States culture prefer text (Kim, 2013).

Consequently, this research assumes that transient migrants' *perceived ease-of-use*, *perceived usefulness* and *compatibilit*y would affect their attitude to access information platforms and websites for seeking relevant academic and ELIS information.

- **Subjective Norms and ISB**

'Subjective norms' refers to the level of influence for either prohibiting or promoting specific behaviours that some individuals or groups have over other individuals or

groups in a social setting (Ajzen, 1991). Many researchers (including Al-Otaibi, 2011; Hsu et al., 2014; Mazman & Usluel, 2010; Shade, 2008) have demonstrated that subjective norms have a significant impact on individuals' behavioural intentions. Subjective norms have been classified into two forms of influence, peer and superiors':

(i) *Peer influence* is the impact of friends, relatives, colleagues and acquaintances on an individual's adoption behaviour (Bhattacherjee, 2000). Studies on social media adoption and usage showed that peer pressure and the need for maintaining contact with friends and relatives in home countries play instrumental roles in motivating users to frequent a particular social media website (Al-Otaibi, 2011; Rahman, 2014; Shade, 2008; Zhao, 2016). Users' tendencies to share information also appear to be dependent on the composition of their social circle (Gross & Acquisti, 2005). Existing studies have also revealed that social networks foster better acculturation and socio-cultural adjustment for international students, while also playing a critical role in fulfilling information needs (Chang et al., 2014; Hendrickson et al., 2011; Sawir et al., 2008; Sin & Kin, 2013; Sin, 2015).

(ii) *Superiors' influence* refers to the role of both non-personal resources (e.g. official reports, expert opinions, and so on) and professional and/or personal contacts in influencing and facilitating the adoption of any technology, including social media (Bhattacherjee, 2001). For international students, university lecturers and teachers can be considered examples of superiors (Hartshorne & Ajjan, 2009; Ndubisi, 2004). In the case of sponsored transient migrants (e.g. SFIS), their sponsors and home country's authorities (e.g. SACM) will be another example of superior influence. Researchers have praised the use of social media in the educational context as an effective supplementary tool for enhancing communication between teachers and students (Goodyear & Ellis, 2008; Hamid, 2013; Junco, Heiberger& Loken, 2011). Thus, if any teacher or another authority figure insists on regular interaction, engagement, and information dissemination with the specific source, SFIS will be forced to comply.

- **Perceived Behavioural Control and ISB**

Perceived behavioural control (PBC) reflects users' perceptions of three aspects: (i) self-efficacy (perceived abilities and self-efficacy towards engaging in a specific behaviour), (ii) resource-facilitating conditions (the different resources or opportunities including time, money and skills required for facilitating the promotion of a particular behaviour), and (iii) technology-facilitating conditions (catering to the accessibility-

related issues that can contribute towards performing a particular behaviour) (Taylor & Todd, 1995a).

(i) *Self-efficacy* has been reported as an important factor, which influences the adoption of technology (Hsu & Chiu, 2004; Taylor & Todd, 1995a), and individuals' ability to seek, access and obtain information (Chen, 2010; Wilson, 1999; Sawir, 2005).

(ii) *Resource-facilitating conditions* refer to prerequisite resources whereby a transient migrant (e.g. SFIS) can ensure the effective use of their home and host countries' information sources for fulfilling their academic and/or ELIS information needs. Resource examples include time, money, knowledge and skills (Binsahl & Chang, 2012; Hartshorne & Ajjan, 2009). Time in particular is an important contextual factor that shapes students' ISB (Esfahani & Chang, 2012; Korobili, Malliari 2011& Zapounidou, 2011; Weiler, 2005).

 (iii) *Technology-facilitating conditions* in this context refer mainly to the ease of access technological services (e.g. internet and social media) to ensure that transient migrants can select appropriate information sources and search for academic and ELIS information using digital platforms (Agarwal, 2011; Connaway et al., 2011; Oshan, 2007). Based on the findings from the literature on the ISB of international students, the researcher assumes that SFIS' ISB will be determined by their perceptions of control over their behavior.

3.9   Potential factors that might impact transient migrants' ISB

The section above describing the fit between DTPB and SFIS' ISB seemed to make DTPB a perfect theoretical model to serve as a basis for this thesis. However, on reviewing the literature (in this chapter), the researcher noticed that certain factors that were frequently mentioned in the ISB literature were omitted from DTPB's constructs, especially culture, transition experience (including changes over time), social media networks, information need, and personal factors. Given the recurrence of these factors, the researcher decided to consider them when exploring SFIS' ISB, and proposed five potential factors (Figure 3.5). Following Figure 3.5 is an explanation of each factor describing how it relates to ISB, and a proposition to be considered in the empirical studies.
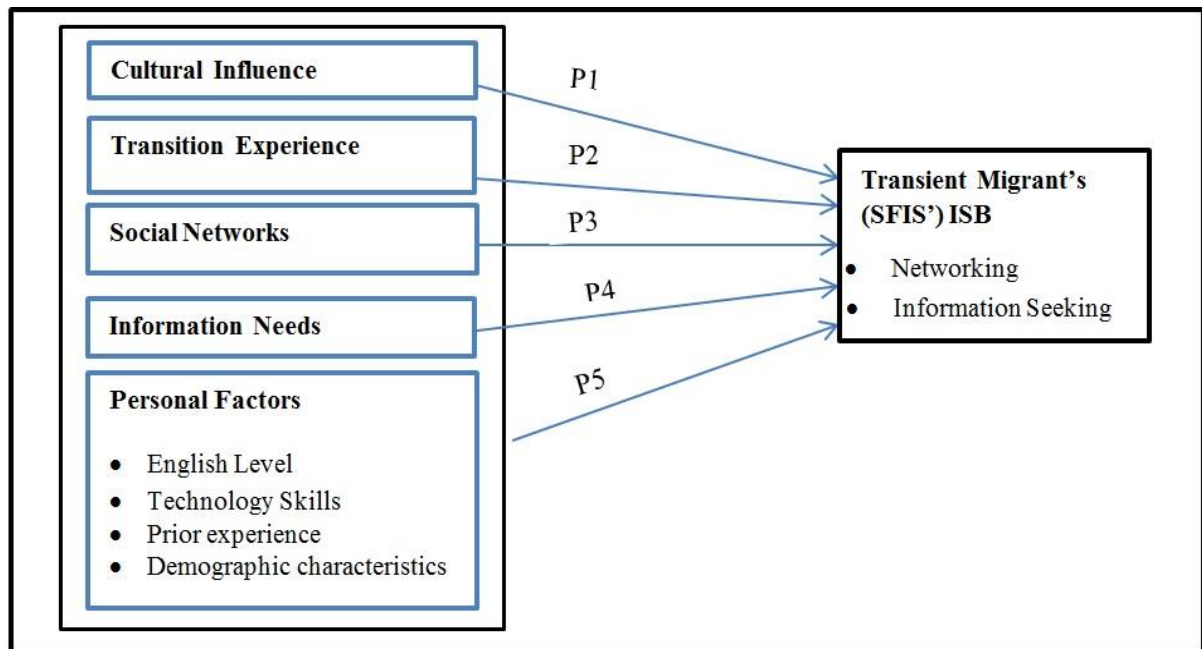
Figure 3.5: Summary of potential factors that might impact transient migrants' ISB.

P1, P2, etc. = Proposition 1, Proposition 2, etc.

3.9.1   Explanation of proposed potential factors

Based on findings extracted from existing ISB literature, five propositions were developed to explore the different factors in Figure 3.6 that could impact SFIS' ISB while living and studying in a foreign environment. These research-based propositions also helped the researcher to guide the research design, data collection and analysis.

- **Cultural influence and transient migrants' ISB**

A user's culture has been identified as having a major impact on both how international students use, find and evaluate information (Hambrecht, 2006; Kim, 2013; Komlodi & Carlin, 2004) and how they use digital technologies (Alruwaili, 2017; Al-Saggaf, 2011,2016; Kim et al., 2011; Gray et al., 2010). For SFIS, as described in Chapter 2, the Saudi culture, religious values and norms are restrictive for women and influence their adoption and use of technology (Al-Gahtani, Hubona & Wang, 2007; Al-Ghaith, 2016; Al-Otaibi, 2011; Al-Saggaf, 2016). Other research (Komlodi & Carlin, 2004), following Hofstede (1984), has stressed the importance of culture on how information seekers search, find, analyse and use information. One of Hofstede's cultural dimensions, collectivism versus individualism, has been found to exert a major influence on ISB. SFIS as members of a collectivist society may prefer to share and

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seek information from other individuals (preferably Saudi females) before accessing computerised systems (Komlodi & Carlin, 2004; Razek & Coyner, 2013). The Saudi Arabia's gender-segregated society is a major cultural factor that affects the way Saudi women seek, use and share information (Al-Otaibi, 2011; Alruwaili, 2017; Oshan, 2007)—for example, posting personal photos online is considered inappropriate (Alruwaili, 2017; Al-Saggaf, 2011, 2016) especially to Facebook, which many SFIS consider untrustworthy. Importantly for ISB, they are discouraged to talk to non-related males, even when they need information.

Consequently, when exploring transient migrants' ISB journey, cultural values and norms should be considered, leading to Proposition 1:

Proposition 1: *Transient migrants' (SFIS) cultural background will strongly impact their ISB journey in terms of their ability to network, seek and share information.*

- **Transition experience and transient migrants' ISB**

SFIS' (transient migrants') move to a very different environment (Australia) impacts their ISB journey. In addition, SFIS will probably experience a unique transitional change in their ISB—a digital shift, or in Chang and Gomes's (2017a) words, a digital journey. Educationally, SFIS move from a teacher-centred educational environment that requires them to memorise textbooks for examinations (Hamdan, 2005) to an online environment whereby governments and educational institutions disseminate vast amounts of online information (Alzougool et al., 2013a) through innovative media technologies e.g. wikis, blogs, and social media (Gray et al., 2010). Furthermore, students are expected to conduct their own research using library-based searches and databases (Hughes, 2013).

Apart from these challenges, recent studies on transient migrants' ISB indicated that the longer SFIS stayed in their host country, the more language mastery, social interaction, personal and academic development occurred (Gu et al., 2010) and tendencies to access their host countries' sources (Chen, 2010). Recent studies show that the longer SFIS stayed in their host countries, the more changes they reported in their personalities, attitudes and beliefs regarding some cultural aspects such as interactions with the opposite sex (Alhazmi & Nyland, 2013; Clerehan et al., 2012) and use of their host country's online technologies (Alruwaili, 2017; Shepherd & Rane, 2012).

Following several years' exposure to an advanced technological environment, SFIS return to their home countries could reverse the opportunities for a variety of different cultural and technical reasons. This assumption is based on prior studies claiming that international students find it difficult to adjust back to their own home countries (Albeity, 2014; Boey, 2014; Roberston, Hoare & Harwood, 2011). Since most ISB research is cross-sectional, a longitudinal study following participants over time would add to ISB knowledge.

Consequently, the researcher assumes that the two transitions between vastly different environments—from Saudi Arabia to Australia and back to Saudi Arabia—will impact SFIS' ISB, thus:

Proposition 2: Transitioning between countries that have different cultural and digital practices will strongly affect transient migrants' (SFIS) ISB.

- **Social networks (online and offline) and transient migrants' ISB**

Gomes et al. (2014) found that international students in Australia tend to form 'multiple identity social networks', mainly composed of other students from either: (i) their home country, or (ii) different countries, or (iii) their host country. Some students have two distinct networks (a host country and international network), rarely mix the two, and speak different languages in each. The larger and more diverse their networks, the greater social and academic success they achieve and the wider range of information sources they access (Chang et al., 2014; Hendrickson et al., 2011; Neri & Ville, 2008; Young & Quan-Haase, 2009). It is therefore highly likely that SFIS will have the opportunity to build multiple social networks comprising members from different cultures and backgrounds, which may affect the way they seek their information.

For instance, Al-Saggaf (2011, 2016) found that although SFIS use their social media networks for information sharing, they do not share personal information. This is because they do not fully trust social media networks, especially Facebook. Mastromatteo (2010) concludes that a 'piece of information is trustable in social media only when it is posted by someone they know, and they are sure that this person can be trustworthy' (p. 123), therefore,

Proposition 3: Transient migrants' (SFIS') social networks (online and offline) will affect their ISB.

SFIS in this research whose offline and online social networks contain friends from different backgrounds will have access to a wide range of information sources, enabling them to fulfil their information needs more easily and quickly. Also, SFIS will be less likely to share and seek personal information through lack of trust in their social networks (for cultural reasons covered by Proposition 1).

- **Information needs and transient migrants' ISB**

Studies on ISB suggest a relationship between the type of information an individual seeks and his/her selection of the information source (Chang et al., 2014; Zhang, 2012). For instance, the importance and usage of library resources and services by international students for accessing academic information is diminishing, since these students find it more convenient to use social media and Google (Connaway et al., 2013; Hughes, 2013; Liao et al., 2007). For ELIS needs, international students use different social media sites for ELIS information such as finance, health, entertainment, general opinions and emotional support (Alzougool et al., 2013a; Sin & Kim, 2013; Saw et al., 2013).

However, the reliability and authenticity of these information sources are questionable, so international students cannot rely on online sources for fulfilling all kinds of information needs (Chang & Gomes, 2017a). Binsahl and Chang's (2012) study revealed that Facebook was considered suitable and reliable for political and social information. Zhang's study (2012) revealed that the majority of respondents considered social media, especially Facebook, an inappropriate medium for retrieving sensitive information.

Consequently, this research assumes that SFIS will rely on different online and offline sources for different information types. For example, close family members and friends would be preferable offline sources for sensitive information, whereas social media sources would be preferable for general and entertainment information. Therefore,

Proposition 4: *Transient migrants' (SFIS') information needs will strongly impact their ISB.*

- **Personal factors and transient migrants' ISB.**

The literature reviewed in this chapter has shown that personal factors affecting international students' ISB include English level, technology skills, prior experience and demographic characteristics (Alzougool et al., 2013a; Andrade, 2006; Chang et al.,

2014; Chang & Gomes, 2017a; Sawir, 2005; and many others). Certainly, lack of English and poor digital skills can create significant difficulties in finding academic information, but this may not be the case for ELIS information seeking, because international students can access information platforms in their own language for many ELIS needs.

In this regard, studies have shown that English proficiency, digital and information literacy influence international students' abilities and self-efficacy to: firstly, seek and acquire relevant information online (Al Moumales et al., 2012; Korobili et al., 2011; Sin, 2015); and secondly, access their host country's bundle of sources – the digital journey (Chang & Gomes, 2017a; Hughes, 2013; Mehra & Bilal, 2007).

ISB studies have also stressed the impact of students' demographic characteristics such as age, gender, education level and length of stay in the host country on their ISB (Alzougool et al., 2013a; Nicholas Huntington & Jamali, 2007, 2009; Sin, 2015; and many others).

There is considerable evidence to suggest that international students' information needs and ISB vary widely across different education or qualification levels (Alzougool et al., 2013a; Nicholas et al., 2007, 2009). Sin and Kim (2014) concluded that undergraduates and Master students reported higher levels of difficulty in finding everyday information (Sin & Kim, 2014). Alzougool et al. (2013a) also found a relationship between international students' education level and their tendency to refer to their host country sources. In their study, while postgraduate international students prefer to use Australian (local) offline/online sources when it comes to finding information about accommodation, such as using Gumtree or asking friends, undergraduate students tend to use offline/online Australian and home sources. These include home-country networks of friends or associations, university websites, Gumtree, etc. McGuinness (2006), on the other hand, pointed out that all students, from young undergraduates to PhD researchers, continued to hone and refine their information-seeking skills throughout their period of study.

Recent studies also show that international students' length of stay in the host country impacted their ISB (Hambrecht, 2006; Liu & Redfern, 1997). Hambrecht (2006) found that newly arrived Chinese students lack awareness of personal services (e.g. health, student equity, finance) provided by their institution and thus relied on their friends

than those who had studied there previously. Chen (2010) also argues that the longer a transient migrant stayed in the host country the more changes in their ISB they reported by accessing their host country's sources.

With reference to SFIS, it is highly likely that the region they come from in Saudi Arabia will also impact their ISB; students from North and Qassim have greater cultural and religious restrictions, so might have even less confidence in a mixed-gender classroom than those from more liberal regions such as Hijaz (Al-Qahtani, 2015; Alqefari, 2015; Oshan, 2007).

This research assumes that SFIS' ISB will be impacted by all the factors mentioned above, and also that SFIS from more conservative Saudi provinces will exhibit different ISB to those from the less conservative provinces. Therefore,

Proposition 5: *Transient migrants' (SFIS) English proficiency level, technological skills and demographic characteristics will strongly influence ISB.*

Chapter summary

This chapter reviewed key literature on international students' information needs (classified as academic and ELIS), information sources, and ISB challenges. It also reviewed some existing ISB models and behaviour theories. Gaps in the literature and models were noted, and five propositions were proposed. These propositions helped the researcher to guide the research design and frame interview questions. The next chapter presents the research design and methods to investigate the ISB of SFIS when moving across different contexts.

Chapter 4
Research Design

Whether we are aware of it or not, we always bring certain beliefs and philosophical assumptions to our research (Creswell, 2013, p.15).

Introduction

The previous chapter reviewed the significant literature and underlying theory relevant to this research. This chapter relates how the research was designed to explore the information seeking behaviour (ISB) of SFIS: in particular, how they seek their information when transitioning between their own (Saudi Arabian) and a different (Australian) cultural and digital environment. An enquiry into research designs led to the choice of qualitative methods informed by an interpretivist perspective. The theoretical underpinnings of this research are given in some detail, owing to the importance of theory in providing a logical and consistent approach to the research. Crotty (1998) notes that many texts on research methods are not presented in an organised fashion:

> *There is much talk of theoretical underpinnings, but how the methodologies and methods relate to more theoretical elements is often left unclear (Crotty, 1998, p.1).*

Following Crotty's quote, the chapter starts with an overview of the IS research paradigms followed by a detailed justification on selecting the research paradigm for this research (Section 4.1). Next, Section 4.2 justifies the suitability of the qualitative methodology. Then, Section 4.3 outlines the research design and gives detail of the studies conducted in this research. The remainder of the chapter describes and justifies the recruitment procedures, the data collection and analysis techniques.

4.1 Research paradigms

Philosophers and historians of science define a research paradigm as a generally accepted conceptual framework within which scientific theories are constructed (Mertens, 2013). A paradigm in this sense (sometimes called a 'world view') consists of a set of implicit or explicit assumptions accepted by and shared between members of a

scientific community about how the world should be understood and researched (Crotty, 1998; Kuhn, 1970; Neuman, 2006, 2014), especially regarding the nature of reality—what exists (ontology) and what does it mean to know about it (epistemology)—and the relationship between the researcher and the objects of research (methodology and methods) (Kant, 2014). These assumptions guide researchers to find pertinent answers to their research questions.

In the present case, the researcher's assumptions would lead to answers to the following questions as suggested by Kant (2014, p.69-70), which in turn would frame the research:

(i) *ontology*—questions about existence, such as 'Do people's thoughts exist in the same sense that their actions exist?'

(ii) *epistemology*—questions about knowledge, such as 'What does it mean to know about people's thoughts and actions?'

(iii) *methodology*—questions about how to set about finding answers, such as 'Is it theoretically possible to discover why and how people act?'

(iv) *methods*—questions about the most appropriate instrument or process for answering the research problem, such as 'What is the best way to find out about how and why people act?'

Standard works on methods in social sciences (for example Creswell & Clark, 2011; Crotty, 1998; Neuman, 2006, 2014) identify several major research paradigms, of which three—positivism, pragmatism, and interpretivism[19] are found popular in Information Systems, a field of study that includes ISB (Klein & Myers, 1999; Neuman, 2006, 2014, Walsham, 1995). Table 4-1 (next page) compares the features of each of the above paradigms as described by Andrew et al (2011).

The main features of the three paradigms described below are relevant to a paradigm appropriate to this thesis:

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[19] Definitions of interpretivism, constructivism, and constructionism (among other similar approaches) differ between authors. For example, Crotty (1998) and Andrew, Pedersen and McEvoy (2011) place interpretivism under the broader class of constructionism, while Neuman (2014) places constructionism under interpretivism. Schwandt (1994) distinguishes interpretivism from constructivism, and places social constructionism under the broader class of constructivism. This researcher uses interpretivism in Neuman's broad sense, to include many of the aspects of other constructionist and constructivist paradigms

Table 4.1: Paradigm features compared

(Andrew et al., 2011)

Philosophy	Constructivism	Positivism	Pragmatism
Type of research	Qualitative	Quantitative	Mixed
Methods	Open-ended questions, emerging approaches, text and/or image data	Closed-ended questions, pre-determined approaches, numeric data	Both open and closed-ended questions, both emerging and predetermined approaches, and both qualitative and quantitative data analysis
Research practices	- Positions researcher within the context - Collects participant-generate meanings - Focuses on a single concept or phenomena - Brings personal values into the study - Studies the context or setting of participants - Validates the accuracy of findings - Interprets the data - Creates an agenda for change or reform - Involves researcher in collaborating with participants	- Tests or verifies theories or explanations - Identifies variables of interest - Relates variables in questions or hypotheses - Uses standards of reliability and validity - Observes and then measures information numerically - Uses unbiased approaches - Employs statistical procedures	- Collects both qualitative and quantitative data - Develops a rationale for mixing methods - Integrates the data at various stages of inquiry - Presents visual pictures of the procedures in the study - Employs practices of both qualitative and quantitative research

4.1.1 Positivism

- Social phenomena, like material phenomena, exist independently of human perception and are to be researched objectively (Klein & Myers, 1999; Neuman, 2006, 2014).

- Meaning, truth and knowledge lie in the external world and can only be discovered by empirical investigation and primarily quantitative approaches (Creswell & Clark, 2011).

- Results are based on cause-and-effect thinking and on objective, empirically verifiable evidence; they should be replicable and generalisable (Creswell & Clark, 2011).

- Research is value-free, as the researchers should not interact in any way with the objects of investigation (Cohen et al., 2011).

Some research (Sin, 2015; Sin & Kim, 2013) and industry reports here tend to focus on the more objective measures of what students are actually engaging in. Aspects of ISB researched in this way could include counting the number of different information sources individuals accessed over a given period of time, measuring how long they spent searching a catalogue, constructing a Likert-scale questionnaire to find which of the social media was preferred, and so on. Use of this paradigm describes how students might be using particular sources of information, but does not always have explanatory power of the motivations and attitudes of the students, and why they act as they do.

4.1.2 Pragmatism

- Pragmatic social research is focused on discovering useful knowledge, and sees knowledge as a tool for action (Creswell & Clark, 2011).

- It is not value-free, since research is undertaken in order to improve (or change) existing conditions. In its critical form, it aims to uncover and re-distribute the power structures in society (Creswell, 2003, 2007).

- Methods of inquiry can be qualitative, quantitative or both (Andrew et al., 2011).

- Research results are justifiable if they work consistently and usefully (Creswell, 2003, 2007).

A lot of industry reports that seek to understand the direct sources of users' information tend to adopt this approach (e.g. Alzougool, 2010). Aspects of ISB researched in this way could include ways of improving search procedures, ensuring desirable outcomes, and so on. While it is useful for informing about where students get their information from, or which social media platforms they use, etc., it does not always have explanatory power for how students transition between cultures and why they use certain sources.

4.1.3 Interpretivism

- Interpretivism is one of the theoretical approaches that claim that meaning and knowledge are not discovered by empirical research but acquired through social constructions such as shared language and participant observation (Klein & Myers, 1999).

- Shared meanings are generated through interactions between members of language communities and their world. Hence research is concerned with understanding how a society makes sense of the world (Klein & Myers, 1999).

The researcher becomes a member of that society (or may already be a member) and through participation, interprets what people say and how they act (Creswell, 2003). This is not a value-free activity.

- Interpretive social research typically associated with qualitative approaches (Creswell & Clark, 2011), but can also use quantitative methodology (Klein & Myers, 1999).

- Participants' observation primarily requires a qualitative methodology, and research results may not be generalisable (Neuman, 2006, 2014).

Aspects of ISB researched in this way could include understanding the impact of the transition as viewed and interpreted by SFIS based on their unique cultural and digital positions. Given the exploratory nature of this research, this paradigm is believed to be the most relevant to the current research. The following subsection justifies the use of the interpretive approach as a paradigm for this research.

4.1.4 A paradigm for this research

A research paradigm and methodology selection depends upon the objectives of the research study, the nature of the social phenomena being investigated, and the research questions expected to be answered by the research (Dash, 2005). The objectives of this research included a thorough exploration of the challenges and changes to the ISB and information needs of SFIS in order to better understand the phenomenon as SFIS moved from their own culture into an unfamiliar culture and stayed for a few years before returning. The nature of the phenomenon is a human activity—people act according to knowledge, experience, needs, motives, desires and so on, against a background of personal, social and cultural norms. The questions to be answered by the research could only be answered by the participants themselves and interpreted by a researcher who had experience of the cultural background and the activity under investigation.

Given the nature of this research required understanding of ISB from the perspectives of SFIS, the positivist paradigm required the researcher to remain remote from the study participants, which was not appropriate in this case. Given also that the scope of the research was not intended to include outcomes, the pragmatic paradigm was similarly not appropriate. However, as the research was interested in gathering data about a phenomena (ISB) that cannot be controlled, exploring and understanding

participants' experiences underpinned by social and cultural norms (Burr, 2015), the interpretivist paradigm was found to be the most logical foundation for this research.

Assumptions of interpretivism related to this research are that:

- an objective social reality is not possible, since individual experiences and views of the world are multiple realities constructed by human beings. Meanings attributed by experience are developed through social processes including language, legislation, and religion (Al-Saggaf, 2004; Klein & Myers, 1999; Krauss, 2005; Yakaboski, Perez-Velez, & Almutairi, 2017),

- the approach may be biased but allows for deep, rich investigations of a subject (Dudovskiy 2016, 2017),

- research participants (SFIS) develop a subjective view of their experiences through their interaction with people, historical and cultural norms in which they live (Corbin & Strauss, 2015; Creswell, 2007),

- the researcher's knowledge of reality (SFIS' ISB) can only be gained through social norms and constructs such as culture, language and shared meanings (Klein & Mayers, 1999; Walsham, 1995),

- meanings are open to change when SFIS are exposed to other environments, social norms, and lifestyles (Corbin & Strauss, 2015) such as SFIS' transitions from Saudi Arabia to Australia and back,

- the researcher's task is to purposefully negotiate and interpret the acquisition of knowledge and reality through interacting with SFIS (Creswell, 2003),

- the researcher's viewpoint is a fundamental principle (Kuhn, 1970; Merriam, 2009; Walsham, 199),

- only through the gathering of participants' data in their social environment can research phenomena be better understood (Creswell, 2003; Burr, 2015),

- a pattern of meaning can be developed inductively rather than using a specific theory from the beginning as in the positivist paradigm, *and*

- the research phenomena are seen from the SFIS' perspective, which helps in understanding their views on reality (Neuman, 2006, 2014).

According to Klein and Myer (1999) varieties of the interpretative approach include hermeneutics and symbolic interactionism. The following section describes their hermeneutics principles.

4.1.5   Klein and Myers' (1999) principles

Klein and Myers' (1999) propose a set of seven principles for conducting and evaluating interpretive field studies in Information Systems (quotations are from Klein and Myers):

- **The fundamental principle of the hermeneutic circle**

    'All human understanding is achieved by iterating between considering the interdependent meaning of parts and the whole that they form'.

The researcher moves inductively from initial assumptions of the meaning of individual parts of the phenomena to an understanding of the whole, and from the whole to a deeper understanding of the parts. All the other principles in this list are subsumed under this one. The researcher began her journey by speculating on her own experiences and added more particulars through reading, moving to an initial explanatory theory. Discovering more particulars by talking through others' experiences followed and she modified the theory. The whole process was iterated until she had a more complete picture of the whole.

- **The principle of contextualisation**

    The inquiry must be set in its historical and social context, 'so that the intended audience can see how the current situation emerged'.

This study acknowledges that the Saudi Arabian context is very important to SFIS (see Chapter 2) and equally important to SFIS ISB once they are in Australia.

- **The principle of interaction between the researchers and the subjects**

    'Interpretivism suggests that the facts are produced as part and parcel of the social interaction of the researchers with the participants'.

Interactions between the researcher and SFIS and the researcher's reflections on their responses were integral to the data collection and analysis. Gaining and building trust prior to data collection was important and the researcher spent time building her personal network with strong relationships that evolved into a snowball sampling process that helped to recruit all the study participants.

- **The principle of abstraction and generalisation**

Klein and Myers cite Walsham's (1995) four types of generalisations from interpretative field studies:

> *'the development of concepts, the generation of theory, the drawing of specific implications, and the contribution of rich insight'.*

Theory is essential to interpretative research allowing the researcher to view the world in a particular way. In this thesis, the interpretivist paradigm led the researcher to generate a theoretical framework from which specific implications were drawn.

- **The principle of dialogical reasoning**

Prejudice and prior knowledge may affect researchers' interpretations, which can be seen as an essential starting point. The Preface to this thesis clearly acknowledges these aspects resulting from the researcher's position. To overcome the bias issues, the researcher adopted strategies that are covered in Section 4.2.4.

- **The principle of multiple interpretations**

Researchers should examine multiple influences the social context has on the individual actions being studied, accept any contradictions that may emerge from conflicting viewpoints, and revise their interpretations accordingly. Multiple viewpoints of the supervisors, external validators (e.g. international students' service providers) and reviewers of the researcher's publications were considered and accepted or rejected after discussion and reflection.

- **The principle of suspicion**

Some social constructions of reality can obscure or falsify others, and it is up to the researcher to apply critical analysis techniques to uncover socially created or psychopathological distortions and delusions. The power structures of Saudi Arabia, including male guardians' dominance and the government's censorship of internet sites and social media, were closely examined.

Thus given the researcher's constraints of time and resources, the interpretative field research of this thesis followed these principles as far as possible. Having justified interpretivism as the most appropriate philosophical paradigm for this research, the question of methodology and methods arose as covered in the next section.

4.2   Methodologies and methods

Research methodology in the field of Information Systems (IS) can be quantitative or qualitative (Klein & Mayer, 1999; Neuman, 2006; Walsham, 1995). Most IS research uses both to some degree, but usually one or the other is dominant, so methodologies

can be seen as existing on a continuum rather than as distinct categories (Klenke, 2008). To decide where on the continuum the researcher should place her dominant methodology, necessary for deciding on the data collection methods, the researcher examined the major features of the two approaches.

4.2.1 Quantitative approach

The literature review (see Chapter 3 Table **3-1**) revealed that the majority of international student ISB studies use quantitative data collection methods embedded in surveys (Kim, 2013; Liao et al., 2007; Saw et al., 2013; Sin, 2015; Sin et al., 2011; Sin & Kim**,** 2013**;** Song, 2004**;** Yi, 2007). The quantitative approach assumes that the research objects of are measurable or countable and research can produce numerical data (Neuman, 2006). Hence, the researcher takes a positivist view if items to be studied are assumed to have some external, independent countable existence (researchers using this approach include mental constructs such as intentions and attitudes among objects assumed to be countable). Other features of the quantitative approach include:

- the researcher is objective, producing factual, conclusive data from measurable phenomena,
- large representative, random population samples are used to provide data that can be generalised and replicated,
- hypotheses are generated by deductive reasoning, and data are analysed by statistical techniques to find patterns and generalisations,
- control groups are often used to give more precise results, *and*
- quantitative data collection methods include calibrated measuring instruments, instruments that extend sensory observations such as microscopes, non-participant observation, structured interviews, and survey questionnaires using scaled instruments. Instruments such as questionnaires can be repeatedly used to research the same population over time or different populations at the same time to allow comparisons (Neuman, 2006; Creswell & Clark, 2007).

4.2.2 Qualitative approach

On the other hand, qualitative research investigates phenomena assumed to be non-countable or measurable, including mental constructs and socio-cultural phenomena (Neuman, 2006). Research is usually exploratory aiming to provide insights and

understanding of social activities, explore the meaning of social constructs and to understand how cultural and social norms influence individuals in society (Corbin & Strauss, 2015; Neuman, 2006). Features include:

- the researcher remains closely involved and produces a subjective interpretation of the observations (Corbin & Strauss, 2015),
- the acceptable use of a small non-random population, since conclusive or generalisable results are not the purpose of the research (Neuman, 2006).
- propositions are generated by inductive reasoning, and
- methods used include focus groups, participant observation, case study, and unstructured or semi-structured interviews.

Given the nature of the phenomena under investigation, the use of a qualitative research approach would be more appropriate for understanding the SFIS' ISB because:

- this research inquiry was mainly exploratory,
- SFIS' ISB experiences can be complex, since they involve interactions with unfamiliar information sources and systems (Mehra & Bilal, 2007),
- the exploration of cross-cultural education and learning experiences international students encountered in host countries and its impact on their academic ISB cannot be measured numerically, but requires a rich and holistic understanding (Mehra & Bilal, 2007; Neuman, 2006),
- the participants' perspective was crucial (Denzin & Lincoln, 2011),
- the researcher, as an SFIS, would be unable to take a totally objective stance (Jackson, 1990; Kant, 2014),
- the research took place in a natural setting (Creswell & Clark, 2011), *and*
- there was a small number of study participants.

4.2.3   Bias and the researcher's role

Unlike the quantitative approach, which assumes that the researcher is remote from the data, the qualitative approach fully immerses the researcher in the data collection and analysis process, building meaning from the interaction with study participants and interpreting the outcomes (Corbin & Strauss, 2015). An impersonal, unbiased stance is considered impossible since all research, scientific or otherwise, is undertaken from a particular viewpoint.

However, when a researcher shares experiences and background with participants, the question of bias arises. Positivist science sees this as a problem, as bias interferes with objectivity and raises questions about the reliability and validity of the procedure and results. Part of the 'paradigm war' controversy is the perceived inability of qualitative researchers to add academic rigour to their interpretative analysis (Corbin & Strauss, 2015).

Procedures to counter allegations of bias and lack of academic rigour have been proposed by qualitative researchers, for example Dharamsi & Charles (2011), Klenke (2008), and Yin (2015). Klenke states that qualitative studies can be rigorous in the collection and analysis of data, as long as the researcher has, among other capabilities, '… skill of comprehension…and competence of reflection' (p. 130). Dharamsi and Charles argue that this rigour is also achieved by the use of extensive quotes and 'thick, extensive, and detailed descriptions and interpretations of the area being studied' (p. 379).

As discussed in the preface to this thesis, research into the phenomena and experiences of Saudi women has previously been acknowledged to be difficult because male researchers cannot easily interview females, and vice versa (Al-Kahtani et al., 2006; Oshan, 2007). Here, the researcher was herself an SFIS sharing with participants a cultural and linguistic background. Certainly the researcher could not take the positivist's 'objective' stance, and the research may be seen as being biased. However, the researcher's immersion into the flow of data provided an additional level of understanding of the participants' experiences, subtleties and nuances of their context. In this research, the researcher's close association with the participants, and the strong relationships that had been built even before the research began, made possible the adoption of a deep, rich interview approach with extensive quotes and Dharamsi and Charles' (2011) 'thick, extensive, and detailed descriptions and interpretations'. As well, the researcher regularly discussed her work with the supervisors, rigorously interrogating the details and interpretations of the data.

Further, according to Kant (2014), a researcher's viewpoint leads to particular epistemological and ontological questions, which in turn lead to an appropriate research methodology and relevant methods to answer those questions, and appropriate definitions of reliability and validity to judge the results. These are discussed in the following section.

4.2.4 Validity and reliability - credibility and trustworthiness

In qualitative research, researchers are themselves the data collection instruments; they cannot separate themselves from the research (Jackson, 1990; Patton, 2002), and the kind of research they perform is not designed to be replicated. These conditions bring special concerns about reliability and validity. Recently, Peräkylä (2016) has pointed out that the terms validity and reliability have widened: validity covers academic rigour in fulfilling the research design, and reliability includes accurate and inclusive research data.

The key to academic rigour is credibility of a study, where the reader is not sceptical of the data collection methods and analysis used (Yin, 2015). Yin describes trustworthiness as where each point of the research is explicitly and methodically reported, and the reader can accept the logic of the researcher's methodology. In building trustworthiness, the researcher must communicate authenticity: participants are valid members of the population who make 'accurate representations of themselves' (Yin, 2015, p. 86). Another indicator of trustworthiness as suggested by Yin is that fieldwork descriptions are sufficiently robust to convince a sceptical reader that the work was performed. The final indicator is a prolonged engagement in the field to fully come to terms with the study context and the issues involved with conducting the research.

A research plan in which the design, questions, and methods continue to interact is credible and trustworthy. Such a plan generates validity and authenticity and reflects reality (Yin, 2015, p. 88). In this research, validity and reliability were ensured and established in several ways:

- data were rigorously maintained according to interview questions and various responses,
- the research design's coding and iterative procedures allowed outlier participant remarks to be considered for: possible contribution and enrichment of data and as illustrative remarks through a continuum of responses,
- summaries of findings were sent to the participants to ensure rigorous and accurate data collection and analysis of participant voices. In that sense, SFIS participants acted as judges, evaluating major findings of the study through "member checking" (Miles & Huberman, 1994, p.309),

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- the researcher conducted external validation of the Study 1 findings: firstly, presented as a conference paper, and secondly discussed with English Language Intensive Courses for Overseas Students (ELICOS) managers and teachers in Melbourne to assess the usefulness of findings for ELICOS (Guba & LincoIn, 1994),

- the analysis and coding process was extensively discussed with the researcher's supervisors. Their experience of working with SFIS helped to increase the researcher's awareness of relevant themes related to participants' ISB experiences (Guba & LincoIn, 1994), and

- the researcher's supervisors also consensually discussed and documented biases and expectations of the data to heighten awareness and objectivity throughout the data analysis process (Poulakis et al., 2017).

As well as above, trustworthiness and credibility were also established through the transparency of the study's context, theoretical basis, and methodology, which are explicitly stated and detailed (Lincoln & Guba, 1985). A degree of transferability (LincoIn & Guba, 1985)—that is, providing sufficient data that enable the reader to judge whether the findings can be applicable to other situations and contexts—is also possible:

- different participants: for Study 1, Saudi women studying in Australia who had recently arrived; and for Study 2, Saudi women who had studied in Australia and had been back in Saudi Arabia for at least three months,

- different demographics: participants represented the larger SFIS population in respect to age, regional background, marital status, prior experience, and so on,

- different geographical contexts: two very different countries, Saudi Arabia and Australia,

- different temporal contexts: engagement with the participants took place over several years.

The chapter so far has justified this research's philosophical and methodological underpinnings. The next sections cover the research design, sampling and recruitment of participants, and data collection and analysis techniques.

4.3   Design of this research

Neuman (2006) classifies research into three categories: explanatory, descriptive and exploratory, according to the purpose of the research. Neuman's classification may be useful for research that has one specific purpose. However, for interpretivism that involves multi-purpose investigations such as this research, the distinctions are often blurred. This research is exploratory as it is a deep investigation into challenges and changes concerned with SFIS' ISB when they leave their home countries, live in their host countries, and move back to their home countries. Insofar as the research describes how SFIS seek their information when moving across different cultural and digital contexts, it is also descriptive. And in its search for an explanatory model for understanding the phenomena of ISB changes over time and place, it is explanatory.

To achieve the research aim and explore, describe and explain how SFIS seek their information when transitioning back and forth between their own and different cultural and digital environments, this research comprised two qualitative studies, Study 1and Study 2, described below.

Study1 consisted of two sub-studies as follows:

- **Study 1A** was an empirical investigation aimed at exploring SFIS' pre-arrival and post-arrival ISB and the challenges SFIS encounter when moving from Saudi Arabia and start living and studying in Australia (findings described in Chapter 5). In Study1A followed an interpretive qualitative research approach, collecting data using semi-structured face-to-face interviews with twenty-five newly arrived SFIS voluntary participants. With their permission, interviews were audio-recorded and notes taken. To validate the data collection methods, results and findings of Study1A, the researcher presented a refereed paper summarising Study1A findings at the 2015 ISANA conference. In addition, in 2016, she talked and shared her findings with Australian international students' advisers and ELICOS educators at La Trobe University, Melbourne, Australia.

- **Study 1B** was an empirical investigation undertaken in Australia that took place about 18-24 months following Study1A (findings described in Chapter 5). Study 1B aimed at exploring the ISB changes SFIS (in Study1A) experience after living in Australia for about two years. Data collection for Study Phase 4 began in May 2017 and concluded in June of that year. The same participants in Study 1A were

virtually interviewed via WhatsApp to explore any changes in their ISB over the time they had spent in Australia.

Study 2 was undertaken in Saudi Arabia (findings and discussion described in Chapter 6). The participants in this study were different, since given the limited timeline of the PhD, it would have been too difficult to wait until Study 1's participants had graduated and returned home (especially as some graduates remain in their host country to do further degrees). This study investigated the ISB changes experienced by SFIS resulting from another Australian to Saudi transition. This study aimed to identify SFIS' post-study ISB challenges faced by ex-SFIS when moving back to the Saudi digital and cultural environment. Owing to cultural and logistical difficulties for the researcher and the participants, the interviews were conducted via online phone applications. As in Study 1, interviews were recorded, translated, transcribed, and sent to the participants for acceptance or changes. The findings were then thematically analysed.

The last stage in the research design was devoted to reflecting on and interpreting the findings of both studies. The new ISB model was proposed and confirmed by the findings and literature, and found to be applicable in reflecting transient migrants including SFIS' ISB throughout their transition journeys. A summary of the research findings was presented at the researcher's completion seminar, where comments received from the seminar's audience were incorporated in improving the final results of the research.

4.4   Target population, sampling and recruitment procedures

Bryman (2015) notes that the selection of a population is governed by the research questions. This study's populations comprised (a) SFIS who had recently arrived in Australia), (b) the same SFIS after they had been in Australia for about two years (Study 1B), and (c) different ex-SFIS who had graduated in Australia and had returned home permanently (Study 2). In the recruitment of participants, this study employed a non-probability purposive sampling approach, which is a sampling technique where the samples are collected in a process that does not give all individuals in the population an equal chance of being selected. In other words, participants were deliberately selected because they have some special contribution to make, because they have some unique insight or because of the position they hold (Denscombe, 2014). According to

Denscombe (2014), in small-scale qualitative explorative studies similar to this study, a non-probability sampling approach is the most appropriate.

4.4.1 Selection criteria

Potential participants in this study were divided into two separate groups, depending on the selection criteria for each study. For both Studies 1 and 2, three criteria were applied: a potential participant:

(i) had to be a Saudi female international student

(ii) had to move between continents, i.e. from one cultural and digital environment to another, to start and complete their graduate studies.

(iii) voluntarily agreed to participate in the study

Each study had additional criteria as follows:

Table 4-2: Participants' additional selection criteria

Study #	Additional Criteria
Study 1	A participant had to a Saudi female that: • was enrolled as new full-time students in an Australian metropolitan university or studying an English language preparation course (ELICOS) prior to commencing their full-time study, and • had to have arrived in Australia from Saudi Arabia within the previous 6 months
Study 2	A participant had to be a Saudi female who: • has graduated from an Australian University or Language Centre, and • had to have been back in Saudi for more than one month before Study 2 commenced

4.4.2 Recruitment

Collecting data from a wide variety of backgrounds was important to ensure a range of different opinions, so participants for both studies were sourced from both conservative and liberal Saudi provinces, varied in age, marital status and study background.

Participants in both studies were recruited from (a) the researcher's personal contact lists, (b) the Saudi Women's Clubs in Melbourne, Sydney and Brisbane (the Australian states with largest presence of SFIS) and (c) through the participants' own social networks- (known as snowball sampling) (Neuman, 2014). Potential participants were contacted via email or WhatsApp messages. In the message, a brief description of the nature and aim of the study was given, explaining that it was a pilot study to examine the information needs and ISB of Saudi women in transitioning between Saudi Arabia

and Australia. Anonymity and confidentiality would be assured.

Recruitment procedures and participants' demographics are described in Section 5.2 Chapter 5 (Study 1) and Section 6.2 Chapter 6 (Study 2).

4.4.3   Sampling size and saturation point

Determining sample size and reaching saturation can be problematic. Advice on this was found in three sources. First, Denscombe (2014) gives two important injunctions: (a) sample size for an exploratory study 'cannot be stated with certainty' (p.51), so the researcher must judge a likely sample size; and (b) study findings cannot be generalised to the population. Second, Mason (2010) notes that non-random samples appeared to be the norm and that the average was 31 participants for interviews. Third, Cavaye (1996) argues that the research questions and the data collected, together, determine at what point the researcher has collected data from sufficient participants to enable appropriate analysis.

After interviewing 25 participants for Study 1, the researcher found that no new information emerged; consequently no more participants were recruited. Following Descombe, the researcher judged that 25 participants would most likely also be sufficient for Study 2. This gave a total of 50 participants to answer all the research questions and data together, as advised by Cavaye.

4.5   Data collection techniques

The unit of analysis was a theme or issue related to their perceptions and experiences of SFIS' ISB (Zhang, 2012), and not an analysis of ISB outcomes.

As well as investigating Saudi female international students' information-seeking behaviour when moving back and forth between two different cultures, this research also sought to understand the factors that impact on students' ISB over time. These concerns were best answered by adopting qualitative data collection methods. The most appropriate data collection technique adopted in this research was the one-on-one semi-structured interviews as explained in the next section.

4.5.1   Semi-structured interviews

Creswell (2007) describes the interview as one of the most important sources of information for qualitative researchers because it allows participants to communicate

how they look at situations from their own point of view. Interviews range from formal and standardised question-and-answer (structured) to informal conversations (semi-structured) (Fraenkel & Wallen, 1993). In a structured interview, only previously determined questions are asked; no attempt is made to pursue interesting descriptors or events. The choice of structured questions can be useful for qualitative or mixed methods research (qualitative plus quantitative data collection and analysis) where distinct relationships and comparisons are necessary and each interviewee has to supply given data. In contrast, semi-structured interviews lead to in-depth questioning and avoid the finality of structured (Denscombe, 2014). Semi-structured discussions are suitable for qualitative designs, where the interviewer and the interviewee hold a conversation on a social or organisational environment, and all data are valued.

Hence, to attain in-depth understanding of SFIS' ISB, this research employed the semi-structured interview format for both Study 1 and Study 2 allowing participants to express their opinions on the phenomena under investigation.

The study commenced after the research was approved by the University's Human Research Ethics Committee. Before an interview session started, each participant was given a consent form and an Ethics Committee Plain Language Statement of Approval (Appendix 3 and 4 respectively). To facilitate an informative but relaxed interview (Al-Qahtani, 2015), participants were allowed to choose the language in which they would be interviewed. The majority (45 out of 50) chose their native Arabic.

Interview questions were designed to address key themes from the ISB literature, DTPB principles and constructs, and the proposed propositions. At the same time, the questions were kept open to check if any additional themes or factors emerged during the interviews. Interview questions ranged from general questions on the students' information needs and preferred sources to more penetrating questions related to the impact of the transition experience on participants' ISB. Issues discussed in the interviews included: current information needs, sources they accessed for their information needs in the digital age; their attitudes toward and perceptions of these sites as a source of information; and whether there were any challenges and changes in their ISB when they were in Saudi versus in Australia and vice versa. The interviews also concentrated on the factors that may lead to changes on SFIS' ISB.

4.6   Data analysis

Qualitative data analysis concerns interpreting and reviewing the data. Silverman (2016) points out that the pragmatics of qualitative analysis is in exploring and explaining what is underlying the data, then to distil its 'essence, meaning, norms, patterns, rules, structures' (Silverman, 2016, p. 10). Data assessment requires constant reassessment to consider optional pathways or contrary (outlier) information. Taylor, Bogdan and DeVault (2016) describe data analysis as an inductive intuitive process, constantly changing and reinterpreting to create deeper understanding through constant redefining of interpretations.

Following each interview in Study 1 & Study 2, the recordings were transcribed verbatim from the audiotape, translated from Arabic to English if required. Transcripts were returned to the interviewees to make sure that the transcribed scripts represented exactly what they wanted to say. Then intensive analysis began, performed collaboratively by the researcher and her supervisors who met regularly during the process. The researcher applied Corbin and Strauss's (2008) coding approach of analysing qualitative data, building up themes and concepts with the guidance of the DTPB (Decomposed Theory of Planned Behaviour, Section 3.8.2) and the proposed five potential factors (Section 3.9.1).

Following Strauss and Corbin's coding approach (2008), the analysis of the collected data involves three steps: (i) open coding, (ii) axial coding, and (iii) selective coding:

(i) **Open Coding:** in this coding first phase, the researcher familiarised herself with the data through careful reading of the transcripts multiple times to gain an overall understanding of participants' answers (Neuman, 2006). After that, the researcher analysed each participant's words, phrases and sentences to identify any key themes/concepts related to the research topic. Each theme was assigned a code of a few letters or words based on Neuman's coding template (2006). Wherever a theme appeared in the text it was labelled with the relevant code.

(ii) **Axial Coding:** the next step of axial coding pieced together data in new ways, allowing connections between categories through asking question and making comparisons. Inductive and deductive thinking processes to relate subcategories to categories were the main emphasis of axial coding. For example, themes

relating to ease of use, compatibility and usefulness were categorised as 'attitude'.

(iii) **Selective Coding:** finally identifying and choosing the core category, systematically connecting categories to other categories, validating those similarities and relationships and then completing categories that needed further refinement and development. The core themes (the 'key concepts', Neuman, 2014, p. 483) were based on the research questions and concepts of the DTPB in order to obtain a deeper insight into the online networking and seeking behaviour that was prevalent among SFIS. In this stage, all interview transcripts were printed, read multiple times and notes were recorded in the margins to identify potential themes. These were then reviewed and examined for connections and redundancies. During the three-level analysis and coding process the researcher frequently met with her supervisors to discuss identified themes and sub-themes.

The concepts and relationships developed through the coding process help to guide the data interpretation and discussion. Following the analysis of the data, findings were verified and analysed based on triangulation and cross-referencing data collected from the interviews. To obtain a deeper insight into online networking and seeking behaviour that was prevalent among Saudi female international students, the field notes, the analytical memos, and the core themes were used to write up the findings of the studies. Commonalities among the data were identified, such as repeated words or phrases that described a concept or participant experience, and illustrative quotations were chosen which exemplified the themes, concepts or experiences.

Chapter summary

This chapter described and justified the research design of this thesis. It began with a description of key research paradigms, justifying the selection of an interpretive paradigm as the best for reaching the goals of this research (a divergence from the great majority of ISB research, which uses positivism and positivist methods). As well, a qualitative approach was used as the researcher was embedded in the population of this research. Credibility through validity and reliability techniques was assured to the extent that the researcher's embeddedness may be reflected in the analysis.

Research samples comprised 25 SFIS who were new study entrants for Study 1 in Australia, and 25 different SFIS for Study 2 (50 in total) who returned to Saudi following completion of their studies. Data were collected in Australia by face-to-face interviews for Study 1A participants and by online (phone) interviews for Study 1B participants and in Saudi Arabia by phone calls and texts for Study 2 participants.

Data analysis was undertaken through iterative procedures, coding and theming for constructs and observations. The methodology, methods, data analysis, and findings and discussions for Study 1 and Study 2 are comprehensively described in Chapter 5 and Chapter 6 respectively.

Chapter 5
Study 1: Information Needs and ISB of SFIS Moving from Saudi Arabia to Australia

Introduction

The previous chapter discussed the research design adopted for the empirical investigations of SFIS' ISB as they move between countries. This chapter presents the major findings of Study 1[20] exploring the ISB experiences of SFIS in Australia. Study 1 had two sub-studies: Study 1A explored the ISB challenges SFIS experienced resulting from their move to a very different cultural and digital environment. Study1B aimed to identify the ISB changes Study 1A participants experience after they had been exposed to the Australian environment for about 18-24 months.

Section 5.1 covers Study 1 contextual background. Section 5.2 describes and justifies the data collection methods and recruitment of participants. Section 5.3 presents the key findings from Study 1A, exploring the information needs and ISB challenges of SFIS who are recent arrivals in Australia. Section 5.4, then, gives the methods and findings from an external validation process carried out to test, confirm and validate the results of Study 1A. Section 5.5 covers Study 1B, exploring the changes SFIS experienced in their ISB resulting from exposure to the Australian environment. Finally, Section 5.6 discusses the findings of Study 1 in detail.

5.1   Study 1: Contextual background

In an attempt to attract more international students and help them locate and access information before and during their stay in Australia, nearly all Australian service providers and governments have developed several offline and online information portals. One example focused specifically on international students, is the Study

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[20] Elements of this chapter appear in the following articles:

Binsahl, H, Chang, S and Bosua, R. (2015c). Information seeking challenges when moving across cultures: The case of Saudi Female International Student in Australia. ISANA International Academy Association Conference)- Awarded Best Conference Paper.

Melbourne Website (Council of Australian Government (COAG), 2010). Prior research (Alzougool et al., 2013a; Chang & Gomes, 2017a) has found that some international students fail to take advantage of these platforms. Researchers attribute this to a lack of service providers and website designers' understanding how international students seek and use portal information in a rapidly changeable digital space (Alzougool et al., 2013a, Chang et al., 2012; Chang & Gomes, 2017a; Sin, 2015). Based on these researchers have emphasised a growing need for further research on how international students from different cultural backgrounds search for, locate and access their required information (Alzougool et al., 2013a; Sin & Kim, 2013; Sin, 2015).

The purpose of Study 1 was to contribute to the literature on international students' ISB (and by extension, transient migrants) by exploring the ISB journey of recently arrived SFIS, first as they prepare to leave Saudi Arabia, second as they begin their lives in Australia, and third after having lived in Australia for two years. The objectives of Study 1 were to:

(i) investigate the before and after arrival information needs and their main sources of information of SFIS in Australia (Study1A).

(ii) explore the ISB challenges faced by recently arrived SFIS resulting from the cultural and digital transition from Saudi to Australia (Study1A).

(iii) provide an external validation of the findings of Study 1A

(iv) ascertain whether SFIS experienced any changes in their ISB after living in Australia for up to two years (Study1B).

The following section describes the methodology specifically used in Study 1. This includes a discussion of the recruitment of participants, their demographics and Study 1 findings, its validation followed by a detailed discussion.

5.2   Study 1: Methodology

Chapter 4 gives broad details of the methodology and methods for the research in general. This section provides the details of data collection processes unique to Study 1.

5.2.1   Study 1: Recruiting participants

Even though the researcher is a Saudi female and thus has a better access to SFIS than male researchers, recruiting recently arrived SFIS proved more problematic and time-consuming than expected, due to their smaller number when compared to other

international female such as Chinese.

Recruitment started with creating a link to Survey Monkey including online invitation messages (See Appendix 5). This online invitation was sent to potential participants from the researcher's personal lists using her offline and social media social networks, and then the participant pools were expanded through snowballing.

So far, five participants had been recruited. To identify potential participants, the researcher also contacted the vice presidents of the Saudi Women's Clubs in a three major Australian states with the largest presence of SFIS (SWCs) requesting their help in the recruitment of recently arrived students for Study1A. With the assistance of the SWCs, the survey link was posted for three months on the Association's Facebook and Twitter accounts. Potential participants were first asked to complete a short online questionnaire to identify their eligibility for a follow-up interview (selection criteria given in Section 4.6.1). The questionnaire took approximately 10 minutes to complete. By the end of the three months, forty responses were received: only six students had been in Australia for less than six months. Of these six, only three expressed an interest in participating in an interview by providing their email address and\or phone numbers. They were contacted and invited to suggest a suitable time and place for an interview. They accepted, which gave the researcher her first three participants.

This method was clearly inefficient to recruit SFIS. Consequently, since most recently arrived Saudi female students were required to attend English language courses, the researcher paid frequent visits to four ELICOS centres in Melbourne. The researcher also frequently visited prayer rooms in the ELICOS centres to recruit participants from there. For most recently arrived SFIS, the prayer room was ideal because it is the only segregated place where women can freely sit, take off their niqab, and meet Saudi friends or make new ones as in this case. Additionally, in this setting the researcher was able to recruit more participants.

To gain more visibility and trust, the researcher also regularly met the Melbourne SFIS in their language centres and chatted informally about their courses and their stay in Australia, which resulted in a number of recruitments, and another snowball sampling process began, with recruited participants introducing other potential participants to the researcher (snowballing). After some weeks, approximately fifteen Saudi female students had volunteered to participate. They were invited for coffee at a place of their

choice. This approach helped the researcher to build strong relationships with participants, since qualitative researchers emphasise the need to build trust between both researcher and participants (Al-Qahtani, 2015).

Eventually, the researcher was able to interview 25 Saudi females who voluntarily agreed to participate. All Study 1A recruited participants were studying at major Australian institutions in Melbourne, Sydney or Brisbane at the time of conducting the interviews. Melbourne participants (18 out of 25) were allowed to choose a time and place for the interview, with two suggested their private accommodation while drinking the traditional Saudi coffee. Sixteen SFIS chose a public place close to their language centre, so interviews were conducted in a quiet room in the nearest public library. Those from Sydney and Brisbane were interviewed online using Skype and Tango.

The interviews for the follow up study (Study 1B) took place 18-24 months later (in May–June 2017), with the same participants as in Study 1A. Participants were given the opportunity either to have a face-to-face interview or send their answers via emails or WhatsApp in the format they preferred (text or audio messages). Twenty participants reported their preference for online interviews owing to limited time, especially as Study1B was conducted during an exam period. The other five interviews were conducted face-to-face.

5.2.2   Study 1: participants' demographics

Study 1 focuses on SFIS' ISB before and after their arrival to Australia required collecting data from a variety of demographic backgrounds to ensure a range of different opinions that could reflect the larger population. Hence, participants differed in terms of age groups, regions, marital status, funding types, academic disciplines and length of stay in Australia at the time of conducting the interview.

Table 5-1 summarises the demographics of research participants in Study 1. To ensure confidentiality, participants' actual names have been replaced with specific codes (P1-P25). Appendix 6 contains a table identifying demographic details of each interviewee.

Key points associated with participants' demographics:

- **Marital status.** In accordance with Saudi custom, each SFIS was accompanied by at least one male companion (either a husband, brother or father). In terms of marital status, the majority of interviewees (13 out of 25) were married with

children. Marital status was important because it required different information

Table 5-1: Study1- SFIS' demographic table (n=25)

Age		
21–25	6	24%
26–34	14	56%
35–44	5	20%
45+	0	0%
Marital Status		
Single	11	44%
Married, children	13	52%
Married, no children	1	4%
Saudi Region		
Hijaz	14	56%
Najd	6	24%
North	4	16%
South	1	4%
Length of Stay in Australia		
1–3 months	17	68%
4-6 months	8	32%
Australian City of Studying		
Melbourne	18	72%
Sydney	2	8%
Brisbane	5	20%
English Level (self-assessed)		
Average	11	44%
Good	10	40%
Very good	4	16%
Funding		
Self	2	8%
KASP	16	64%
Work sponsored	7	28%
Course/Degree		
ELICOS	18	72%
Bachelor	1	4%
Master	6	24%
Discipline		
Arts	1	4%
Business	4	16%
Education	2	8%
Fashion/ Design	2	8%
Technology	9	36%
Health	4	16%
Law	1	4%
Media	1	4%
Social studies	1	4%

needs. Single SFIS need information related to their male guardians (e.g. brothers or fathers), married SFIS arrive with children who have their own needs, while husbands have different needs.

- **Region.** Participants came from four primary regions. Fourteen were from Hijaz the more liberal region in Saudi Arabia, and others were from the more conservative Najd, South and North Saudi regions (Alqefari, 2015; Oshan, 2007). Despite the undeniable fact that Saudi culture and traditions are applied in all families in Saudi society, the level of restrictions imposed by Saudi families on their female members differ according to the region to which they belong (Al-Qahtani, 2015, Oshan, 2007). Unlike other Saudi provinces, the Hijaz province is described by many researchers (Al-Qahtani, 2015; Oshan, 2007) as one of the most multicultural and diverse cities in the Muslim world. This is due to the millions of Muslims who visit the sacred city of Mecca every year, many coming from diverse cultural backgrounds (e.g. Asia and Europe), who have migrated and settled in the Hijaz province (Oshan, 2007).

- **Length of stay in Australia**. This was important because it impacted different information-seeking behaviours. Seventeen respondents had been living in Australia for less than three months at the time of Study1A's interview. When asked about prior experiences living in a foreign country, the majority of participants (*21 out of 25*) had no such experience before coming to Australia, and those who did, entered that specific country as tourists. All 25 students were studying outside Saudi Arabia for the first time. This limited experience living abroad was assumed to add to their needs for a wide range of information prior to arriving in Australia.

- **English proficiency**. This was important as a determinant for different ISB and the questionnaire required the self-rating of participants' English proficiency levels. Although some had spent longer periods studying in Australia, most made general comments concerning the deficiency of their language skills, with particular emphasis given to academic English terms and vocabulary. Some considered their low English proficiency levels an obstacle to asking for help when needed.

5.2.3 The interviews

Interview questions for Study1A mainly aimed to elicit information search behaviour,

sources, and challenges recently arrived SFIS faced when moving from Saudi to Australia. Study1B interview questions on the other hand mainly aimed to explore the ISB changes SFIS experienced resulting from their longer exposure to the Australian environment. Appendix 7 gives examples of the kinds of questions asked in Study1A and B's interview.

5.3   Study 1A: Findings

A deeper analysis of Study1A's data revealed two major themes; 1) - Concerns driving SFIS' ISB pre- and post-arrival to Australia; 2) - SFIS' ISB challenges resulting from the transition from Saudi to Australia. The responses given under each subtheme that follows are relevant excerpts from the transcriptions. Not all relevant responses are shown: only typical examples have been presented.

5.3.1   Concerns driving SFIS' ISB pre- and post-arrival to Australia ISB

This major theme addressed the first research objective by identifying the types of concerns that drove SFIS to seek information about these concerns before and after their travel to Australia. It also highlighted the different information sources that SFIS relied on for their ISB.

- **Concerns driving SFIS' ISB *pre-arrival* to Australia ISB**

Four sub-theme categories SFIS' pre-arrival information concerns were identified: personal safety concerns, concerns related to accompanying family members, academic concerns, and lifestyle adjustment concerns. Table 5-2 below gives a brief overview of all concerns and sub-categories of these concerns.

Table 5-2: Study1A: Themes and sub-themes of concerns driving SFIS' pre-arrival ISB

Pre-arrival ISB Concerns Categories	Pre-arrival ISB Concerns sub-categories	Frequency n=25 (%)
Personal safety concerns	Australians' attitude towards Muslims	22 (88%)
Concerns related to accompanying family members	Mahram (male guardians)-related needs	10 (40%)
	Children-related needs	14/20* (70%)
Academic concerns	General academic information (e.g. the educational system and course requirements)	5 (20%)
Lifestyle adjustment concerns	Accommodation, weather, finance	15 (60%)

* Thirteen of the twenty-five SFIS were accompanied by children.

i) Personal safety concerns

Twenty-two participants reported their information seeking keywords were related to *Australians' attitude towards Muslims* and the way Australians' view and treatment of Muslims. This search was conducted not only before their arrival in Australia, but also before their decision to study abroad. As this was their first extended stay in a Western country for most participants, they were understandably concerned whether Australia was a safe place. This was especially true after getting word about many racist incidents against Muslims that related to female head coverings. In fact, at the time of conducting the interviews, a number of fatal incidents in the US and the UK that could be related to racism that involved Saudi students were reported in the media. For instance, one example was the tragic incident of Nahid Almanea, a female Saudi PhD student who passed away in the UK after suffering 16 stab wounds to her body, neck, head and arms. The student was wearing a full Muslim dress, an Abaya robe and a hijab scarf, and police believed that the religious clothing might have made her a target (Culzac, 2014). One participant expressed this concern and justified her decision to choose Australia over and above the US or UK:

> *After I decided to study abroad and before I chose Australia, I did a search on US and UK as well. The most important thing was to get information about which country among these three countries is the safest for a Muslim female who is wearing hijab [P5].*

Another interviewee commented:

> *Although one of my brothers is studying in the US, I decided to study in Australia after I found that Australia and Melbourne won the best destination of study five times in a row, being a safe place for international students [P4].*

ii) Concerns related to accompanying family members

96% of interviewees reported that information related to accompanying family members was among the most accessed information. The following subsections enlighten the two main family-based concerns cited by most participants:

Mahram (male guardians)-related needs

Ten participants reported the need to find information related to their accompanying mahram. Many participants expressed gratitude for their male guardian's willingness to accompany them in their scholarship journey, with five students reporting that their husbands had left their jobs enabling them to join them. This is also why most felt it

was their duty to help their male guardians get the most of this experience by finding them courses to study while in Australia or identifying specific places where they could meet other Saudi males who were in the same boat:

> *When I got the scholarship, I didn't pick a university for myself, I picked a university for him, my concern being that I wanted him to get a good job when we returned. It was very important to me that he did better than me, as he sacrificed his time to come here as my companion [P14].*

> *One of my husband's main motivators to accompany me was his dream to get a scholarship. As a mahram he could easily study as long as both of us finished at the same time. So we both did a lot of searching to find out about the process [P13].*

Children-related needs

Fourteen married SFIS with children identified different child-based needs that influenced their pre-arrival ISB. Interestingly, five married SFIS said their main reason for studying abroad was not themselves, but their children. This motivation prompted these mothers to seek out the best English-only schools in safe multicultural cities for their children:

> *The main reason to study abroad was for the sake of giving my kids the opportunity to learn English, experience the outside world and build-up their personalities away from our cultural constraints...I also sought for the best Australian public schools: I decided to enrol them in English-only schools with very few Arabs as I want them to learn English [P6].*

The majority of participants were concerned about how to get school offers for their children, since this was a pre-condition for receiving an Australian visa:

> *My brother's wife living in the US told me how important it is to apply for kindergartens as early as possible because people on the waiting list have less chance to get in. But even though I applied for a kindergarten while I was in Saudi Arabia, they put me on their waiting list [P4].*

Four participants with school-aged children attributed the difficulty of finding schools as stemming from their preference for Islamic segregation schools:

> *After I decided to study in Australia I started to worry about my kids and their religion…[I posted] a question on Mubtaath…about the best Islamic schools close to where I would live, and enrolled my children [P12].*

iii) Academic concerns

Only five participants [P4, P6, P8, P9 and P13] mentioned searching for general academic information, related to the educational system and course requirements as concerns:

> Before I decided on Australia, I searched Australian, UK and US universities, and how the Australian educational system differs from Saudi… I found that in Australia, education is self-dependent, students have to do everything themselves, not like in Saudi where students are recipients and the teacher provides everything [P6].

The other twenty interviewees reported that academic information wasn't important prior to traveling to Australia. The majority reported having all academic matters (e.g. such study offers) handled either by the Ministry of High Education, especially KASP, or by a relative (e.g. husband or sibling) who lives in Australia, or by an educational agent such as IDP and the recently established Saudi educational agent in Australia (called Masiratna[21] as reported by ten SFIS). Seven of the participants did not know they had to sit the IELTS exam as a requirement for some universities:

> I didn't do any academic search before my arrival to Australia, and this is why I didn't know about the procedures to get an offer and the need to do IELTS [P8].

iv) Life adjustment concerns

Fifteen SFIS identified multiple pre-arrival concerns that included finding accommodation (ten SFIS) and the Australian climate (four participants), as two participants indicated:

> Before my arrival I was really concerned about the weather…I knew that Melbourne has changeable weather [P8].

> After I'd chosen Australia, I looked for a temporary furnished apartment as I could not book a hotel, which would be too expensive especially for large families like mine of 9 members [P6].

Cost of living was another important pre-arrival concern (cited by five participants). Three participants [P6, P9 and P14] reported their search for financial information prior

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[21] *Masiratna* is an education and training-counselling agency that offers Saudi and Gulf Cooperation Council (GCC) students outstanding opportunities to study in Australia. It is the first educational agent, managed and owned by a Saudi scholarship student in Australia.

to their arrival related to the cost of living such as the rental costs and childcare fees. Two participants [P11 and P20] were self-funded and needed ELICOS courses prices. Despite being self-funded, none of them reported searching for a job or financial support:

> *I wouldn't have been able to study in Australia if I hadn't had my father's emotional and financial support. So I looked for the cheapest ELICOS centres ... I thought of finding a job, but my father became extremely angry and told me to just focus on my study so I could get high marks, which would make it easier for me to get KASP [P11].*

- **Concerns driving SFIS' *post-arrival* in Australia ISB**

Three of the main themes that drove SFIS' post-arrival ISB were the same as the pre-arrival themes (See Table 5-3), namely concerns related to accompanying family members, academic concerns, and lifestyle adjustment concerns. However, a deeper analysis of these themes yielded different sub-themes. For example, while most pre-arrival academic concerns were administrative, such as (course requirements, ELICOS centre location and so on), post-arrival academic concerns were mainly related to making progress in their studies, and importantly, improving their English.

Daily living in the new environment also created new challenges, especially where their lives had changed from the conservative, sheltered life they had lived at home to the open environment in the host country, coping with their new-found freedoms of movement and financial decision-making. Table 5-3 gives a brief overview of these concerns.

Table 5-3: Study1A: Themes and sub-themes of concerns driving SFIS' post-arrival ISB

Post Arrival ISB Concerns Themes	Post Arrival ISB Concerns sub-themes	Frequency (n=25)
Accompanying family members concerns	Mahram (male guardians)-related concerns	8 (32%)
	Children-related concerns	10 (40%)
Post-arrival academic concerns	Post-arrival academic needs related to completing academic tasks	22 (88%)
	Post-arrival administrative, scholarship and financial concerns	25 (100%)
Post-arrival lifestyle adjustment concerns	Accommodation, public transport, religious practices, entertainment, daily access to news, communicating with Australians	15 (60%)

i) Accompanying family members concerns

Ten married SFIS with children identified different ***children-related concerns*** as elements related to their post-arrival ISB. These included searching for childcares as one participant could only look for a kindergarten following arrival:

> *I arrived in Australia 5 days before the course started…to find a kindergarten for my children [P4].*

To preserve their children' Arabic and Islamic identity five mothers reported their concerns about finding weekend Arabic classes for their kids to preserve their children's Arabic and Quran levels

> *You know we are here temporarily and have to go back when we've finished. This means my children will go back to Saudi schools so they have to keep up their Arabic and Quran levels to be accepted. This is why I was so keen to enrol them in additional weekend Arabic classes [P6].*

Finding legal and academic information related to their accompanying mahram was also cited by eight SFIS as an element that drove their post-arrival ISB.

> *Finding information about changing my husband's visa from a spouse to a student visa has been a major concern since we've been in Australia. It still is, especially as he [my husband] started to study as soon as I did —we don't want to break the Australian law [P4].*

ii) Post-arrival academic concerns

Once established in Australia, 95% of the participants identified specific academic and course information needs as the most important, regardless of their study level. SFIS reported two academic concerns: academic needs related to completing academic tasks and academic needs related administrative, scholarship and financial concerns.

Post-arrival academic needs related to completing academic tasks

The first and most commonly academic needs (reported by twenty-two participants) were finding courses information, improving language skills, and writing of assignments:

> *Since I started my English course, I searched and still search for information on improving [my] English (fluency) as this is important if I want to finish my ELICOS course and start my University degree course [P1].*

> *The first and foremost information I need is how to improve my English level and especially how to do the IELTS test, which is a*

nightmare for me at the moment [P3].

Locating academic information was more challenging than finding daily information. Issues related to appropriate English search terms, and easy-to-understand English sources were the main challenges with academic information. One participant cited reluctance to continually ask for assistance from educators, choosing instead to direct queries to friends:

> *I think finding academic information is more difficult than finding daily information. For daily information I can simply search Google or ask friends in my own language, but for academic information, you need good English, which was difficult as my English fluency is low [P2].*

Ten participants linked their difficulty in finding academic information to limited search and IT skills, which they attributed to the Saudi educational system:

> *Unlike in Saudi where all the academic materials are given to us by our teacher, here (in Australia) I need to depend on myself and do a lot of searches for everything starting from the class timetable to the assignment structure [P5].*

> *I don't know how to send documents by emails. In Australia they take for granted that everyone has an email address and knows how to use it[email] so if you want to contact your lectures they expect you to do it by email. I have an email account in Saudi, but I still don't know how to use it [email] as we don't use it much back home [P6].*

The only exception was three students [P4, P10 and P11] who found accessing daily information more difficult than academic information (Note all these were students had a very good English proficiency level).

Post-arrival administrative, scholarship and financial concerns

The second most important academic concern related to administrative matters, i.e. procedures required by Australian university and the Saudi Ministry of High Education to get a university offer and access their scholarship accounts. All participants related concerns about getting university offers to their limited English, and their recent Ministry of High Education's policy that required scholarship students to obtain study offers themselves. This policy prevented them from applying through educational agents, as one students indicated:

> *Our SACM informed us that Saudi Arabian students can't get a financial guarantee if they apply to Australian universities through*

an agent. This new policy makes it harder especially with [my] limited English. I think our embassy needs to revisit their policy [P13].

Another concern that required intensive searching was to find a suitable supervisor:

From the first day I arrived and even before I arrived, my main concern was how to find a supervisor with similar interests as mine. This was very hard and especially with the new rules of refusing offers provided by educational agents…every day I search different Australian university websites and even ask previous PhD students on Twitter to look for a supervisor in my field [P9].

To receive funding from their embassy, recently-arrived Saudi students were acquired to create an online scholarship student account on the *Safeer*[22] website which was designed by the Ministry of Higher Education. All participants, regardless of their scholarship status, cited information related to activating their Safeer student account as the first information they sought and used post arriving in Australia. Fifteen SFIS, many without a friend or relative in Australia, described accessing to this important information challenging due to limited internet access- they were living in hostels and internet access costs were high. SFIS had to open a bank account and to do so they needed good English. This prompted at least one participant to seek help on Twitter from previous Saudi students who had been in Australia for a longer period of time:

First thing I did after arriving to Australia, was getting a SIM card that had internet. Then I created a bank account. I had to get a bank account in order to register my file at SACM. To get help, I contacted the Saudi Club in Sydney through their Twitter account and they were so helpful and answered all my enquiries about the best SIM card and data plan to get [P9].

Three Melbourne participants [P5, P15 and P22] who informed the Saudi Club in Melbourne (SCIM) about their imminent arrival, expressed their gratitude for the welcoming pack they received upon arrival that included a free SIM card and most of the information they needed:

We were lucky that my husband had contacted and informed the Saudi Club in Melbourne before we left. On our arrival day to

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[22] *Safeer* is a cloud platform launched by the Saudi Ministry of High Education to enable Saudi students outside the Kingdom to submit all their academic, financial and other requests without the need to travel and visit the cultural mission in person.

Australia we found a group of Saudi students waiting for us, and they were so helpful and supportive [P15].

Ten SFIS expressed concerns about knowing how to find trusted sources from which to receive information related to legal and academic rights as international students, and to safely report discrimination:

[After suffering discrimination from an ELICOS teacher] I didn't know what to do and I was scared to tell my husband as he might fight with them. So I just cried. My friends told me its better to change my class. I wish I'd known that as an international student I could have got help from a counsellor [P8].

iii) Post-arrival lifestyle adjustment concerns

Six key lifestyle adjustment concerns were expressed by interviewees: finding permanent accommodation; how to use public transport; accommodation of religious practices, finding entertainment; daily access to news; and communication with Australians.

Accommodation

Fifteen participants reported concerns and challenges related to finding accommodation information contributing to their adjustment difficulties:

After my arrival the first issue I was concerned about was to fulfil basic life needs, such as finding permanent accommodation, as without finding it I wouldn't be able to settle and focus on my study [P9].

I was so lucky! I had my cousin in Australia as she arranged our current accommodation [P1].

Participants, especially those married with children found it hard for families to get their accommodation application approved as one participant commented:

Finding accommodation [was difficult] with all my children [P6].

Other important accommodation ISB challenges included the Australian rental system and legislation, which differs greatly from Saudi Arabia's, and finding information about the time of rental inspections, which clashed with ELICOS timetables. These challenges affected their daily lives and academic settlement given the fact that some of the husbands could not support finding this information due to limited English and unfamiliarity with the Australian renting system:

> *Finding accommodation with many children along with the other Australian renting requirements including inspection where most of them are either in the morning or afternoon meant clashing with my ELICOS. I used to ask my ELICOS teacher to allow me to leave earlier and some of them unfortunately marked me absent [P6].*

Many were unaware that ELICOS provides housing support. Three SFIS [P5, P7 and P14] who were aware of it found that the accommodation provided by ELICOS was quite unsuitable:

> *[ELICOS] told us that they provide student accommodation. [but they were only] suitable for single non-Muslim students. I am here with my husband and children [P7].*

Public transport

Public transport was another important search topic, as two participants indicated:

> *I started to search for information on how to use public transport. In Australia I don't have a driver and my mahram [husband] doesn't have a car [P1].*

> *I didn't know anything about how to use the public transport or even how to use Google maps [P5].*

Support for religious practices

Six participants reported concerns related to religious practice with two participants complaining how some teachers were unaware of e Islamic customs regarding dress code while living in Australia:

> *One of my ELICOS teachers kept saying to me if I didn't take off my niqab she would not allow me to pass my level. She claimed that she couldn't hear my voice when I spoke, which I think was just an excuse to practice racism against me [P8].*

Simultaneously, fourteen interviewees were pleasantly surprised to learn of their teachers' awareness of religious needs, including leaving the classroom at prayer time, eating halal food during events, the month of fasting (Ramadan) and Eid:

> *It is only after I searched for information about the facilities available for Muslim females, that I discovered that most Australian institutions provide prayer rooms within their campus and some even provide a separate prayer room for females. I really admired Australians' understanding of our religious needs [P12].*

P6 described her feelings when she once asked her teacher's permission to leave the classroom:

> *I was so impressed about how some teachers knew about our Islamic practices such as praying and respected us when we ask for going to pray. Some of my ELICOS teachers were so understandable and helpful as they knew that in the month of Ramadan we are fasting where some of them allow us to leave earlier as they knew that we have families and we need to cook for them [P6].*

However, P6 had also had a negative experience:

> *I think not all teachers knew about our Islamic behaviour. A male teacher got angry and upset when I refused to shake his hands and I was so embarrassed.*

Five SFIS described the difficulty of praying in a room given where both males and females were present as they had to wait until the males had left. Students from the same ELICOS described how, after they complained about this challenge, their centre responded by providing a female prayer room.

Entertainment

Another information search was for holiday breaks and recreational activities (cited by five SFIS, especially those who arrived earlier than their course commencement date and had time on their hands). Three married SFIS [P6, P9 and P14] with children were particularly interested in school holidays information as P9 said:

> *As my kids' school holiday is due soon I am currently looking for information about the best parks, school holiday activities or attractions close to my area.*

News

Daily searches for Saudi- or Arab-related news was a key activity for four participants [P2, P7, P8 and P15]. Being away created a need to know what was going on in the middle-eastern world:

> *I daily check news about what's happening in the Arab world in general and my country in particular. [Knowing] about what's going on [in Saudi Arabia] connects me to the country that sent me to study here [P8].*

Accessing Sabq [the Saudi online newspaper] is part of my daily routine. I access it either early at the day or before I sleep to get up-to-date news about what's happing in Saudi... I like this newspaper because they gave creditable, up-to date information [P7]

> *I only listen to [UK] BBC radio via their smartphone application but only after my ELICOS teacher recommended listening to news in*

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English if we want to improve our English vocabulary and listening skills [P2].

Other participants reported less interest in checking news especially with the recent unsettled situations in the Arab world. A common feeling was:

'We are here away from our families and we can't bear hearing bad news especially with the current political situation in the Arab world [P3]'.

Ten SFIS complained about the political messages they received on WhatsApp from their contacts, which sometimes included sad or tragic links. A participant described how she was forced to quit a WhatsApp group due to the horrific news she received about the current political situation in the Arab world:

I'm one of those people who can't bear to see or read news about wars and death at all. Now [that] I'm away from my family I've become more sensitive and scared than ever because I worry about them. I don't use Twitter, only WhatsApp, but I can't control what people send. I've told my friends that if they keep sending news items I will just block them [P5].

Communicating with Australians

Three participants [P8, P10 and P11] talked about their search for general information (e.g. advice on buying a cell phone, global warming etc.) that helped them initiate conversations with international classmates. They commonly described their main motivation to study abroad was to improve their English [P8] and make non-Saudis friends [P10 and P11]. One single liberated SFIS did not worry that other Saudi females were embarrassed by her anti-cultural appearance (she did not wear a headscarf in public) as she was more interested in building a transnational social network. She described her information search to find conversation topics to communicate with non-Saudis by saying:

When I arrived Australia…it was important for me to communicate with people here…When I made some friends I searched for information about subjects that people of other nations usually talk about, like global problems (while our Saudi problems are tiny), and about the environment, vegetarian diets and other subjects of that sort that may be silly for us but it's something to talk about with other people [P11].

5.3.2 Information sources pre- and post- arrival in Australia

As shown in Figure 5.1, SFIS relied on four offline and online information sources. Online search engines were the most commonly used tools to source information, followed by word-of-mouth. Social media sites were also cited by participants as sources of different kinds of information. Commonly used social media sites were WhatsApp, Instagram, YouTube, Twitter and Snapchat.
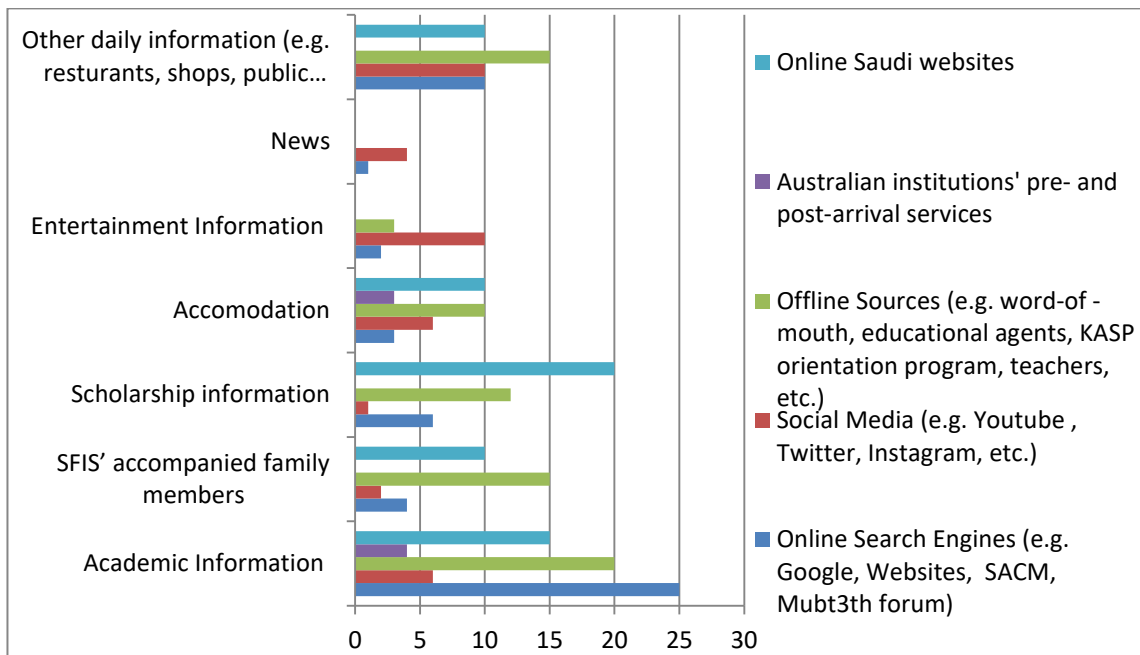
Figure 5.1: Study1A-SFIS' pre- and post- arrival in Australia information sources

- **Online Search Engines**

Nearly all participants actively used search engines as their first step to gather information both pre and post arriving in Australia, with a particular preference given to the Google search engine as expressed below:

> *Whenever I want to search for any information, academic or ELIS, I prefer to start my search with Google. It is my best friend [P4].*

All interviewees attributed their reliance on Google as the first and most preferred source of information due to its ease of use and convenience when compared to other search engines. Additionally, Google's multiple search suggestions and formats (text, videos, and pictures) present information in several perspectives, making the information easier to understand.

> *For me Google is the most convenient and easiest source that I can rely on whenever I have any question(s). I can ask Google any time and everywhere without thinking about whether it is night or morning [P1], and*

> *He [Google] can give me an immediate answer with different forms such as links to websites, image or video. It can also link me to other sources such as Wikipedia, Facebook and Twitter. . I can also ask in Arabic or English. In fact, having the same information from different sites verifies information for me. I can check people's answer and pick up the answer that was common among the majority. It [Google] is amazing [P5].*

Five participants felt Google was trustworthy, even for health and spiritual matters:

> *For health or religious information, I prefer to use Google or to ask only experts in these fields and I trust that they can give me the right answers. I wouldn't put my question on the social media [P4].*

The following sums up their feelings:

> *I prefer to start my search with Google. It is my best friend [P4].*

- **Online Saudi websites**

Participants reported they frequently accessed a number of Arabic online sources while in Australia. The Saudi website and forum *Mubtaath*[23] was identified by 75% of the participants as a major source of information while searching for any information related to their pre-departure academic and daily life, especially as it was created by Saudis with overseas experience. The students noted that a Google search for any question related to Australia in Arabic often returned a Mubtaath entry on the first page of the search results. Two participants highlighted the value of Saudi websites to satisfy their information needs while in Australia:

> *Most of my questions had already been asked and answered by previous Saudi scholarship students. The website is created and managed by Saudis who have the experience of studying overseas and they were so supportive answering any questions posted to their website [P8] and,*

> *Before my arrival, I used to check Mubtaath every day. It is the first option suggested by Google to any question I asked about living and*

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[23] *Mubtaath*, (Arabic website name), means "A Scholarship Student". Created by Saudi Arabia scholarship students, this website aims to help new students find all the information they may need during their scholarship experience.

studying in Australia [P1].

The second Saudi online information sources SFIS most frequently accessed were the website and Twitter feed of the Saudi Clubs in Australia. Ten SFIS identified these as key pre-departure (leaving Saudi) information sources, while fifteen said they were sources of post-arrival information. This information allowed them to receive other Saudi students' recommendations and help, as one student commented:

> *Before travelling to Australia, I searched for a temporary house… I searched the Saudi Club in Melbourne website where students who are on holiday or about to leave Australia advertise their houses, furniture and stuff they want to sell. I also used the club's Twitter account to enquire about my visa information, the Australian educational systems, and my course [P5].*

A third frequently-cited Saudi information source was the Saudi Cultural Mission (SACM) website and the *Safeer* portal. Participants mainly accessed the SACM website to search scholarship information, especially financial guarantee information, a pre-condition to receiving their study confirmation of enrolment (CoE), and also how to apply for a transfer from being self-funded to being KASP sponsored student.

> *As a scholarship Saudi student, the first thing I did after my arrival was to contact SACM to open a scholarship account on Safeer so I could get funding and also submit my academic applications such as financial guarantee request [P9].*

> *As a self-funded SFIS, the most concerned for me after my arrival [in Australia] was to be accepted as a KASP student and this is why I used to check my Safeer account on a daily basis waiting for the good news [P11].*

Interestingly, only two participants [P4 and P7] referred to the non-academic services provided by their SACM website. The other twenty-three participants only accessed the SACM website to check the progress of their academic and financial applications. They believed that SACM's non-academic information portals are useless. Reasons included: a negative perception on the quality of information provided by SACM website that use a 'one size fits all' approach; questions are not fully answered; there is too much information leading to information overload; poor quality of information; other, more useful sources exist such as Twitter, some Arabic sources, and word of mouth from friends; and lack of awareness of the portal. Participants commented:

> *I tried once to check SACM's Q&A page when I was looking for an answer to my enquiry about my husband's study status but the search*

was unsuccessful as most of the provided answers were ambiguous and unclear. This is why I prefer to phone or send emails rather than check SACM's website or social media accounts [P4].

I have never heard of the ELIS services that SACM apparently provides on their website. SACM should tell us as so far I've only used their website for my scholarship-related needs [P13].

In fact, most participants felt that over-reliance on Saudi forums, websites and social media could be detrimental, especially if information was outdated or based on an individual's personal experience which might or might not correspond with the reality they were experiencing:

When I was looking for information about the housing process, I asked Saudi students in the Mubtaath forum. They gave me [the] wrong information, and suggestions were based on their own experience of 7 years ago. After my arrival I found that renting a house in Australia is very difficult, especially when you have a large family such as mine [P6].

An Islamic website was used to source information for more personal enquiries regarding religion:

I prefer to check Islamic websites like Ahl-Alsunnah [for religious enquiries], which are managed by scholars who have the same beliefs as me [P4].

- **Online Social media**

Social media sites were only considered appropriate for specific information-seeking activities. Participants felt that different social media sites were more or less useful for information-gathering, depending on the type of information being sought (Figure 5.2).
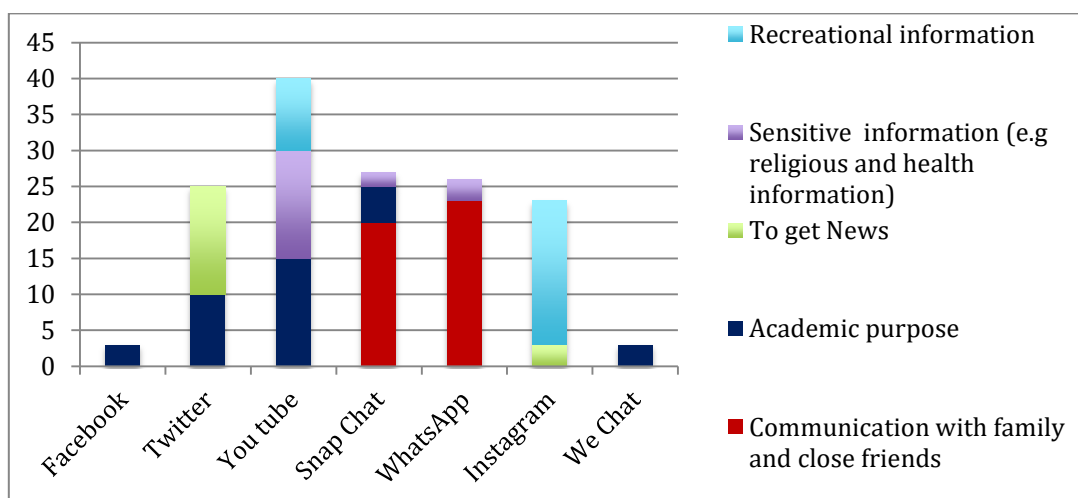
Figure 5.2: Study1A- Frequency of SFIS' social media use for information

As can be seen in the above figure, WhatsApp, Twitter, YouTube, Instagram and Snapchat were the preferred information sources for the majority of participants. WhatsApp and Snapchat were mainly used to communicate with and send enquiries to close friends and family members, Instagram and YouTube were used for information such as movies to watch.

> *If I am looking for news I prefer Twitter. Twitter is the most popular source of news in my country… Instagram is the source of general information such as…fashion and food. YouTube is my preferred source when I want to watch any Arabic or English show. I don't have satellite and with YouTube I don't think I will need satellite [P1].*

Ten participants actively accessed Instagram and Twitter for information before leaving Saudi Arabia. P4 used her Twitter account to get information about conferences and meetings organised by graduate Saudi students:

> *After I received a KASP scholarship, I started searching…On Twitter I followed a number of Saudi students who had studied abroad. One of them was a popular scholarship Saudi student who had 10 years' experience studying in Canada. I visited his Twitter account where he posted a number of events and interviewed people who had had overseas experience [P4].*

Participants linked their use of social media as a source of information with the situation they needed information for. In fact, all interviewees accessed their social media accounts only for non-urgent information. For instance, when in need of immediate information, all participants preferred offline sources including asking a knowledgeable friend or expert using personal contact or searching Google. The delay in getting responses from friends was a major cause dissuading them from using social media. P1, for example, only used social media for casual matters, such as children's entertainment or when she wanted someone's advice on non-urgent topics such as beauty products or food recipes:

> *When it comes to urgent and private information such as those related to health I prefer to call my friend or the person I know had the immediate answer. Offline sources are much easier especially when I need an immediate answer to my inquiry. However, if I have an inquiry about entertainment such as movies or children which was just for fun and to increase knowledge, I prefer to Google it.*

P10 also commented:

> *The things I found with social media is by the time you post your*

question you don't get the answer immediately and sometimes you need to wait not only few hours but days to get the answer.

Findings reveal that the larger and more diverse social network SFIS have on social media, the less likely they are to refer to the social media sites for personal and private information. Fifteen SFIS reported a lack of trust in their social media networks' knowledge and described social media tools as unreliable:

On social media I have followers and friends who I don't know personally and can't trust them or their knowledge [P4].

The majority (80%) also cited the presence of unknown male and female followers or friends on their social media accounts (e.g. Instagram and Twitter) prompting them to be hesitant in posting personal questions or photographs:

My social media networks have built up from different friends and followers regardless their gender or cultural background. This is why I only refer to them for general and opinion based inquiries… No way would I post or share stuff such as personal photographs [P1].

On the other hand, participants considered WhatsApp, Twitter and Snapchat reliable because people use their real identities and are more responsible for what they say:

Twitter can somehow be reliable because you can find most Saudi government agencies and famous figures most of the time use their real identity there, and maybe that's why it's possible to trust when these professionals publish something, because they act as professionals. Snapchat is also trustworthy because you can see how people in reality act and it give you up-to-date information in a practical and visual way [P4].

When it comes to sensitive information, interestingly, fifteen participants reported their frequent use of YouTube as a source for sensitive information such as religious and health enquiries, especially when they needed the answer in a video format:

On YouTube you can listen and watch for any 'fatwah' [Arabic word means ruling on a religious inquiry] from the mouth of the mufti [an Islamic scholar who is expert in Islamic laws], and that makes YouTube a trusted source for me when I have any religious enquiries [P1].

WhatsApp and Snapchat were also used by five participants as medium through which they can ask their sensitive information such as religious and health information to their close and trusted network in these two media.

For academic ISB, YouTube, Twitter and Snapchat (in order of importance) were cited

by fifteen, ten and five SFIS respectively as the best social media sites. Examples of academic use of these included watching YouTube videos on how to improve language skills or Tweeting questions to large networks' asking for recommendations related to an academic speciality:

> *I use Twitter to send my academic enquiries to get academic advice and links to improve my English…YouTube is my preferred source for videos to improve my language skills. There are many Arabic and English videos that help [P5].*

All participants attributed their reliance on Twitter, YouTube and Snapchat for academic enquiries to their compatibility with the Saudi culture, which does not encourage reading, preferring images and few written words. A typical remark reflected by all participants is:

> *We come from a culture where we don't like to read. So when I need to search for any information I would rather watch it on YouTube, send short messages on Twitter or WhatsApp, or call over the phone [P17].*

Participants expressed appreciation for the existence of multiple social media accounts hosted by graduated Saudi students who were willing to share information about their academic and non-academic experiences. Examples include strategies to improve English vocabulary were highlighted by two participants:

> *Whenever I need advice on how to accomplish an assignment or improve any of my English skills, I just send my questions to Saudi students on Twitter or search YouTube. They are speaking my own language and thus are the best to help to improve my English [P5].*

> *On YouTube there is a very good video series presented by a Saudi student who talks about his international experience and he suggests how we Saudis can improve our grammar and vocabulary. Watching such videos is much more valuable and useful than attending classes in ELICOS [P6].*

Surprisingly, Facebook (FB) was cited by only two participants [P5 & P7] as a source of up-to-date information about their academic specialities, while a third participant said she only used it because her ELICOS teacher used it:

> *I currently use my FB account not because I love it…it is only through FB we can access his materials, contact him and even submit our assignments…I was forced to have a FB account and I really do not like it [P6].*

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Three participants also [P1, P2 and P5] identified Wechat to communicate and send their academic queries to their ELICOS teachers and Chinese classmates as it is the only social media that Chinese students could freely access in China.

> It was the first time to hear about Wechat from my teacher who asked us to use and I guess that because it is the popular and free to access social media among Chinese students. I use it whenever I want to ask my Chinese classmates about our assignment, locating of our class and timetable [P1].

- **Offline sources**

Participants did not only rely on the internet. Instead, the majority (70%) reported **the word-of-mouth of their relatives** or friends who were living in Australia before the students had arrived, and who knew everything about living in the Australian cities (especially Melbourne). Most participants relied on their relatives for information on matters like arranging accommodation for themselves or childcare and schools for their children:

> I was so lucky when I arrived in Australia because I have my cousin here. She was the only source of my information. I didn't do any online search and whenever I had any question related to my daily life in Melbourne I just asked her. My cousin has left Australia, [so now] I ask her close friends who have become my close friends as well [P1].

KASP' 'pre-departure from Saudi' orientation program was reported by KASP recipients to provide with a great deal of useful information. According to most KASP participants, this compulsory program was rich and informative owing to the presence of graduate Saudi international students (male and female) and official representatives from the Saudi cultural attaché:

> The program was presented by many specialists from Saudi embassy in Australia and graduate Saudi students. They gave us informational sessions about what every scholarship student may expect and experience culturally and educationally during their overseas study experience. They told us about everything starting from how to initiate our profile on the Saudi embassy website to the Australian renting system and how to apply for the Australian visa. From that program I learnt that in Australia it's a crime to hit kids or scream at them or leave them on their own, and they might take my kids from me [P4].

Despite overall satisfaction of the program, six participants raised a number of issues. For instance, P4, P8 and P15 described that the orientation missed a lot of important

information such as accompanied mahrams' visa and health cover insurance information. Participants from the Northern and Southern Saudi regions [P5, P12 and P18] also raised the issue of limited locations of the program, which is only held in three major cities (Riyadh, Jeddah and Dammam):

> *There was an important topic that I think was omitted in the predeparture program which was related to the process on how to get my health insurance cover to be able to get my visa. I found out about those topics from Twitter by asking graduated Saudi scholarship students who explained how to get my health insurance [P15].*

> *The only thing I didn't like about the orientation was the limited locations as I live in North Region. As a female who cannot drive or travel without a mahram, it was so difficult for me to attend the program which was compulsory to get the final scholarship approval. The limited time we were given was also an issue. I received a message about the details of my program sessions and after three days I have to travel and to attend the program (only three days) [P5].*

P4 also complained about information overload and the large number of attendees saying:

> *The only bad thing about it was the huge number of people who were attending. There was not enough time to answer all of our questions. Also, there was a lot of information given at the same time which made it difficult for me to remember.*

Educational agents were cited by ten participants as a source for academic and legal information such as getting university offers and visas. Three SFIS [P9, P10 and P13] named global educational agents such as IDP and seven [P1, P2, P3, P5, P7, P12 and P20] cited a recently established Saudi educational agent *Masiratna*:

> *Whenever I have academic or visa questions such as getting ELICOS or university offers I used to ask Masiratna. It is owned by a Saudi student who was a KASP student in Australia. So he speaks my own language, knows everything about the KASP rules and requirements and he also has experience in such matters [P2].*

Finally, ***asking teachers and locals*** was reported by four SFIS with advanced English skills [P3, P4, P10 and P11] as preferred source for their academic enquiries:

> *For everyday information, online sources like Google and social media are the most convenient, but for academic I prefer offline, face-to-face interaction when the expert is available [P4].*

5.3.3 SFIS' ISB challenges resulting from the transition from Saudi to Australia

This section addresses the second objective of Study 1 aimed at exploring the information-seeking behaviour challenges SFIS encounter resulting from their transition from Saudi Arabian to Australian cultural and digital environments. Table 5-4 below summarises the two major themes and four subthemes identified in the data analysis related to SFIS' perception on the impact of the transition to Australia on their ISB.

Table 5-4 : Study1A: Themes and sub-themes of SFIS' ISB challenges

Transition ISB challenges Themes	Transition ISB Challenges sub-themes	Frequency n=25 (%)
Cultural-related ISB challenges	The transition to the Australian individualistic environment	22 (88%)
	The transition to the Australian mixed- gender environment	20 (80%)
Digital-related ISB challenges	The transition to the Australian online-based lifestyle	15 (60%)
	The transition to the Australian online and research-based educational environment	25 (100%)

- **Cultural-related ISB challenges**

i) The transition to the Australian individualistic environment

The majority of participants (88%) described the transition from the Saudi, male-dependent lifestyle to the Australian, individualistic and self-dependent lifestyle as challenging. This was especially true when dealing with official matters such as paying rent, or academic concerns such as discussing their academic problems. The challenge was attributed to lack of experience to some of these issues. In addition, marital status and home regions impacted on their individual transition experiences:

> *In Saudi Arabia as a female, anything I needed was a duty to be fulfilled by my family. In Australia the situation is different, as everyone here has to rely on herself [P6].*

> *Unlike in Saudi when my husband takes care of everything, in Australia I have to be responsible for my own actions. Whenever my husband tries to do anything for me here, people say no, I have to do it myself [P25].*

> *We are used to relying on our mahrams whenever we want to go out, so my husband accompanied me when I started ELICOS as he was so worried that I might lose my way, especially as I have never gone anywhere alone [P15].*

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During the first three months after their arrival, the majority, particularly married SFIS, reported an increased reliance on their male guardians to fulfil their academic (e.g. scholarship and ELICOS) and non-academic (e.g. chauffeuring to and from events) needs and to have their guardians speak on behalf of them. Some Australians did not accept this:

> *Once I had a problem with my academic progress…. so the ELICOS coordinator called me for a meeting. I went accompanied by my husband, who talked on my behalf as we are used to. She kept telling me that here I have to speak for myself, and not to bring my husband with me again [P8].*

However, three single participants (P5, P10 and P11) saw themselves as coming from open families that had taught them self-reliance, as one explained:

> *Thank God, even before I moved to Australia I was self-dependent, as my father always told me to do everything I wanted as long as it was within our cultural and religious boundaries. So when I applied for the scholarship I did everything myself, from submitting the scholarship and visa application to renting the house [P5].*

ii) The transition to the Australian mixed-gender environment

Findings show that the mixed gender Australian environment was challenging for most married and new arriving SFIS (80%), especially when they had to ask for help in the presence of Saudi males. The challenge of being with Saudi males in the same classroom resulted in two participants wearing a niqab. Findings show that males' nationality plays a critical role on SFIS' ISB. All SFIS reported more relaxed attitudes to seeking help from non-Saudi males than Saudis. Six participants [P1, P2, P5, P8, P15 and P19] considered male teachers or service providers more useful than their female counterparts, and expressed their surprise at how supportive, respectful and culturally sensitive their male teachers were:

> *I have no problem at all being in a mixed class or asking male teachers or [female] classmates [some questions]. I even found male-teachers more respectful, understandable and informative than female teachers [P13].*

The majority agreed their difficulty in talking to /asking information from Saudi males were resulted from the segregated culture to which they belong, especially since most had never been so close with unfamiliar Saudi males before. They were also concerned about a potential negative view of them on the part of non-family Saudi males if they reached out directly to them. Even those from more gender-integrated Saudi

environments (e.g. those with nursing roles) reported this challenge. Four participants gave varied responses:

> *The only challenge for me is when I am placed in a class or a group with Saudi males. Neither they nor I are used to being in the same place with close eye contact [P8].*

> *Unlike males from other nationalities who come from mixed environments and are used to communicating with females, having face-to-face contact with Saudi males is very challenging especially as in Saudi culture when a Saudi woman talks to a strange Saudi male, he may think that she is over-familiar and wants to have relationship with him [P23].*

> *Many people think that a female nurse doesn't suffer from talking to males. I could talk to any other male student but not to Saudi males to avoid being harassed or criticised by others. He might have been a good man, but I did not have the courage or intention to face him [P10].*

> *Mixed classes are not a challenge. It only becomes challenging if I have to talk in front of Saudi males. One day I went to my student centre to ask about my course options and because I found a Saudi man in the office I wasn't able to talk, and decided to come back another time [Unmarried ELICOS SFIS from a conservative family, P13].*

The tension resulting from SFIS being in close proximity to Saudi males was reportedly even greater in the presence of their SFIS' male guardians. Three married SFIS described their particular discomfort in talking with Saudi males in the presence of their husbands, or even without their husband's presence if those they interacted with were acquainted with their husbands. In the words of one of these participants:

> *I don't have any problem talking to a Saudi man as long as he doesn't know my husband. I don't deal with or talk to those who know my husband. Because of the society I know if I spoke to his friends it would make him angry [P25].*

When it comes to their willingness to seek help from males, and especially Saudi males, SFIS' demographic background (age, marital status, and family background) and length of time in Australia, exerted an influence. Married and more mature recently arrived SFIS reported more challenges in this regard than younger, single SFIS. Additionally, SFIS from less conservative families (Hijazi families) reported being less concerned than those who described themselves as belonging to more conservative families (mostly from the northern area).

Another interesting finding about the impact of gender-segregation on SFIS' ISB was that the majority of participants (90%), including those with relaxed attitudes towards the gender mix, turned to male classmates for information only when three conditions were present: i) they were unable to find the answer from Google/teachers/or female friends; ii) the enquiry was a pure academic concern and they were sure that this man had the answer; and iii) the enquiry was made only within the class or university setting and not outside that:

> *I don't like to ask male classmates [any questions] and would rather search Google or ask my teacher or female classmates. If I wasn't able to find an answer I would ask male classmates, but only about academic stuff and within the classroom boundaries [P15].*

In contrast, online SFIS ISB was less segregated, and participants reported in the virtual world they asked both women and males for information, both Saudis and others. The majority of interviewees felt that Saudi males who were asked questions via social media accounts such as Twitter were more responsive and knowledgeable than females on those same sites. The majority also noted that social media anonymity and absence of face-to-face contact made them feel more relaxed:

> *I don't have any problem asking Saudi males on Twitter and I have found them very helpful and responsive to all my every day and academic enquiries. However, this is not the case when in a face-to-face situation [P19].*

Some participants stated the presence of Saudi males impacted their information-seeking behaviour and their academic goals. Discomfort in the presence of Saudi male students kept one SFIS from attending classes. She subsequently received attendance warnings, and found it very difficult to convince her institution to change her class. Ultimately, she told them that she had no problem in a class with males other than Saudis:

> *It is only because of the presence of many Saudi male students I wasn't able to come to my class and I got attendance warnings. I told my ELICOS coordinator about my difficulty being with Saudi males but it was very hard to convince them to change my class. I told them I have no problem to be in a class with males other than Saudis [P6].*

Another participant cited her inability to benefit from the academic services provided by her institution because of the presence of Saudi males:

> *I was so interested in attending the external classroom conversation*

classes designed to help international students improve their speaking skills. However, I wasn't able to benefit from these classes as the first time I attended; I found a number of Saudi males there. It's still very challenging for me to be in a class where we have to be in a group with Saudi males [P8].

One participant with a computer science background attributed her relaxed attitude towards communicating with males to the fact that there are a limited number of female IT experts in Saudi Arabia:

In Saudi, [the computer science] field is dominated by males, and it's only recently that females have become students in computer science. This late entry of women into the field makes it difficult for [computer science students] to find expert female computer scientists. The only way to get answers about complex topics in computer science is to contact males. I also believe males are much better in providing the information than females [P5].

- **Digital-related ISB challenges**

All Study 1 participants, regardless of their age or previous online experience, described the digital transition from the more conservative and limited online Saudi environment to the research-based, advanced online Australian environment. Most participants (80%) identified this transition more challenging than the cultural one:

The biggest challenge for me is when they say "Check our website or apps". In Saudi if I want a quick answer I phone, here the situation is different—if you want to get more details about anything they tell you to check their website or send them an email. This digital move is very challenging especially with our limited English and online experience [P6].

Participants identified two specific aspects of the digital transition experience that particularly challenged their ISB: (i) the transition to the Australian digital-based lifestyle; and (ii) the Australian online and research-based educational environment.

i) The transition to the Australian digital-based lifestyle

Fifteen participants highlighted the Australian advanced digital-based lifestyle environment as a challenge that impacted their cross-cultural adjustment, especially during their first few months in Australia. The majority felt a pressing need to move from their traditional Saudi daily lifestyle to the Australian advanced and digital-based lifestyle where most of their needs were fulfilled using online tools such as emails. In fact, the majority of study participants described Australia as a digital nation whose natives expected other people similar in this regard.

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Findings revealed that SFIS' age, English proficiency, technology competency and marital status had a strong correlation with their digital adjustment. The transition was particularly challenging for the nine older SFIS who rated their online search skills as 'poor' [P2, P4, P6, P8, P9, P14, P18, P19 and P23]. For instance, a 37-year old SFIS (married with children) described how she felt lost and depressed when she came to Australia, especially when she tried to apply for accommodation and the agent asked her to submit her application online:

> *When I came first here I was shocked by the way people here in Australia rely on the internet. I think technology is part of their life. This online-based life style was really challenging for me as I am not good at online stuff and my English level isn't the best [P6].*

Six younger SFIS [P1, P5, P7, P11, P20 and P21] described themselves as confident technology users, given their online and social media experience in Saudi. Since arriving in Australia they considered their previous online experience as simple, just surfing the internet mostly for entertainment, not for basic needs such as submitting online applications. The challenge for them was increased due to their limited English proficiency:

> *Even though I am expert in using computers and technologies, as this is my specialty, looking for academic information is still difficult for me. In addition to my low English level, I lack skills in search strategies. Unlike in Saudi where all the academic materials are given to us by our teacher, in Australia I have to depend on myself and do a lot of search for everything, which is challenging for me due to my very low search skills [P5].*

ii) The transition to the Australian online and research-based educational environment

The second digital transition SFIS commonly experienced greatly challenged their academic ISB. As part of this experience, all participants felt the need to move from their Saudi traditional text-based and exam-based educational system to what some called the 'Australian research and advanced digital educational system'. For the majority (90%), this proved even more challenging than being in a mixed class with males. Participants, who witnessed the recent digital advancements in the Saudi educational system, identified a number of issues that made it difficult for them to fit into Australia's advanced research and digital educational system and to fulfil their academic ISB. The first issue cited by all participants was their lack of research skills:

> *I have never done any research before and I don't even know how to use the library, owing to my very low search skills [P4].*

> *Unlike in Saudi where all the academic materials are given to us by our teacher, here in Australia I have to depend on myself and do a lot of searching for everything, which is challenging for me due to my very low search skills [P5].*

The second issue to fit into the Australian research and digital environment was poor knowledge of academic search terms and limited vocabulary. In fact, twenty SFIS reported that this was the first time they heard of academic research terms such as 'literature review', 'references', or 'plagiarism'. Participants compared searching information for their ELIS needs (which could be done in Arabic) with their academic information needs, which had to be done in English, using keyword terms in English:

> *Unlike daily information where I can just search Google or ask friends in my own language, here for academic information, [you need good] English, and as you know most of us have bad English which makes finding academic information very difficult for us. Of course with Google you can search using Arabic but the sources suggested were not as good as [searching] in English. Your assignment is in English, so you need to search in English [P10].*

Those with an IT background [P5, P7, P8, P9 and P15] who considered themselves experts and fully confident in using technology, faced a similar challenge once they arrived in Australia. They found their programming and IT skills here useless and inadequate when it came to using educational technologies such as e-libraries. They attributed the challenge to their limited English proficiency level:

> *Despite having knowledge of technical stuff, such as programming language, when it comes to using English educational software like Turnitin and databases, the situation becomes more challenging because of my limited search vocabulary. To be honest, when I first tried to use these technologies, I spent a lot of time translating the search terms so I could find the right term—this was very challenging [P7, IT background].*

The third challenge was the unfamiliar learning style in Australia. All participants reported they were used to copy and paste information from the internet without paraphrasing or referring to the source, and Saudi educators accepted their work. Therefore, they found it challenging when Australian teachers continually warned them about taking others' ideas without referencing them. For most SFIS this was something new and difficult since they lacked academic research knowledge.

> *Unlike in Saudi when students used to use any source including Wikipedia for their assignments. We even used to copy and pasted the information without paraphrasing or referencing, here I was shocked when the teacher marked me fail because I copied and pasted stuff from the Internet. She even told me if I do it again I would be legally in trouble [P4].*

A fourth and very important challenge was attributed to SFIS' lack of previous digital experience in education. In fact, twenty SFIS described their previous online experience in education as limited, or as simple and different. Thus, for most SFIS the digital journey to the advanced Australian digital educational environment was a great challenge resulting from the Saudi traditional text-based system and the late introduction of educational technologies:

> *At the first class, my ELICOS teacher talked about Blackboard and e-library and it was very challenging for me even to pronounce the words as I had never used or even heard of such tools. When I did my Bachelor in Saudi I didn't use any technologies, I used books for my assignments. A submission meant taking hard copies to my teacher [P2].*

Findings showed that 88% of SFIS (the researcher included), regardless of age, did not use Facebook, which could be the reason why SFIS were unable to access some educational information and classes suggested by their teachers:

> *One of my ELICOS teachers told us that most of the class materials would only be posted on Facebook and it was very challenging for me as I have never used it and I didn't like it at all, as it is the hardest social medium to use [P6].*

Six young IT participants with experience of the recent tech-based changes in the Saudi educational system identified the digital journey as moving from the limited set of online sources they relied on in Saudi (e.g. Wikipedia) to the 'more advanced' Australian sources (e.g. social media, e-databases or Turnititn) as challenging:

> *Unlike in Saudi where I used to rely on books, Google and Wikipedia for my assignments, here my ELICOS teachers informed us that we need to use well-known online sources and databases. It was very challenging for me to cope with [Google Scholar and e-library] especially as I have never used or even heard of such tools [P5].*

5.4   Validation of Study 1A

This section discusses the validation phase conducted mainly to confirm and validate the data collection methods, results and findings of Study 1A. The objective of this

validation process was to mitigate study bias and to seek decision-makers' opinions of the findings. The main aim of this part of the research was to find an answer to the following: How do international students' service providers help Saudi female international students in their information-seeking practices? The researcher focused on the question above, aiming to discover and understand the applicability of a number of suggested recommendations with a view to the implementation by the service providers' institutions.

The validation process was carried out in Melbourne in 2015 and 2016, and consisted of (a) a refereed conference paper for the ISANA Conference, (b) a 7-page consultation report, (c) interviews and consultations based on the report with two international students' advisers, and (d) a seminar for ELICOS teachers.

5.4.1 Study 1A validation method

When all the data from Study 1A had been analysed, the researcher presented a finding paper which was published in the proceedings of the 26th ISANA Conference in Melbourne, December 2015. Following the presentation, the researcher used the conference feedback to prepare a seven-page Consultation Report (Appendix 8), in which a series of recommendations to help recently arrived SFIS in their information-seeking activities was proposed. The Report was emailed to several international students' service providers and advisers (chosen from the researcher's supervisor's personal contacts), inviting these providers to read and participate in interviews to share and give their insights, opinions, and suggestions on the proposed recommendations.

The researcher then was able to interview two international students' advisers in managerial positions; an international students services senior coordinator and an ELICOS' director, quality and service coordinator, who suggested that the Study 1A findings be presented at a seminar for ELICOS teachers. The semi-structured interviews (held in August 2016) in Melbourne and were designed to secure their opinions and insights of the recommendations described in the Consultation Report.

The researcher then gave a seminar presentation of Study 1A's findings on 26th September 2016. The audience were ELICOS teachers who were asked to provide feedback regarding the overall findings and compare them against their own understandings of their SFIS' ISB experience (three of the ELICOS attendees acted as spokespersons).

Demographic information on the research participants is summarised in Table 5.5.

Table 5-5: Profile of validation study participants

Participant Code	Service	Educational Level
S1	Director, Quality and Services	ELICOS level
S2	Senior Coordinator, International Student Services	University level
S3	English Teacher	ELICOS level
S4	English Teacher	ELICOS level
S5	English Teacher	ELICOS level

5.4.2   Study 1A validation: findings

This section presents the views of the participants (two were international student service coordinators and three were ELICOS teachers) on the second major them that arose from the data analysis of the Study 1A regarding the ISB challenges SFIS experienced resulting from the transition from Saudi to Australia.

- **Validation of Finding 1: SFIS' cultural-based ISB challenges**

All participants commented on the findings and agreed that the findings drawn from Study 1 interviews gave a valid view of the impact of the Saudi Arabian cultural (e.g. a segregated culture and male guardianship) and digital norms (e.g. conservative and limited online lifestyle and previous online experience) on SFIS' ISB.

i)   Male guardianship

Validation participants agreed that SFIS' cultural background greatly impacted their ISB. For example, in reference to the impact of the male guardianship on SFIS' ISB, all validation participants agreed by sharing their experiences:

> *I was so surprised when one of my SFIS brought her husband with her when we had a discussion session [S4].*

> *When we talk to SFIS we always find them accompanied by their husbands who want to interfere and talk on the students' behalf. Although an academic matter is something that should be handled by the student herself, the mahram takes control, which does not help or protect the SFIS. We tell the husband that he has to wait outside and we will call him in when we need him [S1].*

> *I agree with you—even postgraduate SFIS who speak very well prefer to bring their husbands with them whenever they have a consultation session [S2].*

ii) Segregated culture

All participants also agreed on the impact of the Saudi segregation culture on SFIS' ISB. For example, the three ELICOS teachers agreed that most SFIS found it very challenging to speak in front of Saudi males, especially during their first few months of arriving in Australia. They also agreed on the researcher's suggested recommendation that educators are advised to: (i) initiate orientation classes where the students are trained and prepared to be in a mix class, and (ii) separate new comers Saudi females and males when forming any study groups till they get used to having male classmate. The latter suggestion raised the problem of cultural behaviour considered against the equality law in Australia. One validation participant said:

> *Although it's against the law, to help new Saudi women adjust to my mixed gender classes, I separate them from Saudi males—the women are more productive and confident asking questions than when they are in a group with Saudi males [S5].*

• **Validation of Finding 2: SFIS' digital-based ISB challenges**

All ELICOS teachers also agreed that the theme related to SFIS; digital-based challenges was valid, and that most SFIS' academic challenges resulted from their previous educational background, especially their lack of the linguistic and digital skills to use their ELICOS emails, libraries and websites

> *I found it surprising that still some students such as SFIS were unable to use emails. Once an SFIS came to me and she was embarrassed to tell me that she wasn't able to send her assignment because she didn't know how to attach it in her email, especially her husband was busy and he wasn't able to do it for her [S4].*

5.4.3 Conclusion of validation process

The validation participants of the conference presentation (awarded Best Conference Paper), Consultation Report, interviews, and ELICOS seminar agreed that the themes were valid. Their positive contributions encouraged the researcher to continue to the next stage of the research, Study 1B.

5.5   Study 1B: Findings

Study 1B followed Study 1A and was carried out to address Study1's third objective

i.e. identifying the ISB changes Study1A's SFIS experience *after living in Australia for up to two years*. This period was deemed suitable to explore any changes in SFIS' personal/cultural perspectives and the ways they access information. Many had become more relaxed in the presence of males in the classroom (even to the extent of asking them questions), although some were still shy, and reluctant to act without their mahram's approval. Digital-related challenges saw the greatest change. SFIS have become more able to use technologies such as emails and access English language textbooks and sources as described in the finding sections below.

5.5.1 ISB changes resulting from the transition from Saudi to Australia

Findings of Study1B highlight two major ISB changes: i) culture-related ISB changes and ii) digital-related ISB changes. These changes were evident from SFIS' ISB patterns and practices resulting from their longer exposure to Australian cultural, educational and digital environment. Two key themes and sub-themes are presented in Table 5-6.

Table 5-6: Study1B: Themes and sub-themes of SFIS' ISB changes after 2 years

ISB changes resulting from the transition to Australia: themes	ISB changes resulting from the transition to Australia: sub-themes	Frequency (n=25)
Cultural-related ISB changes	A more relaxed attitude towards asking help from males	25 (100%)
	Becoming more self-dependent	15 (60%)
Digital-related ISB changes	More reliance on online tools	25 (100%)
	Increased access to Australian sources	25 (100%)

- **Cultural-related ISB changes**

Most SFIS described their longer exposure to the Australian cultural environment as leading to changes in their ISB. This section highlights two cultural-related ISB changes as sub-themes.

i) A more relaxed attitude towards asking help from males

All SFIS in Study1B, including older women and those from conservative cultures, reported an attitude change over time towards males indicating more confidence to ask them for information as one participant mentioned:

> *Now after spending two years [in Australia], I have become more confident to ask anyone, anywhere, whenever I have any enquiry, without even asking my husband to help [P7].*

However, the findings also showed that married SFIS, despite some changes in their behaviour, still avoided asking Saudi males questions directly:

> *Although I became more adapted to the mixed gender culture I still haven't reached the stage where I can freely argue or discuss topics with males. Even after two years' exposure to this environment I'm still less likely to refer to Saudi males when I need help. I think it's only because of my personality I still felt shy to ask males [P15].*

ii) Becoming more self-dependent

Fifteen SFIS reported during Study1A's first interview that they relied on their male-guardian to deal with most of their official matters (including academic and scholarship matters). Since their exposure to the Australian individualistic culture and freedom of movement, their self-dependence and confidence increased. They were able to move around without being accompanied by their mahram, and felt encouraged to fulfil their personal needs by themselves including those needs they have always had their male guardian to do it for them such as paying rents, bills, fulfilling official needs such as those related to scholarship and administrative needs. However, the majority described the freedom of being within the boundaries of Islam and their Saudi cultures. For instance, none of them reported seeking or going to non-religious or non-cultural places such as clubs while living in Australia:

> *Being a more self-dependent seeker has nothing to do with my religious and cultural conservative beliefs such as going to places that may lead to issues with my husband, such as going to clubs or attending Islamic events that are not in accordance with Islamic teachings. Although I now do most of my stuff without referring to my husband or getting his permission, I still tell him about anything I've decided to do before actually doing it. For instance, I wanted to buy something in the shopping mall, and before I went out I told my husband I'd decided to go to the mall by myself and buy the item [P1].*

- **Digital-related ISB Changes**

Digital ISB changes were categorised into the following two sub-themes:

i) More reliance on online tools

All participants, regardless their age or prior technology skills, reported an increased reliance on new online search and networking tools (such as email and Google maps) and English academic sources (such as e-libraries and Google Scholar) for their ISB. All participants described how their use of email has changed since the first interview:

emailing has become among their preferred and first options for seeking information, especially for official matters related to their study or scholarship enquiries.

One student who previously found using online tools such as emails very challenging described how over time she found sending emails has become easy and the best way to communicate informally and formally when she had a need to send an enquiry:

> *Now if I have any academic needs such as those related to my course structure or scholarship I would rather send emails as I think it's the best way to keep a record of my enquiry and the receiver's reply so I can go back to it anytime I need [P6].*

In addition, ten participants felt that sending email enquiries to Australian addresses, including Saudi government agencies in Australia, was more effective than sending emails to Saudi decision-makers in Saudi Arabia. In Saudi Arabia, phone calls or sending friends or relatives a message via Twitter was considered a more effective means of communicating. One participant described this as follows:

> *Unfortunately, I had a negative ISB experience [in Saudi] when I used emails to send my enquiries regarding approval from my workplace to change my scholarship plan and study field. I sent a lot of emails to my university scholarship team in Saudi, and I thought that—as in Australia—I would get a quick answer by sending emails [P14].*

Similarly, one PhD student also reported difficulty when she started her data collection, due to poor email communication with potential participating organisations in Saudi:

> *My PhD data collection…had to be done in a public hospital; after I got the ethics approval I started to send heaps of emails to different hospitals in Saudi but I wasn't able to get even one reply. I was only able to get an approval after I asked one of my friends—she's working in a hospital, I wrote her name as a member of my research team—to go in person and accomplish my request [P9].*

ii) Increased access to Australian sources

All Study1B's SFIS also reported an increase in accessing Australian websites and information portals over time during their stay in Australia as their English progressively improved and they became more confident, as one student described:

> *I used to rely either on Google or on Saudi friends or sources such as Saudi clubs or Twitter. However, now that my English has improved a lot, I immediately access the information from its Australian website. For instance, if I want to find out about my Myki fines I will check it by accessing the Victorian public transport website [P7].*

5.6   Discussion

This section discusses the findings of Study1, with respect to the first research sub-question:

SQ1: What ISB challenges and changes do SFIS face when moving from Saudi Arabia to Australia?

5.6.1   SFIS' information needs in transitioning between Saudi and Australia

Findings of Study 1 are in line with the literature by Komlodi and Carline (2004) and Kim (2013) who found that students from different cultures show different information needs. In addition to their everyday pre-departure information needs, especially looking for accommodation in a new destination (as reported by Alzougool et al., 2013a, Clerehan et al., 2011, and Razek & Coyner, 2013), the findings of Study 1 show that SFIS' major pre- and post-arrival ISB needs were religious and familial. They were particularly concerned about problems arising from their unique cultural and religious background. SFIS' ISB is embedded within, and affected by, a global system of religious/racial/cultural relations and current events, particularly with respect to the rise of 'Islamaphobia'. These concerns drove their ISB even before they applied for scholarships, and resulted in motivating SFIS to choose Australia over the US and UK, given that the information sources they accessed suggested far fewer islamaphobic incidents in Australia and providing them with a sense of security and safety, as Shepherd and Rane (2012) have found. Questions about their mahram's and children's education needs were also cited among their important pre- and post-transition daily necessities (Clerehan et al., 2011). This finding is in contrast to previous studies (e.g. Gu et al., 2010) that suggest the pre- and post-arrival concerns for Chinese international students are predominantly financial.

Once they arrived in Australia, many questions were still unresolved, especially problems about accommodation (Hambrecht, 2006) and accompanying family members (Clerehan et al., 2011). Some found the Saudi Clubs very helpful in getting them settled, but by then, academic information needs had become a priority (Mehra & Bilal, 2007). Findings extend previous studies (e.g. Mehra & Bilal, 2007; Sin & Kim, 2013; Sin, 2015) showing that SFIS' level of English and future intentions impacted their information needs. Academic concerns were cited as the most important post-arrival needs for SFIS (Gu et al., 2010).

Unsurprisingly, the primary focus for participants who ranked their English proficiency as low was to find out how to improve their English skills. In particular, the ELICOS students needed to pass IELTS with high scores to get university offers. These findings are in contrast to those of Sin (2015) and Sin and Kim (2013), whose participants reported that legal, career and finance information was more important (although it was difficult to find). Again in contrast to in contrast to Sin et al. (2011) and Sin (2015), the great majority of Study 1 participants found that accessing academic information was more challenging than accessing everyday information; they were challenged by their lack of academic English, research skills, and internet skills, attributing these deficiencies to the Saudi textbook-based educational system. This finding contradicts Liao et al. (2007) and Yi (2007) who ten years previously alleged that English proficiency wasn't an issue for international students any more.

5.6.2 Information sources

In line with Alzougool et al (2013a), the research found that SFIS relied mostly on multiple offline and online Saudi sources for their information due to their lack of English proficiency. The sources tended to be female personal contacts (Alruwaili, 2017), rather than official or semi-official sites such as the Cultural Mission or the Australian sources, which would (or should) have been made known to them before they left Saudi Arabia. To find answers to pre-arrival enquiries, SFIS used family and friends' connections, educational agents, Google, and social media such as the Saudi Students Associations in Australia's Twitter accounts and the popular Saudi online forum *Mubtaath*. Similarly, Alzougool et al. (2013a) and Ling and Trang (2015) found that international students preferred to access pre-arrival information using home country sources, rather than those of their destination country. SFIS attributed the challenges in accessing Australian institutions' ELIS services due to a combination of lack of awareness, English deficiency levels and the existing availability of Arabic sources of information.

The study's findings for information search practices of the participants were similar to those of other studies in the literature on international students' ISB (Chang et al., 2012; Sin & Kim, 2013; Sin, 2015). Generally, SFIS preferred to start their search through Google for information, then turned to their social networks (WhatsApp) if frustrated (Morris & Teevan, 2012). Google was cited as appropriate for locating university-related or special-interest information, including searching for personal

(health) or sensitive (religious) information. Social media (e.g. WhatsApp, Instagram and YouTube) supported the seeking of special interest information, such as entertainment. Scarpino and Alshif (2013) also found substantial advantages for Saudis living in the United States in keeping regular contact with home; especially WhatsApp, due to its free services. Interestingly, although Study 1A participants considered WhatsApp as the only private technology where they could share private information such as personal photos with their social network, none used WhatsApp for sensitive and religious information. One major concern was their social network's knowledge. Several participants commented on the need to seek health and religious information only from experts, noted also by Morris et al. (2010), Majid and Fai (2012), and Zhang (2013).

It has also been found that, despite their use of online sources, none of the students reported their use of Australian websites or social media as a source of their daily information. This was attributed to their limited English levels and lack of awareness of the wide range of online services provided to international students by their institutions (Lawson, 2012; Mehra & Bilal, 2007). Participants in this study were unaware of the wide range of online services provided to international students by their institutions— SFIS believed a university's website and social media focused only on academic information, not on crucial ELIS information such as housing and health information.

Another interesting finding concerning social media was that participants used different social media sites for different information needs. Twitter and YouTube were used for academic purposes and WhatsApp, Snapchat, Twitter, YouTube and Instagram for other purposes. At this stage in their digital journeys, in agreement with Al-jasir, Woodcock and Harrison (2012), showed less interest in Facebook, despite its popularity around the globe.

5.6.3   SFIS' ISB journey from challenges to opportunities

Findings of Study 1 showed two unique journeys—a cultural journey and a digital journey—impacting the ISB of recent arrivals, resulting from the differences between Saudi Arabia and Australia. In fact, what had been initially identified as ISB challenges were transformed into opportunities.

- **SFIS' cultural-based ISB Journey**

In line with previous studies (e.g. Alqefari, 2017; Altamimi, 2014), SFIS in Study 1

identified their cultural transition to the Australian mixed and individualistic environment negatively challenged their ISB, especially in the presence of Saudi males. Interestingly, this research reveals that the cultural transition to the mixed environment was cited to be challenging only when SFIS needed to talk to or ask questions in the presence of Saudi males. This finding was confirmed by several researchers (e.g Alhazmi & Nyland, 2011, 2013; Alqefari, 2015; Madani, 2012; Sandekian et al., 2015). The interesting finding about interacting with males is that SFIS' demographic background—age, marital status, nationality of males, type of information and presence of a mahram—has a greater influence on SFIS' intention to speak to Saudi males than their length of stay. Married and older SFIS, including those who reported increased confidence in talking to males after living in Australia, were more likely to talk to Saudi males than single and younger SFIS. Additionally, SFIS from more liberal families (Hijazi families) reported less concerns about talking to Saudi males than those who described themselves belonging to more conservative families (mainly from the northern area). The impact of SFIS' region and family conservativeness on their tendency to communicate with males was also cited in the literature (Al-Saggaf, 2016; Alqefari, 2015).

Another commonly cited cultural journey was transitioning from the community-oriented Saudi cultural environment with its systems of social support to the individual-oriented Australian culture (Altamimi, 2014). This was found to be especially challenging with respect to fulfilling official needs related to scholarship and ELICOS study issues, as male guardians were not allowed to accompany them into the university. Another commonly-cited challenge was transitioning from a text-based learning style to the advanced digital Australian learning system (Hughes, 2013).

SFIS described the transition to the Australian education culture more challenging. Consistent with the findings of Gu et al. (2010), findings of Study 1A revealed that the transition to the Australian educational culture and digital system was found to be even more challenging than the Australian cultural and social environments (e.g. mixed environment). In addition to language issues, the majority talked about their initial limited research skills, owing to the quick change from passive reception of information to active searching for information (Altamimi, 2014; Hughes, 2013). These unfamiliar cultural norms forced them to become more self-reliant information seekers, although at the start of their studies, they relied mostly on offline and online Saudi

sources for their information.

Further analysis of Study 1B reveals a strong impact of the longer exposure to the Australian cultural and research environment on the ISB of Study 1A's participants. Findings of Study 1B extend previous studies on SFIS' transition experience (e.g. Alhazmi & Nyland, 2011, 2013; Lefdahl-Davis & Perrone-McGovern, 2015)—in the current study, length of time in Australia was found to change not only SFIS' personal/cultural perspectives but also how they accessed information. Participants in this study, similar to SFIS in other studies (e.g. Shepherd & Halim, 2012; Lefdahl-Davis & Perrone-McGovern, 2015) admired the changes in their personalities resulting from the freedom of movement they enjoyed. Culturally, in line with previous studies on SFIS (Alhazmi & Nyland, 2011, 2013; Lefdahl-Davis & Perrone-McGovern, 2015), the longer SFIS had studied in the Australian mixed-gender and individualistic environment, the more self-dependency and relaxed attitude they showed towards asking males questions. Nevertheless, they still preferred to avoid asking Saudi males questions offline unless this was the only option.

- **SFIS' digital-based ISB Journey**

Study 1A's findings support Chang and Gomes' (2017, p. 313) argument, which states that international students not only cultural, physical and educational transitional challenges, but also digital challenges. Regardless of their age or digital experience, SFIS reported fitting into the Australian advanced online and research environment to be a challenge. They attributed at least some of the digital challenge to their English proficiency level and their limited exposure to educational technologies and research skills, restricting their ability to effectively use university libraries and the myriad research databases (Hughes, 2013; Mehra & Bilal, 2007; Razek & Coyner, 2013).

However, SFIS found their digital journey becoming more interesting and exciting as they learnt to rely on more online tools for their ISB, such as email and Australian-based daily information from Australian sources (Chang & Gomes, 2017a; Chen, 2010). They began to understand the opportunities opening up before them. SFIS still preferred not to use Facebook despite its popularity among Australian educators and the services it provides, citing perceived difficulty of use, absence of their close friends (who equally disliked Facebook), and a lack of trust.

Chapter Summary

This chapter has closely examined the first three stages of a four-stage ISB journey undertaken by transient migrants, represented in this research by SFIS in particular. The fourth stage is presented in Chapter 6 following. Study 1A explored the challenges created by their information needs and ISB (i) at the start of the journey as they prepare to leave home (the first stage of their journey), and (ii) soon after their arrival in a host country (the second stage). Study 1B explored the digital changes that occurred after about two years' exposure to the culture and practices of the host country (the third stage).

A comprehensive analysis of Study 1 data revealed that SFIS experienced several ISB challenges and changes resulting from the transition not just to an unfamiliar cultural environment, but also to an unfamiliar digital environment.

The following chapter presents the methods and findings of Study 2, the final stage of the transient migrants' ISB journey.

Chapter 6
Study 2: Returned SFIS' Post-Study ISB Readjustment Challenges

Introduction

Chapter 5 examined the ISB journeys of the recently arrived SFIS, beginning with their departure from Saudi Arabia, and after being in Australia for about two years. The major findings were i) the pre- and post-arrival ISB of Saudi female student transient migrants was most strongly influenced by familial and cultural factors, especially as these related to gender relations, ii) the initial transition to Australian has its own cultural and digital ISB challenges and iii) over the journey, the longer they were exposed to the Australian cultural and digital environment, the more ISB changes they reported.

This chapter covers Study, 2 the final stage of the transient migrants' ISB journey. Study 2 concentrated on the post-study readjustment changes and challenges in ISB experienced by SFIS graduates upon returning to Saudi Arabia after staying and studying at least three years in Australia. While these participants were different from those in Study 1, Study 2's data collection, recruitment, and data analysis methods and procedures were the same as those described and justified in Chapter 4.

Section 6.1 provides a description of the overall context of this Study 2, followed by Section 6.2 that gives details of the particular sampling, recruitment and demographic characteristics of the participants. Section 6.3 presents the findings, classified into three sections: (1) SFIS' perceptions of the impact of Australian experience on their ISB; (2) SFIS information needs and information sources before and after their return to Saudi; (3) and the challenges SFIS faced after their return to Saudi and whether and how these may lead to changes in their ISB. Section 6.4 presents a discussion of the findings followed by a summary of the chapter.

6.1   Study 2: Contextual background

Recent studies on international students' overseas experience emphasise the importance of understanding their work and life experiences upon their return to their home

country (Boey, 2014; Cuthbert, Smith, & Boey, 2008; Novera, 2004; Robertson et al., 2011) since this understanding may also impact their ISB. A number of scholars argue that returned international students have varying post-graduate career and life experiences depending on their primary motivations for studying overseas (Robertson et al., 2011; Pyvis & Chapman, 2007). Pyvis and Chaman have classified these motivations as either 'positional' or 'transformative' (2007). Robertson et al., (2011, p. 687) argue that while positional motivation characterises students who, for example, primarily see international education as providing a competitive advantage in the labour market, transformative or self-transformative motivation in contrast, characterises students who see international education as a vehicle for changing their professional and personal identities.

Most current studies on international students' post-graduate experiences focus on career outcomes. However, recent studies suggest that international education experiences result in more than just career-based outcomes. Gu et al. (2010) for example, found that international students in the UK cited their personal independence, broadened life experiences and interests, and greater acceptance of people with different attitudes and values as key outcomes of their study abroad experience. Similarly, Gill's (2010) study of Chinese postgraduate returnees revealed various shifts in values and identities as a result of overseas study. In fact, Jones (2011) considers the personal changes in students who have been exposed to international and multicultural experiences are of great value to their home country, as well as adding value to their employability.

In addition, Robertson et al. (2011) emphasise the need to conduct more studies that focus not only on the labour-market outcomes, but also on the complexity and diversity of the post-study transition. Researchers have argued that returned students encounter a number of cultural readjustment challenges and that this reverse-culture shock may last even longer than the culture shock they experience while being overseas (Robertson et al., 2011). For instance, in the context of Saudi international students, Al-Qahtani (2015) calls for further research investigating how alumni Saudi international students re-integrate into the Saudi society after years of studying abroad, and whether any changes in their worldviews and identities are or are not sustained. This is particularly important since most SFIS in recent studies reported cultural and personal changes resulting from their exposure to the culturally integrated and open Western

environments (Alhazmi & Nyland, 2011, 2013; Lefdahl-Davis & Perrone-McGovern, 2015). Some of these changes might not be accepted when back in their society, thus posing readjustment challenges (Albeity, 2014). Unacceptable changes reported by SFIS include a more relaxed attitude towards communicating with males, becoming accustomed to the free movement, driving and/or removing the hijab (Alhazmi & Nyland, 2011; Al-Qahtani, 2015; Shepherd & Rane, 2012). Thus, the more a SFIS has adapted to the free and open lifestyle of the country in which she studied, the more difficult it might be for her to readjust again to the Saudi lifestyle (Albeity, 2014).

Recent studies have shown that returned Saudi students face an extremely different life to the one they had abroad (Albeity, 2014; Hall, 2013). Hall's (2013) study investigating the experience of Saudi male students in the U.S. found that pressure from family and friends was an obstacle to being able to truly integrate their overseas experience into their lives back in Saudi Arabia. Sometimes Saudi students would try to conceal the changes in their attitudes and opinions. This was because Saudi families do not welcome Western attitudes and opinions, as Hall (2013) quotes one respondent:

> *When I return to Saudi Arabia for visits, my family doesn't wants me to behave like I do in America, and sometimes reminds that I am not in America anymore if I say something that doesn't come from [my] religion or is different about begin a female (Hall, 2013, p 83)*

Albeity's (2014) study found that many returned SFIS graduates suffered great disappointment when, in spite of their hard-earned degrees, they could not find appropriate employment. In addition, many were dismayed, uncomfortable, and angry that the right to freedom of movement given to them in their host countries was denied to them at home.

To help returned students overcome this reverse-culture shock, most Australian universities provide offline and online services that returned students can access both before their departure and on their return home. For instance, most universities design pre-departure orientation programs and brochures through which students can access important pre-departure information (e.g. about moving out of their accommodation, selling furniture, etc.). Additionally, most universities provide returned students a wide range of benefits they can enjoy following their return, such as joining a university alumni community. In this way students can access a wide range of personal and career benefits, including networking with the alumni community, receiving future career

advice and taking part in lifelong learning opportunities such as those available through Victoria University[24] or by becoming involved in volunteer work for their university[25]. However, without a strong understanding of how international students seek or access pre-departure information before they return home, the success of these and other initiatives provided by universities is not guaranteed. A review of the literature revealed an increasing number of studies examining international students' ISB and experiences. However, most were conducted while the students were still in their host countries. In contrast, there is a scant research focusing on students' post-study ISB experience. In view of this gap, this thesis aims to contribute to this field of the literature by exploring the post-study ISB of returned SFIS and taking part in lifelong learning opportunities.

Hence, Study 2 was carried out to provide answers to the thesis's proposed second research sub-question:

SQ2 What post-study ISB challenges and changes do Saudi female graduates face when moving back from Australia to Saudi Arabia?

In order to answer the research sub-question, the objectives of this research questions were to:

(i) Identify the pre-departure information needs and information sources of SFIS before their return to Saudi from Australia,

(ii) Investigate the impact of at least 3 years exposure to the Australian cultural and digital environment on Saudi female returnees' ISB, and

(iii) Explore the post-study information-seeking challenges and changes, if any, faced by Saudi women graduates after their return to their conservative cultural and digital environment.

The next section reports the key themes that arose following the analysis of Study 2's data.

6.2 Study 2: Methods

Although chapter 4 gave the broader details of the methodology and methods for the

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[24]https://www.vu.edu.au/research/our-research-focus-expertise/research-focus-areas/education-lifelong-learning.

[25] For example, Monash University, http://www.monash.edu/alumni/get-involved.

research, a few details were pertinent to Study 2 alone as explained in the following section.

6.2.1 Study 2: Recruiting participants

Chapter 4 stated the participants' recruitment criteria for Study 2 (Section 4.4.1). To find eligible graduate SFIS, the researcher emailed a number of Saudi universities asking if she could interview graduate SFIS who had since returned to work. Only two universities gave their permission, and only seven participants were recruited using this method. The other eighteen were recruited through the same strategies that were used for recruiting Study 1 participants using the researcher's personal contacts, the Saudi female vice presidents of Saudi students' clubs in Australia, and a snowball sampling strategy. Ultimately, twenty-five Saudi female graduates (saturation point) agreed to participate in Study 2. Fifteen participants had graduated from different universities in Melbourne, six from universities in Brisbane and the other four from universities in Sydney. Data were collected in Saudi Arabia in five major regions (Najd, East, Hijaz, North and South).

6.2.2 Study 2: Participants' demographics

As in Study 1, participants had a variety of background characteristics to ensure a range of different opinions that reflected the diversity of the larger population. Characteristics of participants varied according to age group, region, marital status, funding type, and academic discipline, length of stay in Australia and length of time back in Saudi (see Table 6-1). As for Study1, participants' confidentiality was assured by replacing names with numbers, R1-R25. Appendix 9 contains a table identifying demographic details of each interviewee.

The following section summarises the key demographics of Study 2' participants.

- As with Study 1, **the Saudi region** could make a difference to a participant's perceptions. Respondents came from 5 different regions in Saudi. The majority were from the less conservative Hijaz region (44%), while 24% were from the relatively conservative Najd region. Other participants came from the North (20%), East (8%), and Southern (4%) regions in Saudi.
- Participants' **length of stay in Australia** could produce different types of ISB. The longer a migrant stays in a host country the more he/she accesses the host

Table 6-1: Study2- SFIS' demographic table (n=25)

Age		
21–25	4	16%
26–34	16	64%
35–44	4	16%
45+	1	4%
Marital Status		
Single	6	24%
Married, children	18	72%
Married, no children	1	4%
Saudi Region		
Hijaz	11	44%
Najd	6	24%
North	5	20%
South	1	4%
East	2	8%
Time Since Return		
1–3 months	17	68%
4-6 months	8	32%
Length of stay in Australia		
1-3 years	7	28%
4-5 years	8	32%
6-8 years	10	40%
English Level (self-assessed)		
Good	2	8%
Very Good	15	60%
Excellent	8	32%
Employed		
Yes	8	32%
No	17	68%
Course/Degree		
ELICOS	2	8%
Diploma	3	12%
Bachelor	3	12%
Master	12	48%
PhD	5	20%
Discipline		
Applied Sc.	1	4%
Arts	3	12%
Biomedical Sc.	2	8%
Computer Sc	1	4%
Education	5	20%
English	2	8%
Fashion/ Design	3	12%
Health	3	12%
Law	1	4%
Management/ Commerce	4	16%

country sources (Chen, 2010). This researcher assumed that the longer an SFIS had stayed in Australia the greater the readjustment challenges she might face upon her return to Saudi. Ten participants had spent more than 5 years living in Australia, eight had spent more than 4 years and the remains had spent more than two years. Six intended to return there for further study.

- Participants' **employment status** could also lead to different needs and challenges. At the time of conducting the interviews, fifteen participants were unemployed, including all thirteen KASP graduates and two were unable to receive a scholarship were forced to return to Saudi without completing their degrees. The remainder were university employees' scholarships.

- Two participants rated their **English proficiency level** as 'good', fifteen as 'very good' and eight as 'excellent', compared to Study 1 participants' (twenty-one 'average' to 'good', and four 'very good').

- In terms of participants' **marital status**, eighteen were married with children, six were singles and only one was married without children.

6.2.3   Data collection from remote regions

Fifteen participants lived in towns remote from the interview venue, and as neither the researcher nor participants could drive or use public transport without a mahram, they were interviewed using online applications such as Soma, Imo, and WhatsApp. Ten participants said they would have preferred Viber, Tango, Line or Skype. At the time of conducting the interviews, Saudi telecommunications policy had blocked these online applications. However, participants were relaxed about being interviewed via the other applications, considering them convenient and comfortable. This preference could also be attributed to the anonymity inherent in these online media, which often encourages people to disclose more about themselves (Hamman, 1999; Preece, 2000 as cited by Al-Saggaf, 2004). For this reason, distance interviewing online is a strategic and useful tool for gathering sensitive information in Saudi Arabia, where any enquiry into an individual's personal affairs is frowned upon by others (Almunajjed, 1997, cited in Al-Saggaf, 2004). The online interviews were structured similarly to those in Study 1. Each participant was first asked a set of background questions pertaining to age, marital status, etc. The interviews were primarily aimed at exploring: 1) the returned graduates' pre-departure information needs and information sources; 2) the impact of their cultural and digital transition experiences; 3) what if any ISB challenges they faced after

moving back to the Saudi Arabian cultural and digital environment that may lead to changes in their ISB. Appendix 10 illustrates some of the questions raised during the interviews.

6.3   Study 2: Findings

A deeper analysis of Study 2's data revealed three distinct themes: 1) concerns and information sources of SFIS graduates' pre-departure from Australia; 2) SFIS graduates' ISB changes resulting from the longer Australian exposure; and 3) SFIS graduates' post-study ISB challenges resulting from their return to the Saudi cultural and digital environment, as outlined in Table 6-2 and the next three sections.

Table 6-2: Themes and sub-themes for Study 2

Study 2 Themes	Study 2 Subthemes	Frequency n=25 (%)
Concerns and information sources of SFIS graduates' pre-departure from Australia	Lifestyle re-adjustment concerns (especially recreational and career information)	18 (72%)
	Accompanying family needs	12 (48%)
	Academic concerns (e.g. course completion and scholarship concerns)	10 (40%)
	Other pre-departure daily concerns (e.g. ending renting and selling belongings)	8 (32%)
SFIS graduates' ISB changes resulting from the longer Australian exposure	Cultural-based ISB changes	25 (100%)
	Digital-based ISB changes	25 (100%)
SFIS graduates' post-study ISB challenges resulting from their return to the Saudi cultural and digital environment	SFIS graduates' post-study ISB practices	25 (100%)
	SFIS graduates' post-study ISB readjustment challenges	25 (100%)

6.3.1 Concerns and information sources of SFIS graduates' pre-departure from Australia

This theme was meant to address Study 2's first research objective by identifying the types of concerns that drove SFIS graduates to seek information about these concerns before departing from Australia. The information sources accessed by the graduates before leaving are also given at the end of this section.

- **Concerns driving SFIS graduates' pre-departure from Australia ISB**

SFIS' pre-departure information needs were divided into four categories: lifestyle readjustment, accompanying family members, academic concerns, and other pre-

departure daily concerns.

i) Lifestyle readjustment concerns

Recreational information was cited by eighteen SFIS as a sought-after pre-departure information need prior to leaving Australia. Interviewees reported a need to feel like tourists again after having experienced Australia only as a student for a number of years. The majority of interviewees (80%) knew that once they returned to Saudi Arabia it would be hard to come back to Australia due to distance and costs. Five interviewees, especially those from small conservative cities, wanted to take advantage of the freedom to explore Australia's beautiful natural parks before returning to their limited mobility and fewer recreational choices in Saudi Arabia:

> *Before leaving I was really keen to go around, do shopping, visit new places and parks especially as in Saudi we don't have such beautiful and 'entertaining' options, and even if we did, we wouldn't be able to move so free [R15].*

In fact, fifteen interviewees cited their reluctance to return to Saudi Arabia due to the social restrictions imposed on Saudi women. For instance, one interviewee who had spent 7 years in Australia reported that before returning to Saudi she visited different locations in Australia. She described her last few months in Australia as her saddest moments, and even tried to extend her stay:

> *In Saudi I can't walk on the street as I did in Australia. Also, I can't go out and do whatever [I want to do] without asking help from others... and can you imagine that we can't leave the country without a guardian [R13].*

A single SFIS said that her last few weeks in Australia were characterised by a psychological state of isolation during which she stopped visiting her friends:

> *When I recognised that my journey to the most beautiful country was about to come to an end, I started also to recognise that I'm going to go back to Saudi Arabia with its limited entertainment [recreational] options especially for us as women. This is why I was so keen to go out as much as I could and enjoy the state-of-the-art public transport, where I could go anywhere by myself. I miss it badly right now. That's why most of my search before my departure was about entertainment and travel [R6].*

Fifteen KASP participants reported searching for career information before their departure from Australia. Participants described how financial concerns related to potential unemployment and the loss of scholarship funding occupied not only their

pre-departure ISB but also their ISB after their return to Saudi Arabia.

> *Being a KASP graduate means that finding a job was, and still is, my main concern. I've been looking for six months now. The day we graduate is the day we're gonna face financial challenges [R13].*

> *I started searching for a job six months before I travelled back to Saudi Arabia. I was using Saudi university and government websites… looking for jobs for myself and my husband that meet our qualifications [R9].*

Career information was the most difficult information to find online due to cultural and digital issues, and some attempts to contact universities and job employers by email were unsuccessful:

> *Most of the career information available online in our Saudi universities was out-dated and applying through emails, [is] unfortunately still unsuccessful [R1].*

> *I felt and STILL feel so disappointed, as I came back from Australia with a high ambition that I would easily find an academic position in our universities, especially since I got my degree from a highly ranked Australian university in marketing- a field that has an apparent female shortage [Five years unemployed, R5].*

> *I heard about LinkedIn from one of my international friends and they told me it is a good site for job seekers to post their CV. So I created my account. However, to be honest I doubt that Saudi employers use this site as we are always behind technological advancement [R9].*

ii) Accompanying family needs

The second most commonly reported pre-departure information need was information related to husbands and children. Five participants reported searching for schools, especially since their children lacked Arabic skills as a result of studying in English-medium schools. In fact, participants with school-aged children, even those who didn't search for such information, reported the many challenges their children encountered while readjusting to the Saudi school system after arrival in Saudi Arabia:

> *Before my departure I looked for information about the best international school in Riyadh to enrol my sons in, especially with their low Arabic skills [R9].*

> *Although we spoke only Arabic at home in Australia, I was worried about my older son's public English-only Australian school. I looked for a private school as there was no international school in the area. I also got a private Arabic tutor who understood my son's situation and his poor Arabic [R3].*

Finding a public Saudi school that accepted our children with their low Arabic written and speaking skills was a great concern —I and my husband starting to search [for a school] while we were in Australia and also after arriving back in Saudi. [We searched] for either a private Arabic tutor or to enrol them in an international school, but the latter is very expensive especially when you have three children [R16].

Unfortunately, when you need to contact public Saudi schools there is no way to reach them except by visiting the school or calling over the phone. They don't have websites or emails at all. [I sent emails to] the international schools, which I can say are a little bit advanced but did not receive a reply till I visited them after my return [R9].

Another interviewee reported searching for career information for her husband, who quitted his Saudi job to accompany her. She reported that she even spent more time trying to find a job for him than for her, explaining:

I felt so grateful to my husband who had to leave his well-paid job just to help me study abroad and this is why, after I finished my study, the first thing I thought about was to help him find a better job than his previous one [R5].

iii) Academic concerns

Ten participants reported different academic information needs before departing from Australia, based on their educational level. This included finding information about the graduation process, receiving completion letters, and for Masters graduates, receiving offers allowing them to pursue higher degrees. PhD graduates also reported concerns related to their thesis submission and extending their submission due date.

Participants also reported frequent access of the SACM website before their departure from Australia (and even after their arrival to Saudi Arabia) in order to find information on: i) requirements to close their scholarship account (16 participants); ii) how to upgrade their scholarship (1 participant); iii) degree equalisation (10 participants); and iv) graduation financial allowance (10 participants):

Before I went back Saudi I started searching information about the process of upgrading my scholarship as I was really keen to do a higher degree as well as to stay in Australia, the place of lovely memories and because I know if I went back Saudi and closed my scholarship account it would be impossible to come back [R1].

As a PhD student information on how to submit my thesis, getting my completion letter and publishing as much articles as I could, were the most accessed information for me [R16].

> *Before leaving, looking for information about how to get my graduation financial allowance, closing my scholarship account and getting my own and accompanied family return tickets were among my most accessed information [R11].*

iv) Other pre-departure daily concerns

Other concerns reported by eight SFIS related to selling furniture and belongings [six participants, R1, R5, R11, R15, R16, and R22] and terminating rental agreements [two participants: R2 and R15] prior to returning to Saudi. A participant confided that her husband had left six months before her departure, so she was the one who sold everything including his car:

> *I was the one who had to sort out our departure concerns. You know, one of the hardest things when you leave a place forever is to get rid of your stuff. I was really concerned about how to find someone to buy my husband's car, and I needed to finalise the rent and get my bond back as I was in need of every single dollar, both me and my husband were unemployed, we still are [R15].*

Other SFIS however, reported the selling of furniture and belongings as the responsibility of their accompanying male guardian, which is why it wasn't among their pre-departure concerns.

Finding information on temporary accommodation was also identified by some SFIS' as a pre-departure concern [R2, R10, R11 and R22]. One described how, under the Australian rental system, tenants have to give 28 days' notice before vacating the property, prompting her to start searching for a temporary furnished apartment so she could terminate the rental and bonding policy before she left the country.

• Pre-departure information sources

In terms of pre-departure information sources, all participants reported accessing multiple offline and online sources for various pre-departure concerns (see Figure 6.1). As can be seen in the graph, SFIS relied on multiple Saudi Arabian and Australian sources. All returned SFIS reported greater reliance on online sources, such as Google and social media, than offline sources such as friends' word of mouth. Google, Trip Advisor, and interviewees' social media accounts on Instagram and Snapchat were the most commonly-cited sources for entertainment information, while Saudi university websites and Saudi employment social media accounts on Twitter, Instagram and LinkedIn were the most accessed sources of career information.
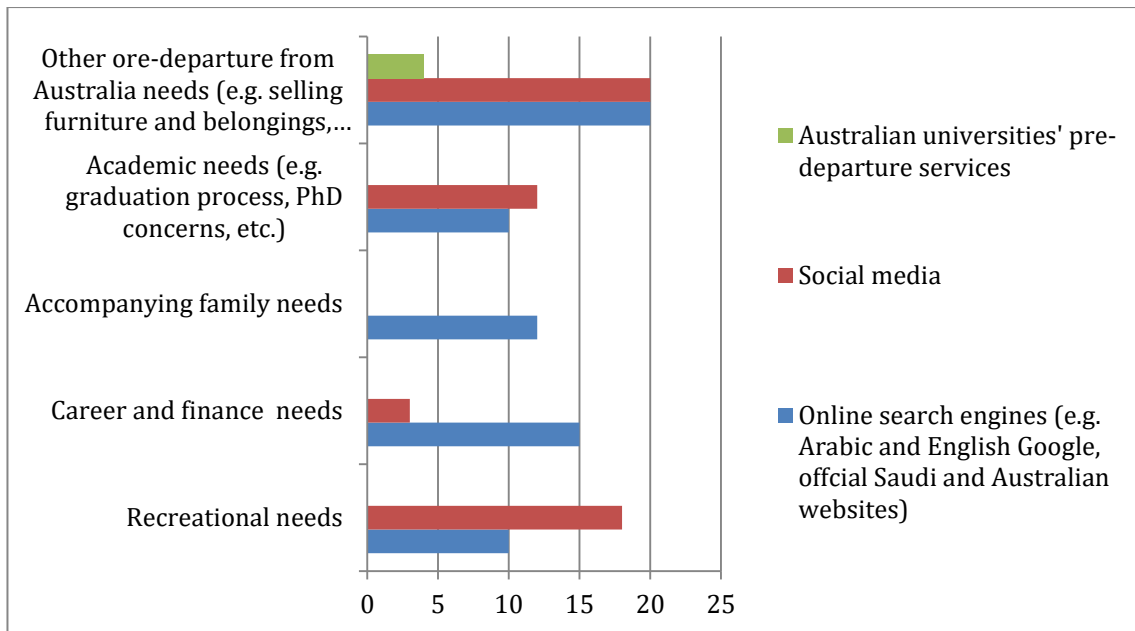
Figure 6.1: Study 2: information sources used by SFIS graduates before leaving Australia

i)   Online search engines

All returned SFIS identified conducting English Google searches among their preferred strategy for satisfying pre-departure and post-arrival information needs.

> *Any [information] enquiry, academic, non-academic, private or general, and even for home-based enquiries such as those related to health advices, I prefer to ask my most trusted and knowledgeable friend [Google]. I even preferred Australian Google searches because I know I would easily find what I was looking for with the most up-to-date answers [R9].*

Reflecting on their pre-departure information sought from Australia information sources, the majority reported directly accessing a number of Australian and Saudi websites depending on the type of information they needed. For instance, SACM and the websites of Saudi universities and other Saudi educational institutions were accessed for academic information related to Saudi-based scholarship and career enquiries, and Australian sources such as university websites and travel websites (e.g. Trip Advisor) were used for Australian-based enquiries related to course completion and recreational enquiries.

One exception to the above finding was the Saudi Students' Club website which was identified by all SFIS as a source for both Saudi and Australian-based enquires. As one respondent put it:

> *When it came to selling my stuff or even getting advice on places to visit or how to end my scholarship and other graduation enquiries, in addition to accessing the Australian websites such as Gumtree for selling my stuff I also referred to the Saudi Club website and social media accounts not only for selling stuff but for all other enquiries [R3].*

ii) Social media

As a source for sharing and seeking pre-departure information and advice, WhatsApp seemed to be the most popular pre-departure information source. PhD graduates mentioned the importance of their closed PhD WhatsApp group, initiated by a doctoral graduate mainly to share her experiences and to help new as well as current PhD students with their entire academic candidature and research enquiries. One interviewee said:

> *Our PhD WhatsApp group is the platform where we share all our PhD, research and even daily enquiries. It was and still is my main source of information especially for those related to my job rights, conferences in Australia and much other information. The girls [in this group] were so active and responsive [R22].*

The Saudi Clubs' Twitter accounts were the second most popular site for pre-departure information enquiries including those related to selling belongings, seeking academic advice, news and updates in the interviewees' respective fields. The only exception came from an interviewee who described Twitter as an incredible source of news. However, she prefers traditional ways of receiving information:

> *I like getting news from the newspapers or media, but I don't trust news that spread via social media. Though I know now that Twitter plays a great role in spreading news, but I like and trust to hear news from TV [R15].*

Four participants [R1, R3, R6 and R15] identified Twitter as the most efficient site to help them document and share knowledge they had gained in their field. The popularity of Twitter among well-known Saudi figures, including those in the government, and more up-to-date information on the site, were cited as reasons for its popularity:

> *Unlike other popular sites such as Instagram or Snapchat, Twitter is the site of knowledgeable people and only on Twitter you can get response from official Saudi figures as most Saudi ministers have their official accounts on Twitter and they response quickly to any questions posted. Twitter also gives up-to-date and reliable information [R22].*

Unemployed returned SFIS also identified Twitter as the best platform for making their voices heard by Saudi decision-makers regarding unemployment. One respondent described how she used Twitter to post hashtags related to her unemployment difficulties, while another used Twitter to directly communicate with the Saudi university's vice-chancellor:

> *On Twitter I was able to make my voice heard by others through sharing a number of hashtags about post-graduate returnee Saudi students' unemployment issues [R10].*

> *I once was in urgent need to talk with the university vice-chancellor to ask about my job application and I tried to send emails and even call him but all my attempts failed so I sent him a message on Twitter where he replied immediately [R1].*

LinkedIn was also cited by eleven participants as a social media tool occasionally used to share information such as a CV's with the public for different reasons. A PhD graduate SFIS described her LinkedIn profile as being useful for '*connecting me with other researchers in my field and facilitating collaborative work with them' [R22]*.

However, although acknowledging the usefulness of LinkedIn, the majority reported rarely accessing their LinkedIn accounts. A typical response was:

> *[LinkedIn is useful to] help me share my CV with employers looking for someone in my field…[but] I only access it when I want to update my profile such as my address, current educational status, and so on [R7].*

Ten participants also reported using social media to share information related to their field of study or their international daily experiences. For instance, one participant described how, while living in Australia, she used her Instagram account mainly to share informative pictures about her daily life:

> *When I was in Melbourne, I used my Instagram and Snapchat accounts to help Saudi female students by sharing daily information. For instance, I would tell them what kind of butter I was using and other food that I recommended to help the women in Australia who didn't know about some stuff [R10].*

PhD graduates also reported relying on international social media networks such as ResearchGate the social networking site, for their research-based needs:

> *While I use social media as a database to connect me with friends and family, ResearchGate is the best database to connect you with academic researchers. I use ResearchGate to make my publications*

> *accessible to other researchers and to get more citations as this will help me get work promotion and a higher position [R16].*

> *I heard about ResearchGate from my Australian PhD professor. I now refer to my ResearchGate network whenever I have a research question in my filed or when I want to get up-to-date news about the latest research done in my field or when I want to access articles [R11].*

However, when it comes to the use of social media as a source of information, all participants described social media an appropriate source only for general and opinion-based topics, such as entertainment, general academic advice, fashion or travel, and then only from trusted, popular social media accounts. According to one participant:

> *I only refer to my Instagram followers when I trust their knowledge and this trust only comes after I make sure that the person I'm asking is famous in his field and his/her profile clearly shows his/her name and specialty [R10].*

Yet, even when information is coming from trusted social media followers, participants further validate information using Google or other websites before acting on it. One interviewee explained:

> *I don't use any information I get from social media, even those whose sources I know, till I've assessed the information on Google and professionals' websites. I also like to ask experts I know who are specialists in my field [of my inquiry], such as my cousin who is a skin doctor or my nephew who is religious preacher [R1].*

Facebook use was surprising. Most participants did not like using it. Only five participants [R1, R7, R16, R22 and R25] from the Hijaz region reported accessing this tool to keep in touch with their non-Saudis friends overseas who could only find them on Facebook:

> *I have built really good friendships with Australian and international friends…they use Facebook more than other sites so accessing my FB is one of my daily activities [R7].*

Notably, the majority of respondents (19 out of 25) reported that they discontinued using FB attributing this to the presence of faster, easier to use, more interesting and private social media, such as Snapchat and WhatsApp, to their decision to discontinue using FB:

> *I have accounts in Twitter, Instagram, Snapchat, Facebook, Telegram, Tango, and WhatsApp and I use what suits me. …I try new*

stuff and over time I decide whether to continue using it based on whether it suits me... Since most Saudis don't like to read or write, Snapchat has made it easier for them to share their friends' or followers' daily life and updates. I think the credibility of Snapchat is higher than other social media sites [R1].

[Nine years ago] Facebook appeared on the scene. So I tried it, like everybody else, to communicate with people like old school friends. I haven't used it for ages, WhatsApp replaced it, it's much easier and compatible with our simple technological background [R3].

When asked whether their discontinuation of FB use was due to family pressure, one participant who belongs to a religious and conservative family described how the Saudi society's perception regarding females' use of social media has changed:

Nowadays, females have more freedom to use social media than in the past. You notice this with the increasing number of females having social media accounts, even…religious women such as Nawal Aleid 26 [R10].

Similarly, another student, from the most conservative Northern region whose husband was previously against her use of social media, noted a change in Saudi society:

Society's attitude regarding females' use of social media has changed a lot even in my area. Now people have become more open towards social media use—including my husband [R15].

Five SFIS [R4, R8, R9, R11 and R21] who described first signing up for Facebook in Australia (to join study groups, the Melbourne Saudi Club, or groups teaching Arabic to their children) reported rarely accessing their FB account:

I use FB only to get into my speciality (Business) groups and I only refer to my FB group when the person I want to refer to uses only FB as their main social media account [R9].

Three participants [R10, R13 and R15] described FB as inappropriate for Saudi women as it relied on building virtual friends as one explained:

I don't like the idea of FB; it is built mainly to make friends from all over the world, which doesn't fit my culture [R13].

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26 Nawal Al-Eid is one of the most prominent female preachers in Saudi Arabia. She was voted the most influential Saudi woman on Twitter.

iii) Australian universities' pre-departure and post-return services

Only four returned SFIS accessed their Australian universities' services related to information for pre-departure and post-return services [R1, R3, R9 and R22]. The majority (70%) lacked awareness of these services Australian universities provide. This was partly due to the fact that in Saudi Arabia, once students graduated they were denied access to Saudi university services. Five interviewees also attributed their lack of awareness because they had not accessed their Australian university emails before departure:

> *I had no idea that my Australian university gave such amazing services, especially alumni membership with unlimited access to my university e-library and network with professors and staff in my university. I wish I'd known about this outstanding service and I hope I can now use it after 2 years of my return [to Saudi] Do you know if I can? [R5].*

> *I didn't know about the [university] services. Maybe they sent us emails about them before our graduation…at that time I was rarely checking my university email as I was only concerned about my travel back to Saudi. The first time I heard from them was after returning. I thought Australian Universities are similar to our Saudi ones where students' access and connectivity with their institution becomes past memories once they received their degrees. Australia's educational system is amazing and impressive [R21].*

6.3.2 SFIS graduates' ISB changes resulting from the longer Australian exposure

This second major theme focuses on Study 2's second research objective: to identify the impact of the longer exposure of the Australian cultural and digital environment on Saudi female returnees' ISB.

Nearly 95% of participants stated their decision to study in Australia was one of the best decisions they had ever made, and all reported total satisfaction with their study experience. Six in fact, intended to return to Australia to pursue a higher degree. Ten expressed a desire to return and experience Australia in ways they were unable to while there, owing to academic commitments. Concerning the impact of the Australian experience on SFIS, participants said their Australian experience led to a number of personal, social, educational and digital changes. Unfortunately, all have found these changes caused readjustment challenges after their return: see Study 2 Section 6.3.3 below).

Concerning their ISB, participants reported a number of changes in their ISB, attributing them to their Australian cultural and digital experiences as outlined in Table 6-3.

Table 6.3: Study2: themes and sub-themes of SFIS graduates' ISB changes

SFIS graduates' ISB changes resulting from the longer Australian exposure Themes	SFIS graduates' ISB changes resulting from the longer Australian exposure sub-themes	Frequency (n=25)
Cultural-based ISB changes	The Australian mixed-gender culture and SFIS' perception of talking to males	20 (80%)
	The Australian individualistic environment and SFIS' increased self-dependent ISB	25 (100%)
Digital-based ISB changes	Increased access to international sources	25 (100%)
	More reliance on online technologies (e.g. emails, Google map)	25 (100%)
	Applying advanced search skills and strategies (e.g. checking reviews and feedback)	25 (100%)
	Changes in online shopping and banking behaviour	25 (100%)
	SFIS' ISB changes within their cultural and religious limits	25 (100%)

The following subsections highlight the various cultural and digital ISB changes SFIS experienced from their transition experience. These highlights are presented according to each subtheme.

- **Cultural-based ISB changes**

Returned SFIS reported a number of ISB changes resulting from their exposure to the Australian mixed-gender, free and individualistic culture as outlined in the sections that follow:

i) The Australian mixed-gender culture and SFIS' perception of talking to males

The first cultural ISB change resulting from SFIS' exposure to a mixed-gender environment was the majority reporting being more relaxed and confident in asking for help or talking with any person, including non-related males. Some participants reported that this behaviour caused a readjustment challenge and prompted criticism from family members. Participants also described how their self-confidence increased when they talked with strange males. For instance, one respondent described how she had become more daring and self-confident: she told how she argued with a Saudi male Human Resources representative when she was looking for a job:

> *After living in a mixed environment I've become more confident talking and arguing with Saudi males—as long as we talk within our specialty and needs [R1].*

This participant said her ISB with Saudi males more successfully than with Saudi women.

Another respondent described how she called her son's school when she was looking for information regarding his enrolment and argued with his teachers without hesitation:

> *Before living in Australia it was impossible to call or visit my son's school as there was no way I could talk to Saudi male teachers. Now I often forget that we are back in our segregated culture; I went once by myself to the school and though I still couldn't enter the school, the teachers came outside the school and I was able to discuss all my enquiries [R20].*

However, an interesting aspect of this change is that, regardless of the length of their stay in Australia, their changed attitude towards seeking help from males remained within the Saudi existing cultural limits. That is, they approach matters with decorum and limit discussions to business-related topics:

> *Having lived in an open and mixed environment has nothing to do with my conservative beliefs. I feel now more relaxed and confident to talk, ask and have discussions with strange males but this doesn't mean that I can laugh or go out with them or discuss sensitive topics with them [R10].*

Married participants also continued to adhere to cultural norms with respect to gender relations; they emphasised that any conversation with unrelated Saudi males should only be done with their husband's permission, or at the very least let their husband's know that a conversation will take place. One respondent described this continuing adherence to cultural norms with respect to gender relations:

> *Although I don't mind talking to Saudi males, I still feel more safe, confident and relaxed when my husband's there, as my relationship with my husband is more important for me than just arguing and asking for things [R15].*

ii) The Australian individualistic environment and SFIS increased self-dependent ISB

The second cultural-based ISB change cited by all interviewees related to personality changes through which they became more self-dependent and confident information-

seekers. As one SFIS explained it:

> *In Australia I discovered that when I needed help, I had to search for it myself and not expect or wait for others to help me unless I specifically asked for help. Now I'm really happy with my personality: more self-dependent, more daring—and for the first time in my life I can travel with my children alone, without my husband [R10].*

Participants described how greater freedom of movement, changes in gender roles and gender-relations, and the individualistic environment they experienced in Australia led to changes in their personalities and thus their ISB. One participant described how the Australian experience increased her independence and confidence, explaining:

> *Before I travelled to Australia I used to rely on others (e.g. my mahram, siblings) for my outside information needs especially if that required transport such as visiting a hospital. However, after I lived in Australia I started to be self-dependent—now I can go immediately and freely anywhere without the need to wait for my husband [R1].*

Married SFIS admired how the Australian experience made their husbands more understandable and supportive, even with respect to undertaking tasks that are generally associated to women's roles: housework, caring for children and so on. For instance, one interviewee described her husband as 'a real Saudi husband' saying:

> *My husband belongs to a very conservative Saudi family where household work is the role of women and males do nothing at all. However, after living in Australia his idea of males and females' roles has changed a lot. My husband for the first time cooks and takes care of the children, and one day to go out alone without the need to take my children with me [R13].*

Twenty-four of the interviewees credited their international experience as prompting them to engage for the first time in work that is traditionally done by males. They saw this as an opportunity to increase their self-dependency in everything, including searching for answers to their enquiries as one participant explained:

> *Before my Australian experience, it was my husband's role and responsibility to search for and rent the house, pay for electricity and other contracts, but now after living overseas I've changed from a person who is being served to a person who serves others [R10].*

Participants also attributed the increased confidence and self-dependence in their ISB to the Australian individualistic educational and learning systems in which students are forced to be self-reliant:

> *For 18 years education in Saudi I would just memorise the curriculum and take the tests but when I moved to Australia it was different. I learnt that I wasn't obliged to stick with the textbooks, I could give voice to my own ideas without fearing that the lecturers would think I'm disrespectful or contradicting his ideas as we used to in Saudi [R12].*

Fifteen participants also credited the Australian multi-cultural experience with making them more open and respectful of different beliefs, views and ideas as one participant commented:

> *It is only after I went to Australia that I became interested in searching for positive and negative opinions regarding any information I was searching for to compare the two before making my decision [R11].*

- **Digital-based changes**

This sub-theme identifies four digital changes returned SFIS reported as a result of their exposure to the Australian digital environment. The digital-based ISB challenges are as follows:

i) Increased access to international sources

Participants reported changes in the origin of the sources they used to seek information, with all of them accessing both Arabic and English sites after their return to Saudi. Participants described sources in English as more available, up-to-date and credible, especially for health and academic information:

> *Despite the increased number of Arabic online sources, I still don't trust them as I'm not sure if they went through the tough reviewing process that English articles go through…I can find heaps of feedback and reviews when I search in English when comparing to the limited and outdated feedback when I search in Arabic [R1].*

ii) More reliance on online technology

When Study 2 participants compared their pre-Australian ISB with their current ISB, the majority credited exposure to the Australian advanced digital lifestyle prompting them to become more confident online information-seekers, with increased abilities and preferences for using technology such as emails to fulfil their official needs (career, etc.) as one explained:

> *It is only after I lived in Australia [that] I became a Googler. When I went first to Australia I expected others to help me find answers to questions…people kept saying 'Google it' or 'Search for the answer*

> *yourself". Of course, I asked my friends and the people around me all the time at the beginning, but it became easier after a while and I became more confident doing it [R16].*

Returned SFIS also appreciated the advanced online educational system in Australia, where students can easily send their enquiries to academic staff via their personal emails or educational learning management systems (LMS or blackboard):

> *I really admired how efficiently Australians, both lecturers and non-academics such as child carers, doctors and travel agents, use emails. When I first came to Australia I was told to always email enquiries and only go in person when my presence was required [R20].*

SFIS also appreciated the improvements in their English language abilities over time, which helped them extend their ISB as one explained:

> *Despite the availability of multiple Arabic websites and social media, I still like to access English websites for most of my opinion-based and advice information such as how to design a CV to get a better career. I've found English sources give better suggestions than Arabic sources [R1].*

Interestingly, although the majority of participants emphasised they had accessed online sources such as Google before travelling to Australia, they described their online search in Saudi at that time as simple when compared to their current, post-Australia online searches. For instance, one participant said:

> *I started using Google even before I went to Australia, but just simply to surf websites. After I lived in Australia I started to use Google to look for feedback and customer reviews before buying any product— thanks to the Australian advanced digital environment [R7].*

Participants from the Northern and Southern Saudi Regions reported a radical change in their ISB, especially those that belonged to the most conservative regions where adoption of technology is slower than large regions such as Najd and Hijaz. These participants compared their old-fashioned search strategies prior to their overseas experience with their current, post-Australian online-based experience. One described her search process before being exposed to the Australian digital environment as 'old and traditional': she used to start her search by calling a friend or relative whenever she needed advice or a suggestion, as 'the only and best way of getting an answer'. In Australia she preferred to use Google as she knew that 100% of the time she would get valuable feedback and a quick response. Another participant commented:

Before Australia, I sought information in books as I came from the Northern Borders region where internet and technologies came to us late. I got my first laptop when I got my scholarship. I was struggling when I started university: I didn't know how to use email and I used to forget passwords ...Now checking email has become a daily activity...but since my return I have emailed 50 Saudi universities looking for a job and only three of them replied [R13].

Notably, three participants [R1, R10 and R11] attributed the change in their old search strategies to the recent explosion of smart phones and social media, even in Saudi Arabia, rather than the Australian experience, as one commented:

Before 2008 I relied on traditional old ways of communication to network or ask questions because at that time in Saudi, the internet or smart phones were not available. So I don't think the transition to Australia is the main reason for my change but it is the popularity and widespread use of smart phones, which encourages people to be more online than offline seekers and networkers [R11].

iii) Applying advanced online search skills and strategies

Nearly all participants cited exposure to the Australian research-based educational system as not only changing the way they seek information, but also how they share that information with others. Participants reported applying advanced information-seeking strategies to ensure the validity of information they accessed and posted online. As one SFIS commented:

In Australia, I learned how to search for information in more advanced ways...when I find the information I'm looking for I check the author and the website to make sure the information is given by a well-known and trusted source [R5].

When asked how they check the validity of information, a common method was checking the sources by applying a number of criteria: i) checking the source to verify who said what; ii) researching prior statements (feedback and reviews); iii) if information comes from social media, checking the profile of the source and assessing if it's written in an inappropriate style, how many people shared the information, comments people made about the information and so on. As one SFIS explained:

It is only after my exposure to the Australian research environment that I started to apply my other ways of verifying information online or offline, I check first the source where that information or link (in social media) comes from so I see that the site is a personal blog or it comes from an academic source from somewhere I know [R1].

One participant also described how exposure to the Australian educational environment made her more careful to refrain from forwarding any information or message to others until she was fully sure of the source's trustworthiness:

> *Studying in Australia taught me to be more careful…You can't just copy and paste any information from Google or Wikipedia…those whose research is based only on Google and Wikipedia are considered academically weak [R15].*

In terms of academic skills, all respondents described how the Australian educational experience helped them to build up their academic search skills. The most common comment related to the impact of the transition to Australia on the way they seek information was some variation of:

> *Studying in Australia built my research skills; it didn't 'improve' them—there was nothing there to improve! [R11].*

For the majority (90%) of interviewees, it was only in Australia that they first heard the terms 'literature review' or 'paraphrasing' or 'Turnitin' or 'Endnote', since in Saudi they had never conducted any academic research. One participant described the difference between her academic experiences in Saudi and Australia by saying:

> *When I compare how I did my Bachelors' project in Saudi with my Masters' project in Australia I can see the vast difference in my search skills. My Saudi project was just copied and pasted from what Australians call unacceptable sources such as Wikipedia without worrying about plagiarism issues [R23].*

Three participants [R3, R20 and R23] now working as academics appreciated how some Saudi universities recently implemented Turnitin in an attempt to overcome plagiarism issues. However, due to a lack of training on how to use it, both on the part of students and lecturers, these attempts failed as one student said:

> *I was so happy when I heard that our university has access to Turnitin, but I am shocked that none of our lecturers or students uses this tool …some of lecturers don't even know how to use it and don't mind if the materials provided by the students is plagiarised [R20].*

PhD graduates who worked as lecturers also spoke of their use of official academic websites such as ResearchGate to share their academic publications. One commented:

> *The introduction of academic websites such as ResearchGate helped me not only to upload and publish my academic work but also find researchers who have similar interests like me. This gives me endless access especially as I don't have access to my university e-library*

anymore [R16].

Another described ResearchGate as a collaborative platform that helped her to stay in touch with her supervisors' latest publications:

> *I created my account on ResearchGate in the first year of my PhD when I was in Australia as I heard it's the best platform to publish and enter the world of academia. Now I even receive notifications whenever my supervisors or any of my followers publish any new work…it keeps me up-to-date with recent issues in your field [R11].*

PhD participants also reported how they started to look at the impact factor of any journal they wanted to cite or publish in as one said:

> *It is only after I had published articles of my PhD thesis that I found out about journals' impact factors and ratings. Now if I want to publish any article I first check its impact factor and reputation [R22].*

Ten participants also reported their wish that scientific research subjects would be among the Saudi university's core subjects and that the Saudi universities would adopt stricter policies regarding plagiarism. One SFIS, a PhD graduate, spoke of her attempts in this regard:

> *After my advanced academic experience in Australia, the first thing I did on my return to work was to try to convince the university dean to offer subjects such as research methods in our faculty [R16].*

iv)   Changes in online shopping and banking behaviour

All returned SFIS described changes in the way they shop and conduct bank business following their international experience. Some credited the efficient and secure Australian digital environment with encouraging them to do most of their daily life activities (e.g. shopping, banking) online. One participant described how, after her return to Saudi, she tried to continue using her Australian-style banking habits, but the experience was totally different:

> *The online banking system in Australia allowed you to do all the banking activities online such as adding a beneficiary, changing passwords and even opening a new account without the need to visit the bank office. So when I came back to Saudi I started to do the same but I was shocked because of the huge differences in online systems where the customer still needs to visit the bank branch or call the bank to be able to activate a beneficiary or even update personal information [R6].*

Similarly, participants who were active online shoppers in Australia stated:

> *In Saudi, despite the increasing number of online shops on social media and websites, I've found the products are either out-dated or untrustworthy—the seller showed different products from the ones they sent [R2].*

> *Unlike in Australia, when you want to buy online you won't find enough feedback as this is new for Saudis and [if you find some] it could be from seller's friends to attract customers. ...This is why despite the increasing number of online shops in Saudi I still prefer the traditional way by going to the shops to make sure the quality is what I'm looking for [R1].*

v) SFIS' ISB changes within their cultural and religious limits

A very interesting finding of Study 2 was that despite the fact that SFIS reported enjoying the open and free digital and cultural environment of Australia, when asked whether the transition made them feel more free to engage in prohibited behaviours (e.g. taking off their hijabs, socialising with males, accessing political or anti-religious websites or posting personal pictures), a typical comment was:

> *My stay in a foreign country does not mean I waver in my principles and religious beliefs. Instead my international experience made me more proud of my religious beliefs...I don't see any issue of talking with strange male as long as he respected me and don't cross the line [R11].*

In fact, although all SFIS appreciated the higher-quality internet speed and free online accessibility of information in Australia that exposed them to a wide range of online sources including some that were blocked in Saudi, all participants emphasised that none had sought or accessed anti-Islamic or anti-government websites or shared personal pictures or visited prohibited places such as clubs. They reported the impact of their religion in their lives is now even stronger and controlling their offline and online behaviour regardless of any freedom they experience resulting from their time in Australia. Hence the Australian transition only changed the origin of the sources they had originally used by now relying on both domestic and international online sources. However, it did not influence the type of information or websites they accessed. The prevailing sentiment regarding the impact of their Australian experience on returned SFIS' ISB was expressed by one interviewee:

> *Despite being in an open and free cultural and digital environment, I had never participated or accessed any source against my religion or government or attend any anti-Islamic places such as clubs or*

*watching M18+ movies as I know they would have sexual references
[R1].*

6.3.3 SFIS graduates' post-study ISB challenges resulting from their return to the Saudi cultural and digital environment

In addressing Study2's third objective two subthemes were observed: SFIS graduates' post-study ISB practices, and ISB re-adjustment challenges.

- **SFIS graduates' post-study ISB practices**

The majority of participants reported that their ISB had changed between their pre-study and post-study experiences. Table 6-4 summarises the changes SFIS reported in their ISB practices after their return to Saudi Arabia.

Table 6.4: Study2: Themes and sub-themes of SFIS graduates in Saudi Arabia

SFIS graduates' post-study changes following their return to Saudi Arabia: Themes	SFIS graduates' post-study changes following their return to Saudi Arabia: Sub-themes	Frequency n=25 (%)
SFIS graduates' post-study ISB practices	Preference for offline and traditional ISB practices	20 (80%)
	Changes in social media use	25 (100%)
	Social media has changed the Saudi society	25 (100%)

i) Preference for offline and traditional ISB practices

Twenty participants reported while most of their information-seeking in Australia relied on online sources, they adopted a new strategy that combined the Australian online ISB style with their traditional methods following their return to Saudi they adopted a new strategy that combined the Australian online style with the traditional method of calling using the phone and visiting places. Participants described their current daily information-seeking behaviour:

> *My ways of searching for information, say career information, have
> greatly developed. l used to apply in person or call over the phone.
> Now I prefer to start any search online. But sometimes given the
> inefficient digital culture among many Saudi decision makers and
> employers I find myself returning to the traditional methods [R10].*

> *In Saudi despite the outstanding digital advancements, our online
> environment is still less efficient and less safe than in Australia… I
> prefer to buy either from international sources or offline as I've had
> very bad experiences with Saudi online sellers and websites [R1].*

ii) Changes in social media use

The second change SFIS reported in their ISB was related to the way they used social media. For instance, PhD graduates reported increased access to scientific databases such as ResearchGate, and they attributed this to their need to be up-to-date with their researcher networks' publications. One participant described how, while in Australia and busy with her thesis, she was unable to discover the great services provided by ResearchGate:

> *It was only after my return when I actively started to access my ResearchGate account more than I used to when I was in Australia as it is the best and most popular source of information among researchers where they not only share their publications but even initiate collaborative research projects [R16].*

Ten participants reported changes in their social media use as a result of changes in personal interests and information needs. For instance, while social media in Australia was seen as a tool for connecting with families in Saudi and a source for academic and daily information about Australia, upon returning to Saudi, social media became an entertainment tool or a platform for sharing knowledge. One SFIS described it this way:

> *I'm now using WhatsApp and Snapchat more often than I did when I was in Australia because at that time I was concerned with my studies. I no longer use Tango at all...Tango joined the blocked phone applications in Saudi [R11].*

Another participant, who used her social media mainly to share her pictures, also reported changes in her upload activities as a result of changing interests:

> *I used to change my profile personal pictures every couple of days but now I only do it twice or three times a year as I'm now more interested in sharing and following up with news [R14].*

Participants described how they were inactive on Twitter in Australia because they used social media mainly for communicating with family and friends, and Twitter was known as a news source. However, after they returned to Saudi they started to look at Twitter differently:

> *In Saudi, Twitter is not only a platform for news but also the best site where Saudis can freely express their opinions and problems. For instance, we (KASP graduates) initiated a hashtag regarding the difficulty we faced in finding jobs [R1].*

> *After my return, I started to use social media such as Twitter, more than I used to when I was in Australia as I became more concerned about what's happening around me. Twitter is the best and most popular source of information among Saudis not only to seek but also share our information and opinions. As an unemployed KASP, Twitter is the platform where most of us from different regions and degrees gathered to share, post and help each other with any information related to our career concerns [R15].*

In contrast to their increased use of social media tools, married graduates reported a decrease in their social media use especially for their entertainment once they returned to Saudi. The majority, especially married SFIS, reported a decrease in their use of social media upon their return to Saudi. This was attributed to work, social obligations, and family responsibilities:

> *Unlike in Australia when I was a student, in Saudi working full-time and having children of different ages gives no time to use the internet for fun. I only surf WhatsApp in the morning to check emails and important communication [R16].*

> *In Saudi, I can't find free time for myself due to my hectic social life— [there are] endless events where I can't say I can't go, as that means endless crises and arguments, such as 'you've become arrogant since you got your degree' [R8].*

When participants were asked about the type of pictures they posted on social media, twenty-two participants posted non-personal pictures such as natural scenery, ten posted children's photographs, fifteen posted pictures with religious content, and ten posted health or entertainment information. Personal material was not posted. Participants appeared worried about falling victim to blackmail:

> *[There is] no way would I share my personal pictures on social media. I even didn't take photos on my smartphone: I was worried about losing my phone and I don't want to have scary moments [R21].*

> *Publishing pictures on social media is a red line I won't cross, and especially after many incidents when Saudi women published their pictures and they suffered from hacking and blackmail [R11].*

Thus, even though the majority (20 out of 25) reported using private settings on their social media accounts so that only close friends or known female followers can access their accounts; they are concerned about their privacy. The only exception was with respect to WhatsApp and Snapchat, which were described as the safest, most private sites to share their personal pictures.

iii) Social media has changed the Saudi society

Interestingly, the majority considered the increased popularity of social media and smart phones among Saudis as changing the traditional viewpoint of the conservative Saudi society. All interviewees, in fact, criticised the way Saudis currently use social media sites. According to one:

> *I have lived seven years in Australia and I think our society has changed. Smart phones and social media have changed our conservative society a lot both in bad and good [R9].*

Participants also raised the implications for privacy given that most Saudis use social media primarily to show off what they have and where they go instead of sharing more important information:

> *Friends of mine whose economic status is not that good … even borrowed money to buy furniture and things just to take pictures and post them on Instagram to show others what they have. I'm really sick of how most Saudis utilise the technologies so badly [R10].*

> *I don't like Snapchat all that much because of the way Saudis use it to show off. I only use it to keep abreast of the recent works of well-known Saudi celebrities or to follow up with my daughters because they live away [R3].*

According to another:

> *In my husband's tribal tradition when there is a feast, the guests should enter the dining room first. Now …my in-laws are the first to enter the dining room to take pictures of the feast to post them on Instagram and Snapchat. Now even poor people… borrow just for the sake of showing off on social media [R15].*

- **SFIS graduates' post-study ISB readjustment challenges**

During interviews, all returned SFIS reported they themselves and their accompanied family members faced a number of post-study cultural, personal, and digital readjustment challenges. These challenges were such that they prompted several returned SFIS with Masters degrees to try to go back to Australia in pursuit of higher degrees. However, this study's focus is only on Saudi women and their ISB challenges and excludes husbands, kids and cultural or social challenges.

Table 6-5: Study2: Theme and sub-themes of SFIS graduates' ISB readjustment challenges

SFIS graduates' post-study ISB readjustment challenges following their return to Saudi Arabia: Themes	SFIS graduates' post-study ISB readjustment challenges following their return to Saudi Arabia: sub-themes	Frequency n=25 (%)
Cultural-based post-study ISB challenges	Gender-related challenges	20 (80%)
	Career challenges	14 (56%)
	Freedom of movement challenges	25 (100%)
	Academic and research challenges	4 (16%)
Digital-based post-study ISB challenges	Limited credible and up-to-date Arabic online sources	23 (92%)
	Inefficient use of digital communication tools (e.g. email)	20 (80%)
	Poor internet speed and quality	6 (24%)
	Limited advanced research labs and technologies	4 (16%)

i)   Cultural-based post-study ISB challenges

Returned SFIS reported four post-study ISB challenges they attributed to the Saudi culture as follows:

Gender-related challenges

As SFIS became more relaxed and confident with respect to their ISB with males, including non-family males, this created challenges for twenty participants, especially married participants from the North and South regions. Their husbands refused to let them work in a gender-mixed environment, such as the banking sector. An IT graduate said:

> *I found an IT job in a female section but my husband didn't accept it. Most IT experts and mangers are males, I'd have to communicate with males, and that was unacceptable for him and his family [R13].*

Another described how her husband kept warning her that she was no longer in Australia:

> *Once I was looking for a job and I had to call the HR manager, a Saudi male. My husband gave me permission to call him, but he told me to avoid calling males as much as I could as this is against our tradition [R15].*

Career challenges

Even after successfully pursuing academic qualifications in Australia, fourteen returned graduates found it very hard to pursue their careers. Frustrated KASP graduates created a Twitter hashtag regarding their difficulty as R1 commented, *'We (KASP graduates)*

initiated a hashtag regarding the difficulty we faced in finding jobs.'

Most interviewees cited the influence of Saudi culture limiting their career choices and their academic job searches. Most unemployed graduate SFIS, especially married SFIS, are eager to find an academic job in a Saudi university. This job was considered as the most prestigious job for a female who had gained a graduate degree from a Western country, and it was also an appropriate career since academic work conditions suited their busy Saudi social lifestyle:

> *I found a job in a bank but I refused the job due to its long working hours compared to academic jobs. As a mother with children the only job I think I will look for will be an academic [one] [R5].*

> *It's almost five years since I came back to Saudi and I'm still unemployed. My expectation was to work as an academic lecturer in a Saudi university so I didn't apply for private companies. The working conditions in private companies include long working hours and the necessity to travel for business meetings—these don't fit our cultural and social background [R4].*

Six participants [R1, R4, R8, R13, R15 and R17] also attributed their career challenges in finding a job, to the Saudi norm 'Wasta' (nepotism and 'old school tie'):

> *I thought after getting a degree from a top-ranked Australian university, I would easily get an academic job, but I'm still unemployed. I think we still rely on Wasta, our social connections, nor our qualifications, which is very disappointing [R13].*

Freedom of movement challenges

All interviewees mentioned their limited freedom as the greatest re-adjustment challenge they faced after their return to Saudi. Issues such as limited public transport and the need to be accompanied by a male guardian when they wanted to go out or look for a job were also cited as major factors that affected SFIS' readjustment and information-seeking experiences. All returned women seemed to share a new appreciation for the freedom they experienced abroad:

> *I lived seven years abroad where I enjoyed the freedom of movement and could go anywhere without having to ask someone to accompany me or give me a ride. I found it very challenging to return to this significantly restricted environment [R9].*

> *Even though my husband let me to use public transport and even taxis in Australia, here [in Saudi] when it comes to using taxis or private drivers he is totally against it. It's his family background— he belongs to a very conservative family and letting me travel like this is seen as*

bad behaviour [R13].

However, participants from Hijaz and Najd also reported enthusiasm over the recent transportation applications, although they still need permission:

> *Though I still feel my movements limited compared to in Australia, I am so impressed with the recent transport options such as Uber and Careem we have here. At least they are much better than taxis, which my husband doesn't like me to ride in [R11].*

Academic and research challenges

PhD graduates reported a number of academic research challenges resulting from different research cultures:

> *I missed the Australian collaborative and safe research environment where researchers can share their project ideas without the fear that they may steal them. In Saudi after I returned I submitted proposals to my colleagues and instead of encouraging me to work they started to put up barriers such as the need to get supervisors…I think the scientific research policies in Saudi kill research talent instead of enhancing it [R16].*

A PhD graduate with a medical background identified the limited advanced research facilities, such as labs, as greatly impacting her research-related ISB:

> *To be able to continue my scientific research I need advanced medicine labs, chemical materials and technologies which isn't the case here…Comparing Australian research labs with our existing Saudi labs [is so frustrating] especially since I work for one of the developing universities…I have to rely on my international and research connections on ResearchGate and university supervisors to help me continue with my research interests [R11].*

PhD graduates also spoke of how they began collaborating with one another, regardless of age, gender or background, to initiate Twitter and Facebook pages to discuss, share and exchange their research challenges and make their voices heard by decision makers:

> *Recently we were lucky with the explosion of social media such as Twitter whereas as future researchers we can gather for the first time, regardless our age, gender or location to share and discuss using [the hashtag] #what_scientific_research_in_Saudi_needs [R22].*

ii) Digital-based post-study ISB challenges

Despite the digital advancements currently in place in Saudi Arabia, all participants reported multiple digital challenges that negatively impacted their post-Australia's ISB.

The following subsections highlight four digital ISB challenges that impacted returned SFIS' readjustment as following.

Limited credible and up-to-date Arabic online sources

Most returned SFIS appreciated the digital advancements they noticed in Saudi society upon their return, but the majority (% 90) described most of the available Arabic information on these websites and accounts as unavailable, outdated, or expensive:

> *Despite the digital improvements in Saudi, still there are some well-known organisations and institutions that don't have Arabic websites and social media accounts and I therefore have to resort to old-fashioned seeking means such as phone calls and direct face-to-face communication [R1].*

> *Unlike in Australia, in Saudi most online information sources and websites including official websites such as universities were outdated [R2].*

Participants also talked about the stricter online accessibility in Saudi. For instance, four participants [R2, R7, R8 & R13] complained about blocked sites that required membership fees. An interior designer graduate described how most of the English sources in her field were free to access compared to the Arabic sources:

> *After I returned I was so keen to practice my field which requires accessibility to a number of online sources and tools and I was shocked about the charges they asked to get access to these sources where some of them I used for were free in Australia [R8]*

Ten participants also raised the issue of censorship of their Saudi telecom company, which blocks a number of video and call applications, such as Line and Tango. According to one:

> *I lived in Australia for more than 7 years and whenever a new free online call application appeared I immediately installed it to keep in touch with my family in Saudi. Now I'm so upset about the way our Saudi telecom companies treat their customers by blocking most of their free online call applications, forcing us to pay for normal calls [R10].*

To overcome the above digital challenge, returned SFIS reported their increased access to free academic English sources, such as Google Scholar. R21 commented:

> *I teach special education, a subject which is taught in Arabic and with our limited academic Arabic databases, most of the available Arabic articles on special education are also outdated/ I tend to rely*

and access the English articles I studied in Australia, refer to Google scholar and sometimes I even send emails to my lecturer in Australia to send me some of the articles I don't have access to. She was so supportive and responsive to my emails [R21].

However, many of their difficulties could have been prevented if they had known that Australian universities provide services to returned international students, such as access to e-libraries. In fact, twenty-three SFIS were unaware of this:

I use English articles, but I don't have access to my Australian university any more so I have to use the articles and materials I'd saved from my Master's degree and translate them into Arabic, which is very hard and time consuming [R5].

Unfortunately, I wasn't able to access my Australian university database as my free access ended with the end of my study at the university. I wish I'd uploaded articles so I could use them now my access is denied [R22].

Five SFIS graduates with Masters degrees who reported plans to pursue PhDs, identified their limited access to international journals and databases as particularly challenging, especially since these limited their abilities to write their PhD proposals, causing them to ask for help from friends or siblings currently studying overseas to upload articles they needed using their authorised access:

To overcome the difficulty of finding sources and references for my PhD proposal due to my inability to access my Australian university e-library and database following completion of my study, I asked my sister to give me her access because she was still a student at that time [R7].

Only two participants [R1 and R22] reported having signed up for an annual membership that would allow them access to their university databases, e-libraries and other services such as email. One of these students reported:

As there is a very limited number of Arabic books and publications, I access my Australian university e-library to get information. My university alumni association provides with me with discounted library services including access to a growing range of research journal databases [R1].

Inefficient use of digital communication tools

Another digital ISB challenge cited by twenty SFIS was the inefficiency, low quality and lack of digital communication tools such as emails. This led them to rely on traditional means of communication such as phone calls or in-person visits. In fact,

participants expressed disappointment at the inefficient use of online technologies, such as email, even on the part of official and government institutions, as reflected in these comments:

> *Unlike in Australia…unfortunately in Saudi, emails are still inefficiently used by Saudi universities and the only way to send your queries still either by personal visits to the place (e.g. university) or by calling over the phone [R15].*

> *When I was looking for a job I sent an email to over 50 public and private institutions…but I am shocked that still at this moment, I haven't received any responses [R1].*

Three participants [R9, R10 & R16] also described the difference between using Google maps in Saudi and in Australia. As one interviewee put it:

> *Unlike in Australia where Google Map is the best application to get your direction to any place, in Saudi you will find the location is either outdated or not even listed in the website [R10].*

Poor internet speed and quality

Six participants also attributed their decreased online ISB and greater reliance on traditional information-seeking tools to the quality and slower internet speed in Saudi, as one described:

> *I find our internet speed still lags behind the Australian internet speed and quality…Trying to upload some documents…I ended up visiting the place and handing them in personally [R13].*

Four participants [R8, R9, R12 and R13] also stated that limited smartphone data plans affected their online information-seeking preferences as one commented:

> *When I came back I found it very difficult to use my social media because of data availability. Internet phone plans in Saudi Arabia are awful and very expensive…Some plans in Australia even give you free access to social media [R8].*

Limited advanced research labs

Four PhD graduates [R6, R11, R16 and R22] also identified the **lack of advanced technologies, specifically medical and design technologies**, in their work labs as negatively impacting their research productivity, prompting them to seek help internationally. One cancer researcher described how she tried to overcome the IT resource shortage in her Saudi university to be able to fulfil her research information needs:

Due to the lack of advanced laboratory technologies and to be able to work on research projects I tried either to find a collaborative researcher in a technological advanced country to work with me so I work with the limited facilities available to me and he/she worked on the part that need advanced technologies. In some research projects I even travelled overseas for two months to work outside with researchers. This is why I advise PhD students to build good relationship with international researchers so they can collaboratively work together [R22].

6.4 Study 2: Discussion

This section discusses the findings of Study 2, with respect to the research sub-question 2: What post-study ISB challenges and changes do Saudi female graduates face when moving from Australia back to Saudi Arabia? This research sub-question aimed to explore how SFIS sought information before and after their return to Saudi, how their educational experience in Australia influenced their ISB, and what ISB challenges and changes they faced transitioning back to Saudi cultural and digital environments. Findings obtained from Study 2 have been extremely useful and beneficial in this respect. The following subsections are structured with respect to Study 2's respective research sub-question:

6.4.1 Pre-departure information needs and sources

Findings of Study 2 reveal that SFIS' pre-departure information needs confirm the researcher's assumption about the impact of future intention, which is in line with Sin's (2015) and Sin and Kim's (2013) findings. It was more important for returning graduates to look for non-academic information (such as schools for their children and careers for themselves) than academic information. However, seeking information using Saudi sources was challenging and frustrating. The graduates attributed some of their pre-departure difficulties to Saudi online technology, which they described as inefficient, out-dated, and unreliable (Sin, 2015). These deficiencies were to be blamed for many other challenges they were to face upon their return. Other pre-departure difficulties could have been avoided if graduates had been aware of the many services Australian universities provide for returning international students.

The second interesting finding was related to SFIS' pre-departure and post-study information sources. Findings of this study confirm the finding of previous researchers in which the longer an international student stay in the host country the more digital journey the experience by using the host country sources (Chen, 2010; Chang &

Gomes, 2017a). For instance, graduated SFIS who had lived in Australia for longer reported an expansion of their digital sources. In fact, SFIS, now even after their return back to Saudi, relied on multiple offline and online Saudi and international sources (especially Australian, confirming Chang & Gomes, 2017a; Chen, 2010).

The research also found that this digital journey was mainly attributed to the English improvements students experience and the positive experience of using English sources that motivate students even to access these sources even for their home country based inquiries such as writing an Arabic CV as reported by R1. The impact of linguistic and previous experience was also confirmed in literature by Hughes, 2012. Participants also attributed their preference to international sources to the great number, accessibility, variety of the sources, and the reliability and currency of the information, compared to Arabic sources and information. They did not use social media as a primary source of information (confirming Mastromatteo, 2011; Zhang, 2012), except for Twitter and ResearchGate. The existence of 'followers' in social media, whose background, education, and identity are unknown, convinced the participants not to trust these information sources for professional, sensitive or personal needs such as religious or health enquiries or sharing personal news and photos. SFIS only used them for general needs, such as news, places to visit, entertainment, fashion, cooking recipes, and so on. This finding is also consistent with (Gross & Acquisti, 2005) who found that users' primary social media audience affect their tendency to share sensitive information.

6.4.2   Post-study cultural re-adjustment

It can be deduced from Study 2' s findings that SFIS face changes in their cultural perspectives, access to technology and information etc. when they move back to Saudi Arabian's cultural and digital environment. Due to these observed changes in their behaviour SFIS also face certain challenges as explained in the next sections.

Consistent with Albeity (2014), all the participants confirmed that they found it challenging to adjust back to the Saudi culture. Limitations on their ISB resulting from their restricted freedom of movement created a challenge. Other examples of cultural norms they found challenging their ISB were the absence of ubiquitous public transport systems they enjoyed in Australia (Shepherd & Rane, 2012), and the presence of conservative family relations, especially in-laws. Many found that husbands had accepted their use of public transport and taxis in Australia, but once back in Saudi

Arabia pressure from their husband's relatives created problems (Albeity, 2014). For instance, over their years in Australia, SFIS had learnt to feel relaxed about talking to, seeking information from, and even arguing with males unfamiliar to them. This behaviour is not acceptable culturally in Saudi Arabia (Hall, 2013).

Findings of Study 2 showed that despite the recent availability of alternative transportation companies such as Uber in Saudi Arabia (Nagy, 2015), fulfilling external needs including career needs was still an issue mainly raised by participants from conservative families and areas. These women were prevented from taking advantage of the recent private transportation options, such as Uber.

Their return to the Saudi social norms, especially the busy social life (Binsahl & Chang, 2012) and gender-segregation, affected many SFIS' careers, presenting an ISB challenge. Other social customs cited by unemployed returned SFIS, such as 'Wasta' (using social or family influence to obtain a good position, also called nepotism) and Saudi society's views about appropriate jobs for women, also challenged in their careers ISB (Albeity, 2014). Many found that the communication and ISB skills they had acquired during their stay in Australia were not adequately valued in Saudi Arabia, mainly for cultural reasons, and they had difficulty pursuing professional careers, as found by Robertson et al., (2011).

6.4.3   Post-study digital ISB challenges

Apart from the cultural challenges, returned SFIS also faced issues with respect to their different post-study digital experiences in Saudi Arabia. Although they admitted improvement over the past few years, Saudi digital environment still lags behind that of Australia, which creates difficulties in SFIS' ISB once back in their home country.

All participants in Study 2 who lived in Australia for at least 3 years reported a change and improvement in their digital search skills and the development of new academic search skills and ISB strategies (Clerehan et al., 2011; Gu et al., 2010). SFIS have become confident about managing their own independent ISB, carrying out online searches using Australia's advanced digital tools and sources, including using advanced search skills to check the trustworthiness of information themselves.

However, applying their newly acquired search skills to Arabic sources is extremely challenging for SFIS, due to their limitations compared to English. Hence, participants in this study reported changes in their search strategy and preferences once they moved

back to Saudi, which was a key issue for them because they were used to carrying out online searches using advanced digital tools (e.g. emails) and sources (e.g. e-databases) in Australia, but had to move to offline searches again when they moved back to Saudi. In addition, inefficient use of online communication tools and restricted accessibility to tools such as e-libraries have also become major challenges. While in Australia, participants did not face problems accessing online sources, back in Saudi now they have found that a large number of websites and phone applications are restricted and blocked.

PhD researchers have also identified a number of ISB challenges resulting from the lack of advanced scientific research technologies, tools and online resources and the inefficient scientific research culture in Saudi Arabia. In addition, returned students from small cities in Saudi Arabia, as well as having to manage these digital limitations, they also had to manage the challenge of poor internet connection in remote areas.

Chapter Summary

This chapter highlighted and discussed the findings of Study 2, which focused on exploring the post-study ISB of graduate SFIS who had been back in Saudi Arabia for at least a month. The data revealed that SFIS' longer transition experience in Australia leads to a number of cultural and digital ISB opportunities: enhanced digital ISB and research skills, intellectual growth, increased confidence interacting with males, and independence. This maturity however, creates its own readjustment challenges. Returnees to Saudi find that Saudis still lag behind other societies in using professional online communication technologies especially email; trustworthy Arabic sources are few; and interaction with male colleagues is still more limited due to Saudi's gender-segregated culture and norms.

Chapter 7 that follows first presents a detailed reflection and discussion of the empirical findings by answering the main research question, then discusses and further explores the proposed conceptual model for this study. It also provides the conclusions of this research.

Chapter 7
Discussion and Conclusion

International students are characterised by their diversity, in terms of their cultural and linguistic backgrounds, their previous professional and educational experiences, their interactions with online resources, and their thoughts and feelings about using them (Hughes, 2013, p. 142).

Introduction

The aim of this research was to explore and understand the ISB challenges and changes faced by transient migrants particularly from conservative cultures as they move to relatively liberal cultures such as Saudi female international students (SFIS). The researcher's own experience gave her (and continues to give her) some insights into the early stages of the journey, first as transient migrants prepare to leave home, and then as they learn and gain new information-seeking skills and more confidence. Reading the literature on international students' ISB gave her more knowledge, especially during the middle part of the journey, while students are still in the host country. The studies forming part of this research were designed to consolidate the whole journey.

This chapter presents the results from reflecting on and interpreting the findings according to the main research question (Section 7.1). Section 7.2 then discusses the suitability of the DTPB as a theory and distils the essential factors to explain transient migrants' ISB at all stages. In addition, a new model that explains the ISB of transient migrants (SFIS) is proposed in Section 7.2.3. Section 7.3 gives implications of the research and suggests recommendations that can facilitate transient migrants' transitions from one cultural and digital environment to another, and back again. Section 7.4 discusses the contributions made by this research to theory and practices. The remainder of the chapter highlights the limitation of this research, and areas for future research.

7.1   Answering the main research question

The main research question on which this study is based is:

>   **MQ:** How does the Information Seeking Behaviour (ISB) of Saudi Female

International Students (SFIS), change when transitioning to and from their host countries of study?

Using Saudi female international students as a case study, this research question aimed to explore the impact of the transition experience between different environments on transient migrants' ISB. Findings of this research suggest that transient migrants actually undertake two ISB journeys: a cultural ISB journey, and a digital ISB journey. The following paragraphs discuss these two journeys and their impact on ISB as experienced by the selected transient migrant group, in this study SFIS.

7.1.1 Transient migrants' cultural ISB journey

This study's findings confirm previous studies findings on the impact of transient migrants' cultural background (e.g. Hambrecht, 2006; Kim, 2013; Komlodi & Carline, 2004; Liao et al., 2007; Liu & Redfern; 1997; Mu, 2007; Song, 2005; Wang, 2006; Yi, 2007) and digital backgrounds (Chang & Gomes, 2017a,b; Hughes, 2013) on their ISB, including information needs. .

For transient migrants from Saudi Arabia, both Islam and the Saudi conservative culture strongly impact their cross-cultural transition experience (e.g. Alhazmi & Nyland, 2011, 2013; Al-Qahtani, 2015; Alqefari, 2015; Sandekian et al., 2015; Shepherd & Rane, 2012) and their ISB throughout their transition experience. Cultural ISB findings identified three cultural norms that impacted their ISB journey: gender segregation, male guardianship, and teaching and learning practices. The forms these norms take on are unique to the Saudi culture, but as all societies have norms, it is highly likely that these cultural norms contributing to ISB challenges will be faced by any transient migrant when his/her cultural norms differ from those of a host culture.

- **Gender segregation**

Findings indicate that participants experience many cultural and personal changes resulting from their exposure to the Australian mixed-gender environment—and the longer the exposure, the greater and more varied the changes. The most significant cultural change is the evolution of SFIS' more relaxed attitude towards seeking help from Saudi males (Alhazmi & Nyland, 2011, 2013; Lefdahl-Davis & Perrone-McGovern, 2015). Yet even though an attitudinal change is apparent, the Saudi women can only approach males for information under the conditions that:

- they are unable to find answers from Google or female friends,

- they are sure that the males have answers to their questions,

- the exchange takes place in an official setting (university, bank, etc.), and

- the interaction does not transgress Saudi norms (that is, being over-familiar).

By discovering these conditions, this research adds new knowledge to previous studies examining the influence of gender-segregation on SFIS' transition experience (e.g. Alhazmi & Nyland, 2011, 2013; Alqefari, 2015; Sandekian et al., 2015).

Another interesting finding related to Australia's gender-mixed environment confirms previous studies (e.g. Alruwaili, 2017; Al-Saggaf, 2011) indicating that SFIS seek information not only from women but also from males including Saudi males. This is because Saudi males on social media (such as Saudi Club accounts or Twitter) are felt to be more responsive and knowledgeable than females, particularly for information related to rental accommodation or requirements for scholarships. In addition, SFIS feel comfortable communicating with Saudi males on Twitter owing to the anonymity of their preferred social media and the absence of face-to-face contact.

Forced to be in a mixed environment, SFIS reported increased self-confidence towards seeking offline help from males including Saudis. When SFIS return to their home country after years of exposure to a radically different cultural environment, they face readjustment challenges while engaging with their return culture shock. Their increased confidence in interacting with males is not welcomed by their families (even by husbands who accompanied the SFIS on their transition abroad).

This cultural-based ISB journey of SFIS suggests that due to their cultural norms and interactions, transient migrants become used to getting their information from particular sources, especially as they know whom they can approach in their home country. When transient migrants move across countries, those sources are likely to change and the norms (e.g. segregation) may no longer apply. During the period of adjustment in the host country, a transient migrant could face the challenge of finding an appropriate replacement to interact with, which has to be reversed when the migrant returns home.

- **Male guardianship**

Findings confirm that the influence of male guardianship is another culture-based ISB challenge, especially during SFIS' early transition to Australia and their readjustment experiences back in Saudi. The majority, in particular married SFIS, affirm that their move from male dependency to self-dependency was difficult. In Saudi Arabia, they

are dependent on husbands or other male guardians to fulfil most of their information seeking needs. At the start of their digital journey, they are often inexperienced as they begin seeking out relevant information, including form filling, signing applications, applying for scholarships (not just for themselves, but also for their husbands), and dealing with money matters (now not in their husbands' bank accounts but in their own). Suddenly, children and mahrams are dependent upon them—even SFIS' visas declare the dependency of their husbands. Lacking fluent English exacerbates the challenges.

Over time, as part of their cultural transition journey, SFIS come to admire the changes in their personalities and capabilities resulting from self-management and freedom of movement without male guardians (Alhazmi & Nyland, 2011, 2013; Lefdahl-Davis & Perrone-McGovern, 2015; Shepherd & Rane, 2012). Findings strongly indicate their acquired ability to manage their ISB independently. Moreover, as Gu et al. (2010) note, SFIS become more accepting of people who have different beliefs and values.

Later on in their journey, these changes create their own post-study challenges when they move back to the Saudi male-controlled culture and face the challenges of limited freedom of movement, career choice and opportunities, and access to information.

Although these findings focus on SFIS, transient migrants from any collectivist culture could face these ISB challenges when they move to an individualist culture, where adults are responsible for their own actions, especially if the transient migrants are reliant on others and lack fluency in the language of the host country. The lesson here is about dependency and why it should be considered seriously when trying to understand transient migrants' ISB. This situation is analogous to the period of adjustment between childhood and adulthood: children, used to getting information from adults, go through ISB changes as they become older and have to acquire new skills to get information on their own.

- **Teaching and learning practices**

International students often attribute their general academic ISB challenges to the impact of their previous educational systems (see e.g., Alhazmi & Nyland; 2011; Al Murshidi, 2014; Andrade, 2006; Gu et al., 2010; Mehra & Bilal, 2007; Razek & Coyner, 2013; Sawir, 2005). In this research, as in Razek and Coyne (2013), findings indicate that SFIS are openly critical about their prior Saudi educational experience.

Regardless of age, length of stay in Australia, discipline, or technological skills, SFIS' journeys to Australia's academic norms are more challenging than journeys to Australia's cultural and social norms. This contradicts Alhazmi and Nyland (2010) who argue that the mixed-gender environment is the most challenging transition for SFIS, but confirms Gu et al.'s findings (2010, p.10) indicating that the challenges of adapting to a different academic culture appear to be more acute than adapting to a different cultural and social environment.

Coming from a traditional text-based and memorisation pedagogic system that lacks academic research teaching and accompanying technologies, findings indicate that SFIS find the early part of their journey difficult. Studying in the Australian system, with its emphasis on rigorous research, challenges SFIS academic ISB and their capacity to fit into the Australian research environment. Adding to this challenge is SFIS' lack of familiarity with academic research vocabulary: the majority report that they had never heard terms such as 'critical literature review', 'references', or 'plagiarism' before.

Over time, SFIS acquire a range of advanced academic search skills and knowledge. However, despite their new-found confidence and self-efficacy, SFIS do not forget their (often harrowing and extremely distressing) early experiences. Indeed, some students find they cannot overcome the hurdles, and abandon their studies. For this reason, it is crucial to continue the work of Leask and Younie (2001) and Jones (2011) who argue that academic staff should undertake professional development programs based on the internationalisation of the curriculum to increase their awareness of the teaching and learning backgrounds of their students. Jones (2011) suggests that the internationalisation of the curriculum should include informal programs (such as international volunteering), which would also enhance the multicultural and learning experiences of both students and staff.

On their return home, graduate SFIS found the Saudi research environment still lags behind advanced academic societies in several ways. Even though schools and universities are beginning to pay some attention to research, the teaching of rigorous and ethical research methods and practices need to be improved. This may difficult as science labs have limited equipment and there are few libraries.

7.1.2 Transient migrants' digital ISB journey

The second unique ISB journey transient migrants undertake relates to their digital experience. This finding strongly suggests that despite cultural and social challenges, transient migrants regardless of age and digital skills encounter digital journeys that impact their ISB. This finding extends previous studies on the impact of transition on transient migrants' adjustment (Alhazmi & Nyland 2011; Gomes et al., 2014b; Komito 2011; Neri & Ville, 2008). It also extends Chang and Gomes's article *Digital Journeys* (2017) by identifying *two* digital journeys that a transient migrant makes, each with its own challenges: the ELIS digital journey and the academic-related (or job-related) digital journey as described in the next two sections.

- **ELIS- related digital journey**

A returned SFIS (R1) has drawn up a timeline to illustrate her ELIS-related digital journey (Table 7.1).

Table 7-1: A graduate SFIS' (R1) ELIS-related digital journey

Before arrival to host country	During stay in host country	After returning to home country
I got my scholarship in 2008, before the recent digital explosion in Saudi, so I fulfilled ELIS needs traditionally. I had to go to the bank. there was no application for this.	I mainly used different Arabic and Australian websites and smartphone apps (banking, TripAdvisor, Instagram). I also preferred using eBay for my shopping. Gumtree also helped me a lot to find teachers.	Unfortunately, as we don't have advanced and trusted digital environment as in Australia, most of my shopping has become traditional again. I tried Instagram, but it was not a successful experience. I have become a very detail-oriented person, so now I try to use my Australian advanced online strategies to check feedback and reviews before buying. But here it's very hard to find online feedback so this is why I rely on offline methods by asking my sisters and friends for advice.

In their ISB journey, findings highlight a number of challenges experienced by SFIS when moving from Saudi Arabia's offline-based (or limited online-based) everyday experience to Australia's advanced digital-based everyday experience, whereby many Australian businesses have their own websites and accompanying smartphone applications. Although most SFIS used digital information sources at some point (especially Google and social media), they were unused to the ubiquitous use of online sources for all ELIS information needs in Australia, such as searching for

accommodation, ordering a take-away, and banking. Adding to these challenges, most participants felt that Australians falsely believed that SFIS were familiar with online technologies such as email.

Years later, on their return to Saudi Arabia, having become established digital seekers for all their everyday information needs, they have to revert to traditional ISB again. They find themselves having to use the phone and personally visit shops, banks and offices. Visiting can be difficult as some of them are not allowed to go out without a mahram or the pertinent permission of a mahram. These challenges are so frustrating that they have prompted several returned SFIS with Masters degrees to try to go back to Australia in pursuit of higher degrees.

- **Academic-related digital journey**

The hardest digital journey consists of two academic-related transitions, the first away from the Saudi digital education culture, and the second returning to it. The first transition—from Saudi Arabia with its lack of digital academic research, sources and practice to Australia, with its emphasis on digital academic research and rigorous, ethical scientific methods—creates more adjustment challenges than the ELIS digital journey.

Findings confirm that the first stage of SFIS educational journey is full of obstacles, especially as many university lecturers use online applications to set assignments and share content online with students. When SFIS first arrived to study in Australia, they found that lecturers and tutors expected solid online information searching skills and acquaintance with current educational technologies, as well as accounts for popular social media sites, especially Facebook where some teachers post information for students. Yet even though Facebook is widely used throughout the world, many Saudis find its use challenging. This research shows that most participants, regardless of their age or length of stay in Australia, do not use Facebook—they do not like it, trust it, or use it, as it is too open—so incoming students were unable to access some educational information posted on Facebook by their lecturers.

However, over time, SFIS travel along their academic digital journey with increased self-efficacy and digital competencies. Longer exposure to the Australian teaching, learning and researching culture changes, enhances, broadens their digital search skills and ISB strategies and increased use of technologies such as e-libraries and emails

(Clerehan et al., 2011; Gu et al., 2010). Hence, the second transition comes as a digital shock to returned SFIS. Two returned SFIS (R1 and R21) have drawn up a timeline to illustrate their academic-related digital journey (Table 7.2).

Table 7-2: Two graduate SFIS relate their academic-related digital journeys

Before arrival to host country	During stay in host country	After returning to home country
(R1) I only used printed materials like course booklets and books. I also used Google but without checking the credibility of information—Google and Arabic forums were the best sources—without having ethical consideration regarding plagiarism.	I became a digital researcher and before using any information I made sure of its accuracy and reliability. I didn't refer to any article till I knew the author and the journal's reputation. I accessed university e-libraries, and emailed questions to my lecturers.	As we don't have developed academic libraries or digital sources, if I've got academic inquiries I search for it in English or go to a bookshop to see if there are Arabic books. I'm very frustrated about the ineffective use of emails, forcing me to go places to find answers to a query.
(R21) My information source was very traditional, such as asking a friend or a relative, calling on the phone, my husband, my brother, If I wanted to go shopping I would go to the market with my husband.	Completely independent and mostly online, I used eBay, libraries, websites; I used the internet more often.	Mix between both, but more traditional because of our society, and also because digital technology such as efficient online applications are very limited.

Despite recent advances in Saudi digital technology during their absence, findings confirm that returned SFIS find that these technologies are not effectively used by government officials and others. So in addition to the cultural challenges, returned SFIS report multiple digital challenges: online sources are sometimes of poor quality, not fully credible or up-to-date, and sometimes difficult to access, slow, and expensive. In particular, email (which the participants eventually discovered to be the safest, easiest, quickest and most convenient communication medium) was underused, and many graduates report that officials are more responsive to requests posted on social media accounts such as Twitter. Young and Quan-Haase's (2009) participants similarly used social media as a replacement for email to get quicker responses. Findings confirm that graduate SFIS had to change their search strategies and preferences once they moved back to Saudi, which was a key issue because SFIS were used to carrying out online searches in Australia, but had to move to offline searches when they moved back to Saudi. The returned Saudi graduates are not alone in this predicament, as recent studies

attest this finding (see Edmunds, 2007; Starks & Nicholas, 2017; Robertson et al., 2011).

7.2   Revisiting the DTPB

7.2.1   Matching constructs and factors[27]

Following the gaps identified in the ISB literature and models (Section 3.7.5) the researcher searched for a suitable IS theory to use as a base for this research, eventually selecting Taylor and Todd's (1995) Decomposed Theory of Planned Behaviour (DTPB: Section 3.8.2) that explains intentional and unintentional actions and decision-making associated with users' behaviour (see Figure **7**.1).
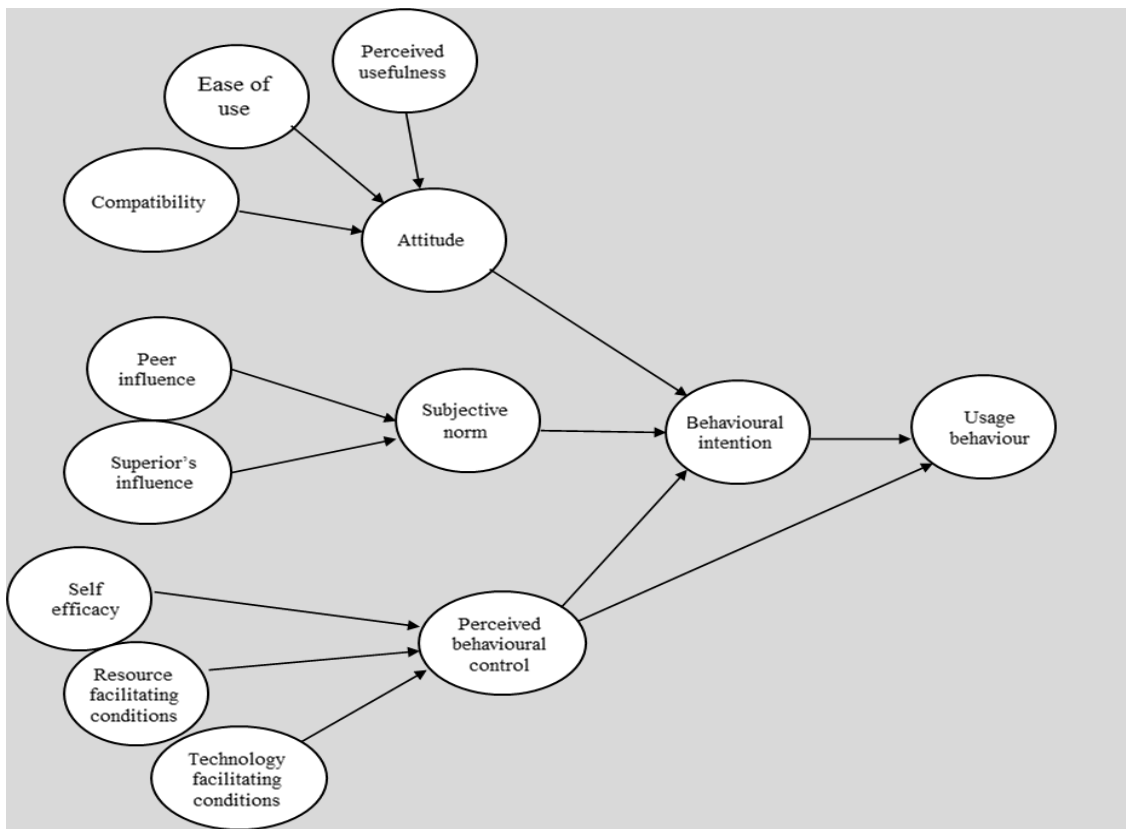
Figure 7.1: Decomposed Theory of Planned Behaviour (DTPB) copied from Ch. 3

(Taylor & Todd, 1995a)

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[27] In this thesis the terms 'construct' and 'factor' can have the same reference, but are distinguished by their context of use. A construct is a mental abstraction, one of the elements of a theory. The element is termed a factor when it is used as a variable or a constant in an empirical study (repeated from Chapter 3, footnote 18)

The research findings confirm the basic framework and intentional constructs of DTPB. SFIS' ISB journeys are greatly affected by their attitude towards information sources (usefulness, ease of use, and compatibility), subjective norms (peer influence and superiors' influence), and behavioural control (self-efficacy, resource facilitation, and technology facilitation). Table 7-3 below gives typical responses to exemplify key DTPB factors.

Table 7-3: DTPB constructs confirmed by SFIS' responses

Factor	Frequency (n=50)	Study 1 evidence	Study 2 evidence
Ease of Use	45	I never use Facebook for information as I don't like it. It's the most difficult site to use compared with YouTube and Instagram [P6].	For any inquiry, I immediately check Google—it's the easiest way to get your answer in any format you want and in any language [R1].
Usefulness	50	Watching YouTube videos is much more valuable and useful than attending classes in ELICOS [P1].	In Saudi Twitter is the most useful online tool to get quick responses from Saudi decision-makers, rather than email [R15]
Compatibility	40	Looking for any information related to my religion such as finding a halal restaurant I ask my Saudi friends who have the same cultural, language and religious beliefs [P5].	We come from a culture where we don't like to read…[for information] I would rather watch YouTube, send short Twitter or WhatsApp message, or call over the phone [R17].
Peer Influence	50	What made me hate [Facebook] more is that most of my friends don't use it or like it [P8].	I've got Australian and Arab friends and Facebook is the best way to keep in touch [R7].
Superior Influence	35	I only had a Facebook account because my teacher used it for class information like assignment details [P6]. Because of our SACM's recent restrictions on applying through an agent, I was forced to visit the Student Centre [P15].	The old scientific research policies [in Saudi universities] need to be changed as instead of encouraging us to enhance and increase our research and publications, they kill them [R11].
Self-efficacy	50	For all my ELIS I refer to Google or Saudi sources they fit my poor online skills [P13].	I used to rely on [relatives and friends]. Having to search for information helped me learn how to use online sources [R1].
Resource Constraints	45	It took me ages to get permanent accommodation…I didn't have the time to arrange inspections [due to my ELICOS timetable][P6].	I couldn't complete an important project because couldn't get funding, which is so frustrating [R16].

IT Constraints	30	When I came to Australia I didn't know how to connect internet to my phone and at that time I didn't have a laptop. So I spent a lot of money using the hotel wi-fi and PC, which weren't free [P22].	[Back in Saudi Arabia] I was so frustrated…I wanted to participate in a big project with researchers from high-ranking universities and I couldn't finish my part because of the limited lab technologies in my university [R22].

7.2.2 Potential factors

As shown in Table 7-3, the intentional factors in the original DTPB were successfully applied to SFIS. However, these factors only explain international students' cross-sectional ISB at one particular point in time. Hence, these factors only partially answer *why* international students choose to seek their information from specific information sources. International students' transitory migration, especially the unique situation of Saudi females, needs further explanation. Findings from Chapter 5 and Chapter 6 strongly suggest additional factors that trigger ISB journeys: ISB can differ depending on culture, social networks, information type, IT skills, language proficiency, prior experience, and demographic factors. Due to the absence of these factors from DTPB, five additional factors and propositions (P1-P5) were proposed in Chapter 3, to explore the phenomenon under investigation, namely transient migrants' ISB (see Figure 7.2).
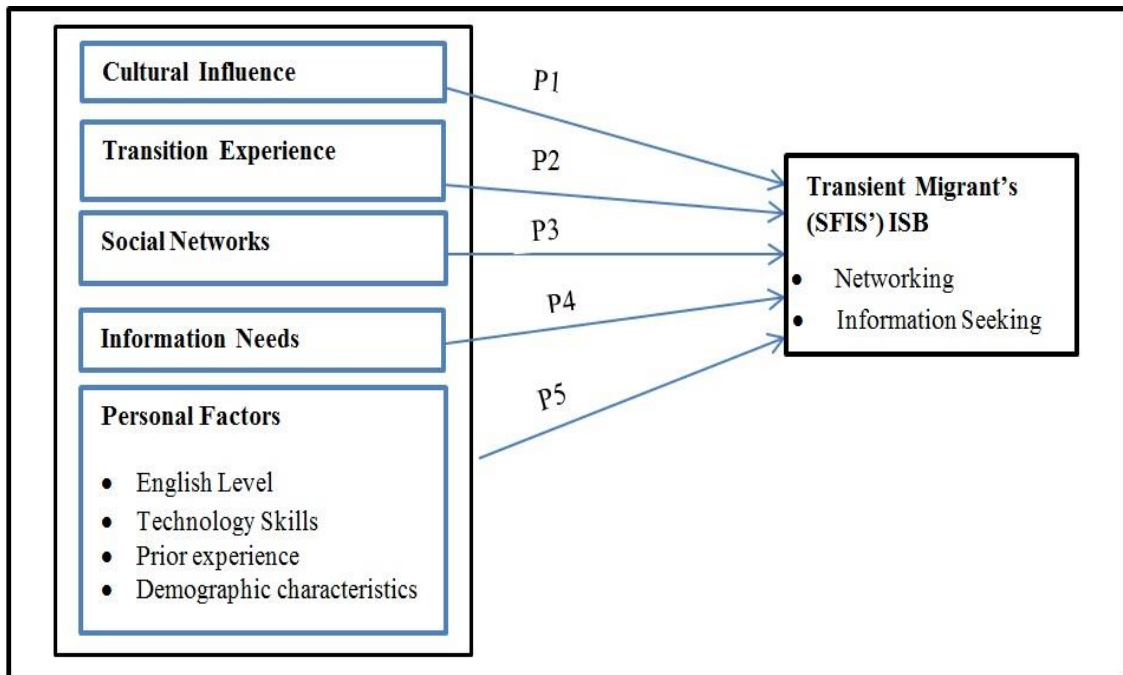
Figure 7.2 : Summary of potential factors that could impact transient migrants' ISB

Propositions P1-P5 above are strongly are strongly supported by this research, hence potentially extending our understanding of the DTPB in the context of transient migrants.

7.2.3 Proposed extension of DTPB model in the context of transient migrants' ISB

Using the original DTPB as a basis, this research proposes an extended model that includes several additional constructs that impact the ISB journey of transient migrants (see Figure 7.3 followed by explanations).
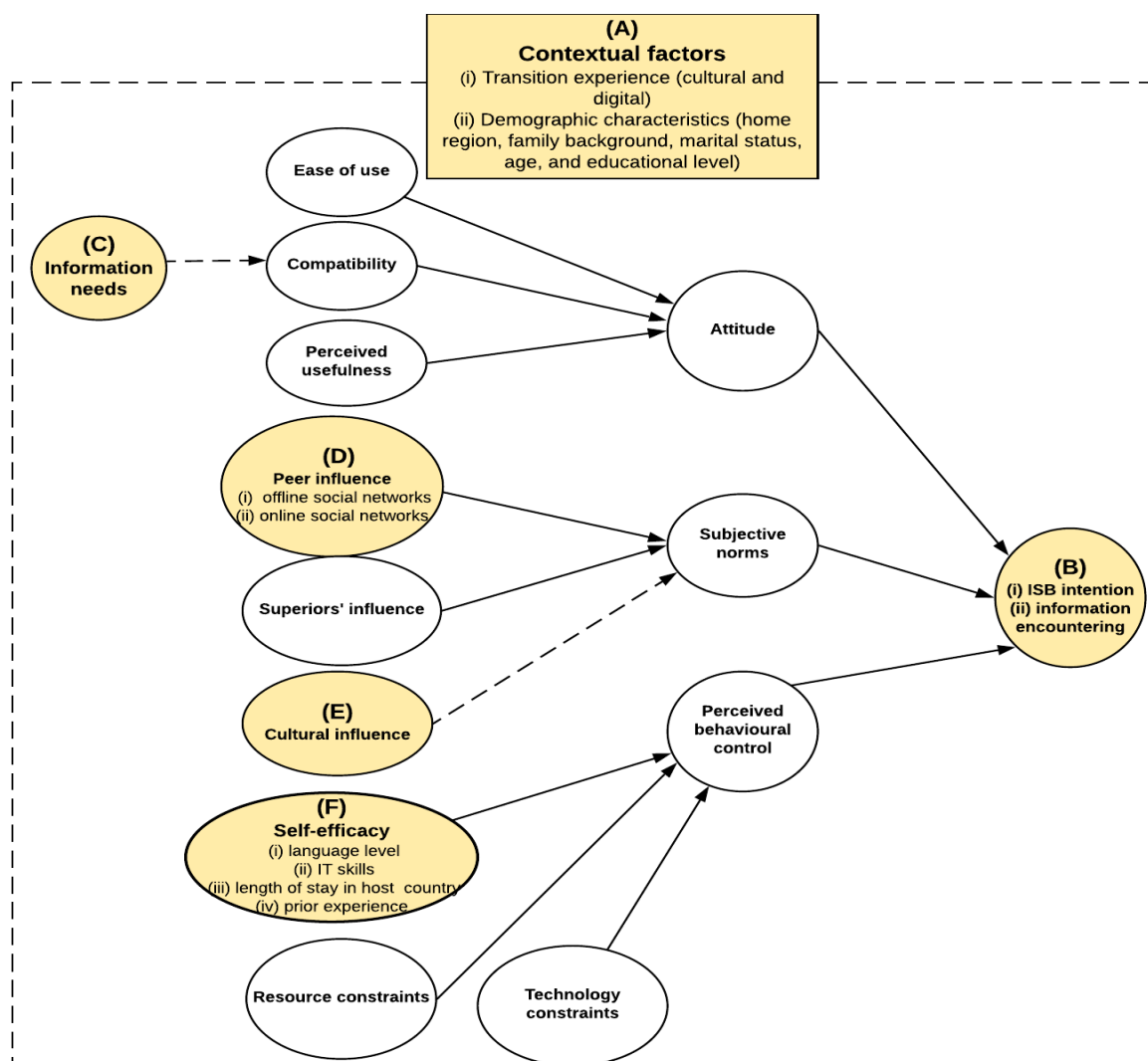
Figure 7.3: Proposed extension of DTPB in the context of transient migrants' ISB

Note: Yellow icons (A) to (F) represent additions to DTPB.

 (A) Contextual factors are *transition experience* and *demographics characteristics*, which exert a strong influence on all the factors (Figure 7.3) within the ISB journey; hence they govern all the factors in the dotted rectangle.

Transition experience is the primary contextual factor and refers to the process of moving back and forth between a transient migrant's home country (e.g. Saudi Arabia) and his/her host country (e.g. Australia). This thesis proposes that transient migrants undergo two unique transition experiences: *cultural (including educational culture)* and *digital.* For the SFIS in the case study, both transitions generated unique challenges. The cultural journey began with their transition from a teacher-centred teaching method to a self-learning educational system whereby they had to learn to think critically, write original essays, formulate logical arguments, and so on. The digital journey began with the realisation that their IT and computer knowledge was totally inadequate for academic life, and they had to learn how to use advanced online research resources and unfamiliar social media sites. Over time, these cultural and digital journeys positively impact SFIS' academic and ELIS ISB. Over time, these cultural, educational and digital journeys positively impact SFIS' ISB. The transition helps PhD graduates to expand their network to include researchers and followers from different backgrounds (Gomes et al., 2014) that takes them through a new online landscape (Shepherd & Rane, 2012) where they discover confidence, self-efficacy, and unthinkable IT skills and ISB. However, at the end of their journey back home in Saudi Arabia, SFIS often find these skills cannot be sustained or used, making readjustment difficult.

Demographics as the secondary contextual factor include features such as home region, family background, marital status, age, and educational level, which exert an influence on all the factors, although not as strong as the transition experience.

- *Home region.* Residents from different regions in Saudi Arabia display different regional differences (Al-Qahtani, 2015; Alqefari, 2015; Oshan, 2007), which impact ISB. SFIS from conservative and small Saudi Arabia regions, report more frustration and digital resource ISB challenges owing this to their home country region's prior digital and educational experience (Study 1), readjustment challenges and slow internet connectivity (Study 2) than SFIS from more liberal and larger regions. SFIS from conservative and small northern and southern regions described their regions as the last and slowest regions in the country

adopt and adapting to cultural and digital changes. They talked about limited digital exposure in their universities and schools and the late introduction of transportation services such as Uber.

- *Family background* and the family's level of cultural or religious conservativeness greatly impact transient migrants' ISB journeys. Findings suggests that in contrast to Alqefari (2015) and Oshan (2007), it will be inaccurte to single out home regions alone as contributors to the level of conservativeness that can affect SFIS' ISB. On the contrary, as some parts of Saudi Arabia are more or less conservative than others, Saudi regions are not homogeneous: every region has families with different levels of conservativeness. Some SFIS from Hijaz (the more liberal region) reported multiple cultural and digital challenges resulting from the fact that their families are conservative and religious. SFIS who described the background of their families, mahrams, and in-laws as conservative reported more ISB cultural and digital challenges (Study 1) and readjustment challenges (Study 2) than those from SFIS from less conservative families, whatever their home region. SFIS from conservative families exhibited much more hesitant ISB practices, such as interacting with Saudi males and publishing their pictures online than SFIS from more liberal family backgrounds, and on their return, they find it harder to overcome the challenges of limited movement that negatively impact their ISB, owing this to strong family pressures to conform to. Future research should consider SFIS' family background's level of conservativeness rather than home regions they belong to as most studies currently do (Al-Qahtani, 2015; Alqefari, 2015; Oshan, 2007).

Marital status impacts transient migrants' ISB journey. Regardless of their region, most married SFIS feel the impact of the cultural journey on their ISB more strongly than single SFIS. Married SFIS have essential ELIS information needs related to husbands and children. They exhibit more reliance on their mahrams and are more worried about talking to Saudi males or communicating in the presence of Saudi males. A married Hijazi said:

> *Even though I am part of a less conservative family—I grew up in an open family and mixed environment where I could sit and chat with second and third male cousins who were not my mahrams—but to be in a class with Saudi males…especially when I am not covering my face, I find that very difficult and challenging [P14].*

Some married SFIS, now back in Saudi, find the conformist views of their husbands and in-laws negatively influence their career ISB, and the many time-consuming social commitments of some Saudi wives warrant different social media uses.

- *Age* also impacts transient migrants' ISB journey in several ways. Older SFIS reported the highest challenges and changes in their ISB journey and preferred using traditional offline sources for searching information, attributing their preference to their lack of interest in using new technologies. Age also affected students' adjustment in a gender-mixed environment: older SFIS faced more challenges when communicating with males. Older graduates (who had not used digital sources before their transition to Australia years before) experienced and commented more on the radical changes to their digital ISB than younger graduates (who were more used to digital sources prior to coming to Australia).

- *Educational level* in line with Yi (2007), Alzougool et al. (2013a) and Whitmire (2003), this research found that, unlike undergraduates and Master's graduates, SFIS with PhDs were the only participants who reported scientific research challenges. Their transitions provided opportunities to explore more sources and wider social networks, but these were not always available in Saudi. PhD graduates regularly checked journal impact factors and citation strategies for their research sources, and actively posted information on ResearchGate to share their knowledge acquired from international experiences in Australia. Educational level also impacted SFIS' ISB searches, especially for recreational information such as entertainment or travel. Most Study 1 participants were ELICOS students, just starting their educational journey and their main concern was to achieve good English scores enabling them to complete their degrees. Graduate SFIS, on the other hand, who have finished their studies have time on their hands. So, entertainment information became one of their most accessed pre-departure information searches.

(B) *Information encountering,* or serendipity, has been added to ISB intention, since it is not uncommon for information seekers to encounter unintended information especially when accessing social media platforms intending to seek particular information. Although information acquired through serendipity was not within the scope of the research, most SFIS mentioned this potentially valuable aspect of their

digital experience, the 'aha!' moment of discovery that Makri et al (2011, p. 4) call a 'fleeting concept'. This research confirms Makri et al.'s (2015) argument that in the digital and social media information environment, serendipity is an integral part of information seekers' ISB. This implies an increased need to conduct more research on transient migrants' serendipitous ISB to add to the ISB literature, since the nature of information dissemination has greatly changed in the last decade, especially with the rapid changes in the online/digital environments.

(C) *Information needs* is a factor extending the attitudinal influences on transient migrants' ISB journeys. The dotted arrow in the model indicates a possible correlation between information needs type (academic vs. ELIS) and compatibility that needs to be further investigated, especially given the fact that in this study the researcher focused on the information-needs aspect of SFIS ISB.This research confirms a close relationship between the type of information SFIS seek and their attitude towards the appropriate information source to access (Chang et al., 2014; Zhang, 2012). Further investigation, based perhaps on different information needs classifications (e.g. Alzougool et al's 2013b states of information needs) may lead to different relationships. Most SFIS in Studies 1 and 2 justified their use of search engines (especially Google), Arabic sources, and social media (especially Twitter, You Tube, WhatsApp and Snapchat) as easy to use, useful and compatible with their culture. Hence, the original attitudinal construct *compatibility* has been further decomposed into the subdivision *information needs*, since it has been shown that transient migrants search for information in sources compatible with their culture to satisfy their unique information needs.

SFIS have added conditions to using digital sources: the medium choice depends on the type of information they need. Arabic sources and social media were seen as appropriate only for general and advice-related information such as entertainment. Google is deemed more appropriate for seeking study-related information and serious enquiries including personal (health) or sensitive (religious) information. This finding confirms Morris et al. (2010) and Zhang's (2013) research, whose study participants felt that asking questions about personal topics on social media, such as health and religion, was inappropriate. Facebook in particular was considered untrustworthy in this regard.

 (D) *Offline and online social networks* have been added to the subjective norms to include the relationship between peer influence and social networks. This relationship confirms Chang et al. (2012) and Gomes et al. (2014b)'s findings on the impact of international students' social networks demographics patterns on the type of information sources they rely on. This research showed that transient migrants' offline social networks and social media networks were made up of different demographic groups.

Regardless of their length of stay in the host country's liberal cultural environment, SFIS build their social networks to be consistent with their gender-segregated, religious background. They differentiate between their offline social network (comprising a peer group of close friends and relatives, mainly females) and their online social media network (comprising a large diverse population, including some members of the peer group), and their ISB is influenced by this distinction. For example, given their larger and diversified online social networks with people from various backgrounds, SFIS found it difficult to share or seek personal information online, confirming Young and Quan-Haase's findings (2009) stating that the larger the social network, the less information shared on social media.

SFIS' peer group members belong to both their offline and online social media networks, while not everyone in their online network is a peer. A major difference between peer and non-peer members of their online social networks is that the peer group mostly do not communicate using Facebook, but prefer WhatsApp and Snapchat. SFIS follow the influence of their peers and also refrain from using Facebook. At the same time, findings of this study confirm Chang and Gomes's findings (2017a, b), stating that international students have a large mix of home and host country social networks, they are more likely to successfully embrace the digital journey than those who do not. In this research, PhD graduates who use ResearchGate and SFIS, and keep in touch with international friends via Facebook who had wide diverse social networks, were best able to overcome their initial digital adjustment challenges.

(E) *Cultural influence* together with peer influence and superior's influence strongly influence transient migrants' offline and online ISB journeys. The dotted arrow in the model indicates a possible correlation between cultural influence and subjective norms that need further investigation. In the SFIS' case, all participants reported various cultural influences based on their context (Saudi vs. Australia) affecting their ISB

journeys. These include gender-segregation, male guardianship, collectivism and a conservative educational culture. SFIS, regardless of their attitude towards seeking information from males, found it hard to share personal information, such as personal photographs, on social media (Alruwaili, 2017) and limited their ISB from Saudi males to special conditions (Al-Saggaf, 2016). The impact of culture and Islam on SFIS' offline and online behaviour was confirmed by Alruwaili (2017), who found that despite changes, participants refrained from stepping out of their cultural limits.

SFIS also have to learn to make decisions that in Saudi Arabia, are made by males, i.e. go places and perform activities without their guardian's permission, seek information from male teachers/lecturers, and discuss ideas with male students. All these cultural norms challenge their ISB and force them to be reliant on their cultural-based social networks built up from their female friends. Post-study career ISB challenges due to cultural and social norms (e.g. *wasta* a form of nepotism ensuring prestigious positions in universities), and Saudi universities policies (e.g. for an academic career, a PhD degree must be in the same area as their bachelor degree) were also cited as affecting ISB.

SFIS' need for privacy (Al-Saggaf, 2016) also dictates digital technologies they used for general ELIS information. Regardless of multiple cultural and digital changes SFIS experienced through transition, the majority still avoided posting personal messages or photographs unless they could fully trust the site and recipients; and they do not access material that could offend their religious code (Alruwaili, 2017; Al-Saggaf, 2016). Findings of this study confirm and extend the findings of previous studies on SFIS' online behaviour, in which the majority in this research attributed their resistance to publishing their pictures online as a result of their personality and family's conservativeness rather than their fear of their culture or society. Some attributed their negative attitude towards posting their pictures to the fact that they cover their faces in Saudi Arabia, and if they posted personal pictures showing their faces on social media they would be contradicting themselves. All participants described how the widespread use of social media and smart phones led to cultural changes in the Saudi society including their own families in which Saudi families become less conservative in many aspects including women's distribution of personal pictures.

 (F) *Language level, IT skills, length of stay in host country, and prior experience* significantly impact transient migrants' self-efficacy and abilities to make required

educational and digital transitions (particularly to fulfil academic needs as reported by Chang & Gomes, 2017a, Hughes, 2013, Jeong, 2004, and Liu & Redfern, 1997), such as accessing English language sources.

Recently arrived SFIS attributed most of their cultural and digital ISB challenges to their lack of **language proficiency**, with poor **IT skills** a close second. This finding confirms Chang and Gomes (2017a) finding that identifies international students' lack of English and IT skills as the primary cause of significant difficulties in accessing information in host countries. Chang and Gomes (2017a, p.316) note that international students have a range of digital and information literacy skills, ranging from highly advanced to basic. However, findings in this research show that language levels had more impact than IT literacy levels on SFIS' digital ELIS journeys. Several recently arrived SFIS had little difficulty in accessing ELIS information, even if they lacked English language proficiency, since they could access everyday information in Arabic (originally in Arabic, or translated into Arabic). Academic information, however, was a different matter —for the students, academic texts in Arabic were not useful, and there were few translations, so a low language level was particularly challenging. In addition, they lacked adequate online research skills and vocabulary, so searching for and accessing academic information in host countries took much time and effort.

SFIS' previous learning and digital experiences in Saudi Arabia significantly increase the challenges on SFIS' digital journeys. Findings extend Chang and Gomes's (2017a) argument of the factors that discourage international students from embarking on a digital journey, prior experience has a greater impact than level of IT skills. Most SFIS attributed their academic ISB difficulties to their poor, limited and diverse digital experiences resulting from their Saudi education experience. This hindered their access to Australian universities' wide range of offline and online pre- and post-study services provided to international students (Hambrecht, 2006; Hughes, 2013; Lawson, 2012; Mehra & Bilal, 2007). Despite their linguistic and digital improvement over time as they became accustomed to the host country's digital sources, none of the students reported using their Australian institutions' websites or social media as a source of pre-departure information. Many were unaware of these services as a result of their prior experience in Saudi Arabia, where universities only publish academic information relating to courses.

Even though returning SFIS spent at least three years at their academic institutions, they were not made aware of online services provided to international students by academic institutions in host countries. They did not search for these services either, as they believed university's websites and social media accounts focused only on study-related academic information, and following their course completion, they would have no more access to university online resources, as in Saudi Arabia. In fact, these websites and social media are designed to help international students find ELIS information such as housing and health information for both new arrivals and departing graduates, and to encourage postgraduates to join their institution's alumni membership

Length of stay in a host country also makes a great difference to self-efficacy and the ability to counter many ISB challenges. Like Chen (2010), this research argues that the longer transient migrants are exposed to their host country's educational and digital environment, the more digital competency and self-efficiency they will experience. This includes an increased reliance on host country sources. International students gradually improved their ISB research skills and strategies until they are ready to return to their home country, habitually using advanced search skills such as checking reviews and accessing Google Scholar and ResearchGate. PhD graduates develop skills to search for journal ratings and impact factors. Not only do language and IT competencies improve through familiarity and use as expected; other challenges are also faced with greater confidence. SFIS who have been in the host country for two to three years start to feel less uncomfortable about exchanging information with males, while those exposed to the Australian culture for more than three years welcome their increased self-efficacy, confidence and more relaxed attitude in this situation. Unfortunately, this causes serious readjustment challenges after their return.

7.3   Implications of this research

Being concentrated on the experiences of one group of international transient migrants in one country has some limitations. Nevertheless, findings are of potential interest to all who globally seek to support learning in culturally diverse higher education contexts (Hughes, 2013)—educators, information professionals/librarians, researchers, lecturers and students. Nevertheless, the findings are of potential interest to all who seek to support learning in culturally diverse higher education contexts (Hughes, 2013)—educators, information professionals/librarians, researchers, lecturers, and students. In

particular, the study could help establish content for information portals that are appealing and beneficial for different types of transient migrants, especially those from conservative cultures.

The implications and recommendations that follow are drawn from the case study, and Australian and Saudi[28] institutions are named in particular. However, they are intended for all institutions and organisations concerned with transient migrants, and can be adapted to suit other groups and institutions around the world. Institutions and Service Providers should understand that SFIS and most likely other international students do not always have the same information needs and ISB as local students. The assumption that new students should be able to navigate their new digital environment without support must be challenged. It leads to potential problems. Hence, the following recommendations are based on challenging this assumption that young international students should all have the same ISB strategies (Chang & Gomes, 2017a).

7.3.1   Implications for Australian institutions

Australian ELICOS centers, universities, libraries and other service providers may use the findings of this research on SFIS' information needs, sources commonly used and information-seeking challenges to inform the provision of adequate information services, IL training, and targeted library outreach programs. Findings of this research can help Australian educational and government institutions to consider the development of culturally responsive information channels, including designing cross-cultural system interfaces, and services that are highly supportive of international students.

Universities may also consider including surveys to identify information needs and related challenges in their orientation programs for incoming international students. This could serve as an assessment of user needs and provide useful information for further service planning.

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[28] Since the studies in this research were conducted, several changes have been made, or have been proposed, to Saudi's digital environment (see the Postscript at the end of the thesis). Hence some of the recommendations may be outdated, or may become outdated in the near future. However, as several of the returned SFIS (interviewed in 2017) are still challenged by inadequate sources, there seems to be much scope for further improvement.

Notably, some information needs and challenges found in this sample may also be found among international students from other conservative backgrounds such as Pakistan and Iran studying in other public universities with sizable international student populations. Some ISB differences are expected across universities due to factors such as differences in the size, composition of the international student population and the availability of information resources in the town/city in which the university is located.

Based on the findings the researcher recommends the following:

Recommendation 1. *Institutions need to improve their understanding of international students' diverse information needs and information-seeking skills prior to arriving and being in a host country.*

ELICOS and university officials and administrators at all levels hosting international students should improve their understanding of SFIS' information needs and seeking strategies, stemming from Saudi's unique culture and previous educational experience. Institutions should provide tailored or at least appropriate levels of support. It is not enough to treat all international student groups similarly. The following strategies should help:

- Provide ELICOS[29] teachers (and university lecturers if necessary) with training programs on international students' cultural differences and sensitivity. In the case of Saudi students, an awareness of their unique cultural norms especially gender-segregation, male guardianship, and avoidance of the sharing of personal information is required. Sensitivity of their awkwardness when in the presence of Saudi males, or new student's difficulty in making decisions without her male guardian is also required. Educators are also advised to separate new Saudi Arabian females and males when forming study groups, until SFIS have become more used to having male classmates.

- Students' digital skills should be evaluated so that adequate and appropriate tuition and help can be given (Chang and Gomes, 2017b). The optimum opportunity for assessing SFIS' digital skills is when new enrolled students complete placement tests assessing their English proficiency levels, while tests to

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[29] ELICOS is generally a student's first point of entry to Australian study.

assess digital skill levels can be conducted at the same time.

- Educational staff interacting with the Saudi population should be made aware of the outcomes of this research results and other similar studies. Educators who understand SFIS' information needs, search practices and source preferences may provide more support allowing students to adjust more comfortably in the ISB environment. An understanding of the challenges of Saudi students may help to develop strategies that will attract larger numbers of Saudi students to host countries.

Recommendation 2. *Australian educational institutions could collaborate with cultural experts and information system designers to enhance existing information and support services. In the case of Saudi students, this could include Saudi student clubs (SSCs) and the Saudi Arabia Cultural Mission (SACM) to enhance SFIS' digital journey.*

- Findings suggest that the majority of SFIS are unaware of the many quality services provided to help new and graduate students in their transition experience, in particular following arrival in Australia or before departure back home. Notably, SFIS do not access these sources, but frequently refer to websites of the Saudi Cultural Mission (located in Canberra) and the Saudi Student Clubs (located in large Australian cities). Australian institutions could take advantage of students' preferences in this regard, and provide links to their own services' websites on the SSC and SACM websites and social media pages.

- International Students Officers could help initiate greater collaboration between the Australian university and SACM/SSCs by providing contact details for facilitating meetings or workshops.

Recommendation 3. *Australian educational institutions could introduce and train students to make better use of their digital environment, information sources, and online etiquette.*

- Educational institutions should not assume that all students are familiar with educational and academic technologies such as email, LMS, Blackboard, and Turnitin. Information Literacy (IL) educators could enhance SFIS' information and digital literacy through orientation and training programs on how to use their host country's advanced technologies for information-seeking and research. Such programs would increase students' information and digital literacy skills.

- Academic staff should inform their students about the various academic and ELIS services provided to them, and regularly remind them of these services. Similar to the orientation programs provided to newly arrived international students, Australian universities could also arrange pre-departure briefing sessions and invite international students in their last semester to attend information session, for example (a) packing up and/or selling belongings, (b) ending rental arrangements/organising short-term temporary accommodation, (c) readjusting to life back in Saudi Arabia, (d) joining alumni groups, (e) preparing a CV, and (f) applying for postgraduate study and finding an appropriate supervisor.

- As Saudi female students feel more relaxed with other females, senior Saudi female students (contacted via the local Saudi Student Club) can be engaged in orientation programs to advise and support SFIS with ISB challenges.

Recommendation 4. *Australian educational institutions should develop greater understanding of cultural differences in students' digital source preferences*

- Current and graduate SFIS cite 'information overload', despite improvements in their English and IT search skills over their time at university. Given that Saudi culture does not encourage reading, too much written information could discourage their access to their institutions' services. There are many ways of designing information artefacts that can make it attractive to read, while also being informative.

- SFIS show different social media preferences and use, so the researcher recommends frequent surveys to assess international students' approach to university information and support services (website use, online links, social media in use), since one size does not fit all—patterns of social media use are diverse amongst the student population, and students do not use the same platforms. In particular, SFIS do not like to use Facebook.

- Be aware of culturally sensitive aspects associated with technology use (e.g. reluctance towards posting personal photos or revealing personal details).

- To help new SFIS in their ISB process and networking challenges, gender-segregated social events arranged by the tutor or organisation could offer an opportunity for SFIS to contact other female international students, even if just for a weekly coffee break to start breaking down barriers among international students. This could be arranged on an on-going basis (policy) through the Saudi

Club in Melbourne, the Saudi Cultural Mission, Saudi and their representatives in Melbourne. Redden (2013) described an efficient USA university initiative that can be recommended by launching a once-a-semester named 'Cultural Lunch and Learn' event for sponsored SFIS and their Australian faculty to provide them with a chance to casually interact and get information.

- IL educators and academic staff should encourage SFIS to ask for help, and should ensure that the students know about the various university services that exist to help (counselling, academic skills and language, students' union, accommodation, finance, and so on), keeping in mind some students are shy owing to language difficulties or in the presence of Saudi males.

- Some graduate SFIS intend to return Australia for further degrees, but as many are unaware of PhD requirements (for example, the necessity of studying research methods and completing a minor thesis), academic course coordinators or student advisors should inform and remind coursework students (before the students' course completion) of further study options.

7.3.2   Implications for the Saudi Arabian Cultural Mission (SACM)

SACM could use this research findings to populate their website with valuable information that encourage international students to search for and use the ELIS services provided alongside the scholarship and academic services. For students enrolling in Australian universities and colleges, the Saudi Students' Clubs (SSCs), present in almost every large Australian city, could help in this regard. Importantly, for this to benefit, SACM should bear in mind that SFIS have expressed disappointment with the poor quality and out-of-date information provided by SACM. Based on the findings the researcher recommends the following:

Recommendation 5: *SACM and the SSCs should join forces to post advertisements on their social media with direct links to each other's websites with daily information pages (see also Section 7.3.1 Recommendation 2 above).*

Recommendation 6: *SACM should revisit and update their Q&A pages, and might consider including surveys for current and graduate students to assess their information needs and related matters to provide useful guides for future planning.*

Recommendation 7: Findings related to the resource and IT constraints noted by returned Saudi women researchers suggest that *SACM needs to encourage PhD*

students to enlarge their social networks helping them to become more involved in research activities and networking events held in their universities or internationally.

7.3.3 Implications for the Saudi Ministry of Higher Education and universities in Saudi Arabia

The value of the research accrues to sponsors of international students, particularly for its potential to expose fault lines in higher education and study preparatory programs abroad that are inattentive to the needs of first-time international students attending overseas universities. The Saudi Ministry of Higher Education and Saudi universities could use these results to assess their scholarship programs and identify the challenges their sponsored students and graduates face during their ISB journeys.

Many participants cite Saudi Arabia's simplistic IT training as challenging to their ISB when they first arrive in the host country, and the limited and inefficient use of digital tools such as email, Blackboard, and e-libraries as equally challenging when they return home. A great deal of money is spent on scholarships for overseas qualifications, yet many returning graduates and postgraduates find that their skills are not used to their potential. Returned postgraduates are also surprised and dismayed by some unethical practices.

Findings of the research may help prospective SFIS who wish to study in an educational context that is digitally and culturally different from their home context, to better understand the obstacles they might encounter and thus better prepare them for their cross-cultural experiences. Based on the findings the researcher recommends the following:

Recommendations 8: *Pre-departure programs should include more information on what Australian universities and colleges (or other overseas destinations) regard as adequate information literacy and information-seeking practice skill levels.*
Recommendation 9: *The national curriculum in Saudi Arabia may need to pay more attention to teaching students how to conduct ethically acceptable offline and online scientific research, within the international copyright policy guidelines.*
Recommendation 10: *For better return on investment (ROI), the skills and experience of graduates and postgraduates with overseas qualifications should be better respected and accommodated.*

7.4 Main contributions

For researchers within the fields of information systems, information science, and international students' information-seeking behaviour, this study has the following contributions.

7.4.1 Contributions to theory

- **The use of DTPB to examine ISB**

This research is the first ISB study to explore the ISB of international students using the rational and intentional behavioural theory of DTPB. A contribution is thus provided by this research illustrating the benefits of DTPB to guide data collection and data analysis in explaining the factors that impact transient migrants' ISB. In this research, DTPB helped the data analysis by its decomposition of the attitudinal, subjective and control factors that influence SFIS' use of specific information sources. Each decomposed factor (ease of use, peer influence, self-efficacy, and so on) was found to play a central role in SFIS' ISB, especially through social media.

- **Proposing an explanatory ISB model to enhance the understanding of the ISB of transient migrants when moving across different environments**

This research reveal that while DTPB helps in understanding the *what*, it does not explain the *how*. To allow deeper understanding of transient migrants' ISB when transitioning between their home countries and host countries, the researcher developed an extended version of DTPB through the addition of pertinent constructs:

- The constructs 'transient migrant' and 'demographic characteristics' have been added to the original DTPB as they exert an impact on all the intentional factors from start to finish of a transient migrant's journey.
- Decomposing 'compatibility' into 'information needs' explains that an information seeker accesses specific information by looking for sources that are compatible with their information need and ISB. SFIS describe the social medium site Twitter as a compatible source for their general and opinion-based needs due to its short messages that fit their culture, but the same source is considered incompatible with their culture for health and religious needs.

The researcher suggests that the proposed model is used by service providers to understand ISB issues of transient migrants (e.g. international students) to self-assess

the online and offline services they currently provide for their international students. This model can also be useful and applied to other transient migrants' groups especially those from conservative cultures such as Yemen or Pakistan.

7.4.2 Contributions to practice

When private and government information service providers provide a new digital information channel to help transient migrants in their ISB, what is already known is the capability of that digital platform. Much, however, is *unknown* about how the information channel is used, or even if it is used at all and how transient migrants especially those from conservative backgrounds use these technologies over time and especially when moving across different contexts (Chang & Gomes, 2017a).

Using the proposed extended ISB model developed in this study, this thesis contributes to practice in the following ways:

- **Exploring the ISB of a unique group of transient migrants**

This research is the first to shed light on the information needs, information-seeking experience, and cultural/digital challenges of international students (Saudi female students and graduates in particular) when moving forth and back to between home and host countries. Such clear awareness of these challenges may assist Australia and Saudi decision makers and service providers in designing solutions that help SFIS throughout their ISB journeys. For example, the research found that SFIS do not access Australian sources for several reasons, one of which is the easy availability of Arabic sources despite their unreliable and out-dated information. To minimise 'satisficing behaviour'[30] Australian educators should promote services in a way that is more useful to transient migrants, such as reminding them (online and offline) about places and sources they can consult when seeking any kind of information, while keeping in mind that some people are shy to ask questions due to language deficiencies or the fear of losing face.

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[30] Near enough is good enough. 'If students are able to find the information they are looking for in 'home sources', they are likely to be satisfied with that, despite any perceived risk of relevance or reliability'. Chang and Gomes, 2017a

- **Providing insights into ISB changes transient migrants may experience over time**

This research is the first to track the ISB of transient migrants over an extended period in order to understand how transition experiences impact cultural and digital ISB, as new skills develop. The interviews with SFIS provide rich descriptions of how ISB changes over time, providing educators with useful insights for designing materials.

- **Highlighting the post-study ISB experiences of returned transient migrants**

This research is also the first to explore the post-study ISB of returned transient migrants, finding not only reverse cultural shock but also 'reverse digital shock' that challenge their post-study ISB. Other practical suggestions can be found in the Recommendations (Section 7.3). By revealing that most returned SFIS lack the awareness of the Australian universities' pre-leaving and post-study alumni services, designers of university services should develop new or revised promotions of their post-study services. This study also gives insights can be taken into account by Saudi scholarship sponsors and decision makers to accommodate returned SFIS and help them in their readjustment experience. Other practical suggestions can be found in the Implications (Section7.3)

7.5 Limitations of the study

Despite its contributions and implications, this study has a number of limitations, as follows.

- A majority of Study 1 participants had been in Australia for 4 months to 1 year at the time they were interviewed. They reported their search for information before they had left for Australia, but because they were looking back in time, it is possible they were not able to accurately recall challenges they faced during their information-seeking process. Similarly, when returned Saudi women in Study 2 were asked to compare their ISB before coming to Australia with their practices after their arrival in Australia, they reported their inability to recall what they used to do as many had returned about eight years ago. Clearly, a study that interviews Saudi women before they travel to Australia and before they leave Australia could provide more accurate results.

- The participants recruited through email or WhatsApp may have responded differently to personal invitations to participate in research while the latter group

may have felt pressurised to volunteer, as they were known to the researcher.

- Despite rich data being collected, the number of study participants was small (25 in each study), so the findings may not be representative of all SFIS in Australia or generalisable to SFIS studying in different countries. However, the generalisability of this research can shift to transferability (Al-Qahtani, 2015). In transferability, the researcher has to provide rich descriptions about the researched area and the reader decided whether or not the research is transferable to other contexts (Guba, 1981; Lincoln & Guba, 1985 as cited by Al-Qahtani, 2015).

- The research was conducted in Australia, so there might be cultural and digital differences that limit the applicability of the findings to SFIS who study in other countries.

- All research is susceptible to human bias through the opinions of both participants and researchers. In particular, this research was conducted by a Saudi female international student. Additionally, the interpretation of the results might also be influenced by the researcher's own beliefs, values and prior assumptions. Although each participant was asked to preview the researcher's interpretations of the data, a subjective interpretation is likely to be present in the results (Denzin & Lincoln, 2000; Whealthy, 2006, cited in Al-Qahtani, 2015).

- Even though this research focuses on tracking the changes in Saudi female international students' online behaviour when they move across different cultures, the study does not cover the outcome of the ISB and how SFIS used the information.

- As with all self-reported data, it is not possible to know whether the participants were telling the truth about their experiences (Brewer, 2000). Answers to sensitive questions may have been misreported. However, my role as a researcher did not involve investigating whether the participants were telling the truth; attempting to do so could raise ethical issues (Clark & Sharf, 2007).

- The study only focused on the Saudi female students; male Saudi students and their wives are not represented.

7.6   Directions for future research

To address the above limitations, this study calls for more research into the Saudi

female international students' online behaviour in general and information-seeking in particular.

- To address generalisability, subjectivity and bias issues, quantitative or mixed-methods studies could include international Saudi female students who are pursuing higher education at other universities in different countries.

- International female students from different cultural backgrounds could also be included to explore any differences due to different cultures. Similarly, future research can explore gender differences in ISB (especially since Saudi males having more cultural and digital freedom in their home country and may not face the same challenges). Future study could also investigate the perspectives of other parties (e.g., husbands, SACM, ELICOS teachers, international students' frontline staff) who interact with Saudi female students and may have different perspectives.

- To address the limitation related to the reliability of SFIS' answers especially since most of their answers related to their pre transition experience were memory-based, a future longitudinal study could be undertaken following the same group before, during and after their international experiences. Future research can also about research that follow the entire experience of students longitudinally from when students indicate they are interested in study overseas to 4 years after they have returned etc.

- Future research could explore the ISB activities SFIS engage in within their social networks or the websites they access, the outcomes of the ISB process, and how they use the information they obtain.

- Future research can also explore how SFIS come across their academic and ELIS information serendipitously. The frequent and ubiquitous reports of users encountering valuable information by accident demonstrates that serendipity is a worthwhile concept for understanding more about ISB in a digital information environment. Makri et al. (2015) have discovered a method whereby it is possible to directly observe users unexpectedly encountering useful information.

- Future research can also be done by applying other IS theories such as Activity Theory. Wilson (2006; 2008) suggest the use of Activity theory which was identified as best suited in information science (Wilson, 2006; 2008) it has been argued by Wilson (2006, p.1) that an activity-theoretical approach to information

behaviour research would provide a sound basis for the elaboration of contextual issues, for the discovering of organisational and other contradictions that affect information behaviour. This approach may be useful to aid the design and analysis of investigations.

- Given the fact that type of information needs impact how SFIS seek their information, and the ambiguity of defining information needs as reported in the literature (Alzougool et al., 2008; Wilson, 2005), future research can apply Alzougool et al's (2008) framework of information needs states.

- Future research can quantitatively test the thesis's proposed model (3) by applying it to different groups of transient migrants (e.g. skilled migrants or female or even male international students from any developing or developed countries)

- Future research can also concentrate more deeply on cultural aspects.

7.7   Concluding remarks

This research is crucial as it contributes to the ISB and SFIS fields of literature and helps to address a number of research gaps identified in the existing literature: (a) limited understanding about how transient migrants (for example, international students) from conservative cultures (SFIS in this research) seek out information; (b) lack of understanding about how international students' ISB changes over time resulting from their exposure to the host country's cultural and digital environment; (c) insufficient understanding about the post-study ISB of returned international graduate and postgraduate students, especially on returning to their home country's different cultural and digital environment; (d) lack of detailed understanding about the readjustment challenges that international graduates face after their return, which can lead them to seek their information differently; and (e) lack of understanding many of the factors influencing transient migrants' ISB over time.

To conclude, the researcher's journey is almost at an end. The researcher hopes that her contribution will fill some of the gaps noted by Gomes and Tan's (2015, p.215) comment:

> *More than ever before, the global and transnational movement of young people for work and study has become part of everyday life. Yet there is very little research on this phenomenon in relation to how actors in transience create strategies to cope with being away from*

home nation (place of birth and/or citizenship) and from family.

In this thesis, these gaps have been addressed by exploring transient migrants' digital experiences, which are just as important as their physical experiences, especially, since they spend so much time online.

With the submission of this thesis, the researcher must start the final stage and become a returned SFIS herself. Listening to the research participants' post-study lived experiences has given her a valuable insight into the various cultural, digital and research challenges she will be facing upon her return, and so she is preparing herself and her family for the coming readjustment experience.

POSTSCRIPT

I collected the data in 2015-2017. During this period, and especially over the last few months while I was writing up the results, the government of Saudi Arabia proposed and in some cases instituted radical educational and social changes to empower women culturally, educationally and digitally. Examples of the very recent changes in Saudi Arabia follow:

- Saudi's 2030 Vision was published. The cultural and social changes envisioned in the document may lead to changes in the position of women and the ISB challenges (e.g. the unemployment ISB challenges) they face as international graduates. For instance, in Saudi's 2030 vision Saudi women are seen as a key asset to society. According to the Saudi Arabian Vision website (2017), over 50 per cent of Saudi university graduates are female and the Saudi government will continue to develop their talents, invest in their productive capabilities and enable them to strengthen their future and contribute to the development of Saudi society and economy. The plan also alludes to increasing the percentage of women in the workforce from 22% to 30% by 2030.

- SACM presented a seminar in Australia on 3/8/2017: "Beyond PhD – maximising opportunities in research and the job market". On their website, SACM describes the purpose of the seminar as "to equip PhD students with skills, policies and expectations about completion of their research in a way that matches further research opportunities, as well as the requirements of the job market in Saudi Arabia". Check this link for more details: https://sacm.org.au/sacm-organizes-a-seminar-on-post-phd-opportunities-in-research-and-job-market/.

- In their attempt to help Saudi graduates in their career ISB, the Saudi Ministry of High Education launched an online platform named 'Safeer graduates' works as a database where all Saudi scholarship graduates need to join to help public and private institutions recruit Saudi graduates.

- On 12 September 2017, the Saudi Minister of Communication and Information Technology (CIT) announced the removal of all the previously blocked online call applications, including Viber, Skype, WhatsApp, and Snapchat. This digital change can overcome some of the ISB challenges related to accessibility that

returned SFIS raised in this study. More details on this change can be found on the headline in Arab News (22/9/17): "Smartphone Users Buzzing After Kingdom Of Saudi Arabia Unblocks Internet Calls"

<http://www.arabnews.com/node/1165306/saudi-arabia>.

- A number of returned Saudi students have recently initiated a number of hashtags to make their voices heard, not only for personal and employment issues but also to improve academic and scientific research in Saudi. One hashtag is 'What would you do if you were a research decision maker?' (#لو_كنت_مسوولا_عن_البحث_العلمي.). Below are some examples of tweets:

  I would place each research into scholarly plagiarism detector! In Saud university despite its high reputation as the best Saudi university, there is a lot of research is cut and paste, or even stolen.

  I would make research methods as one of the core and compulsory subjects in the early stages of education from primary schools, and has created the necessary requirements of tools and technologies to facilitate teaching and learning such very important subject.

  The first decision I would make is to re-establish the scientific research committees in our universities. I would also build a database and data management programmes to facilitate access to information and archive old ones. I would also be honouring and awarding distinguished researchers and highlight accomplishments. These awards can be more research support and research facilities.

- In October 2017, Saudi women won their battle to drive for the first time. This means most of the ISB challenges related to limited freedom may cease to exist. However, Saudi women will only be officially able to drive from July 2018. I assume that Saudi women from strictly conservative families may not benefit from this change for a long time, if at all.

- In December 2017, a few weeks before this thesis was submitted, in a landmark decision, Saudi Arabia announced that cinemas will be allowed to operate from early 2018, for the first time in over 35 years (Saudi Arabian Centre of International Communication, 2017).

Although these changes bring more freedom and may eliminate some of the challenges identified in this thesis, the findings of the research are still valid. In a conservative society such as Saudi Arabia, it will take a while for changes to be fully accepted. And unsurprisingly, gender segregation continues to be the mainstay of Saudi norms.

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APPENDICES

Appendix 1: Some of SACM initiatives for Saudi international students

Initiatives	Year	Description
Pre-arrival Orientation program session arranged by the Saudi Ministry of High Education	Before departing to host country	Annual induction sessions for those awarded KASP scholarships are held in Riyadh, Jeddah and Khobar. Attendance to these orientation programs is compulsory. Designed to prepare Saudis for life in multicultural environments, their rights and responsibilities under the scholarship conditions, information on legal, health and educational systems, accommodation, and social norms of their selected country, particularly life at the university.(Ministry of Education, 2016; Taylor & Albasri, 2014).
A Guide to Studying in Australia by SACM (in Arabic)	2015	This online guide aims at assisting students and scholarship candidates in their study journey by Meeting students' needs and helping them easily find information. Providing important information that would assist students in their travel, study and living arrangemalests in Australia, such as visa procedures, preparing for travel, arriving, and settling in. The guide also talks about Australia, its history, people and culture.
The Legal Guide by SACM (in Arabic)	First edition 2013, second edition 2015	This online guide aims at: Educating Saudi sponsored students on the Australian laws and regulations related to their living in Australia as international students. Discussing topics influencing student's everyday life, such as housing laws, traffic laws, immigration laws, banking, social relations, intellectual property laws, educational and employment laws.
Education System in Australia by SACM (in Arabic)	2015	This handy online booklet aims at providing students and interested parties with: Important information about general and higher education systems in Australia. An overview of research trends in Australia.
After arrival orientation program	2014	Launched in 2014. Delivered to students before or during their scholarship, tailored and innovative. A short training course that a student can register for and complete online. Provides key information on regulations, instructions, FAQs and some guiding videos. Ends with a 20-question student test qualifying for certificate of completion automatically e-mailed to student.
Saudi Clubs in Australia	2012	Help prospective Saudi students use social media sites such as Twitter hashtags (my advice to new scholarship coming students) in which topics related to accommodation, academic and other issues were suggested by current Saudi students.

Appendix 2: A summary of studies that focus on SFIS*.

Author	Title	Research focus
Alanazi (2013)	*SFIS' participation in online and face to face*	SFIS perceptions towards participating in mixed gender classes and online discussion in US. One of the findings: marital status affected level of comfort.
Alqefari (2015)	*Difficulties of Saudi Arabian female students studying English abroad*	Further research is needed for identifying and suggesting the remedies to overcome the difficulties faced by females coming from conservative backgrounds while studying in western countries.
Alruwaili (2017)	*Self-identity and community through social media- the experience of Saudi female international college students in the United States*	The findings point the need for educators to understand how to implement social media in the classroom in a way that serves students of all cultural backgrounds as the U.S. educational system continues to receive large numbers of Saudi international students each year.
Altamimi (2014)	*Challenges experienced by Saudi female students transitioning through Canadian pre-academic ESL*	Usual issues were more profound for Saudi females than for other females or for Saudi males. As well, Saudi females had additional cultural differences that had a major impact on performance.
Binsahl & Chang (2012)	*International Saudi female students in Australia and Social Networking Sites: What are the motivations and barriers to communication?*	The use of social media by five Saudi female international students in Australia, with a particular focus on Facebook.
Lefdahl-Davis & Perrone-McGovern, (2015)	*The cultural adjustment of Saudi women international students: a qualitative examination*	Exploration of expectations v reality, acculturative stress, language proficiency, relationships, help-seeking behaviour, etc.
Sandekian et al. (2015)	*A narrative inquiry into academic experiences of female Saudi graduate students at a comprehensive doctoral university*	The participants' varied prior experiences with mixed-gendered educational environments led to differing levels of comfort with developing relationships with males.

* This table illustrates the studies conducted only on SFIS. Other studies focus on Saudi international male and female students, where males outnumbered females (e.g. Alhazmi, 2013; Al-Qahtani, 2015; Clerehan et al., 2012; Madani, 2012; Shaw, 2009 and many others).

Appendix 3: Plain Language Statement of Data Collection

Project Title: An investigation of Saudi Female International Students' Information-Seeking Behavior in transition between different contexts

You are invited to participate in the above research project, which is being conducted by Dr Shanton Chang (Supervisor), Dr Rachelle Bosua (co-supervisor) and Mrs Haifa Binsahl (PhD student) of the Department of Computing and Information Systems at the University of Melbourne. Your contact details have been drawn either from the pre-interview questionnaire you have filled in 2015 or the researcher's personal contact lists. This project will form part of Mrs Binsahl's PhD thesis, and has been approved by the University's Human Research Ethics Committee. The aim of this study is to conduct a longitudinal study that investigates Saudi female international students' information needs and information seeking behaviour through their transition experience. The study also aims to identify the factors that may lead to changes in students' information seeking behavior over time. This study includes two rounds of interviews as well as the filling of a 7-day diary.

Should you agree to participate, we would ask you to participate in a first one-on-one interview and to complete a short diary, so that we can get a more detailed picture of your information seeking behavior. During this interview, you will be asked to answer some questions on how the transition from Saudi Arabia to Australia impacts your information seeking behavior. After about 4-6 months, we would also like to invite you to participate in a second round interview. The aim of the second interview is to identify any changes that may have occurred in your information seeking behaviour. We intend to protect your anonymity and the confidentiality of your responses to the fullest possible extent, within the limits of the law. With your permission, both interviews would be audio-recorded so that we can ensure that we make an accurate record of what you say. Once the audio has been transcribed, you would be provided with a copy of the transcript so that you can verify that the information is correct and/or request deletions. Each interview is designed to be approximately between 40-60 minutes in length.

There are no anticipated risks associated with this study except for the inconvenience of the time taken by the interview sessions and completing the diary. To minimize inconvenience we will provide you with a diary template and a reminder to fill this template. Your details will only be able to be linked to your responses by the researchers, for example, in order to know where to send your interview transcript for checking. Your name and contact details will be kept in a password-protected computer file separate from any interview data that you may supply. In the final report, you will be referred to by a pseudonym. We will remove any references to personal information that might allow someone to guess your identity; however, you should note that as the number of people we seek to interview is very small, it is possible that someone may still be able to identify you.

Once the thesis arising from this research has been completed, a brief summary of the findings will be available to you on request from the Department of Computing and Information Systems. It is also possible that the results will be presented at academic conferences. The data will be kept securely in the Department of Computing and Information Systems for five years following the date of last publication, before being destroyed.

Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice or negative consequences, and do not need to provide a reason. If you would like to participate, please indicate that you have read and understood this information by signing the consent form and returning it in the envelope provided. The researchers will then contact you to arrange a suitable interview time.

If you require any further information, or have any concerns, please do not hesitate to contact Haifa Binsahl hbinsahl@student.unimelb.edu.au.

The project has been approved by the Human Research Ethics Committee, The University of Melbourne (project number: 1443607.1). If you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne, on ph:83442073, or fax:93476739

Human Ethics Application1443607.1   Plain Language Statement Version 1

Appendix 4: Consent form

Consent Form - Interview participation

PROJECT TITLE: An investigation of Saudi Female International Students' Information Seeking Behaviour in transition between different contexts

THE UNIVERSITY OF
MELBOURNE

Name of participant:

Name of investigator(s): Haifa Binsahl, Dr. Shanton Chang and Dr. Rachelle Bosua

1. I consent to participate in this project, the details of which have been explained to me, and I have been provided with a written plain language statement to keep.

2. I understand that after I sign and return this consent form, the researchers will retain it.

3. I understand that my participation will involve two one-on-one interviews and a diary to be completed in over a month of your choice. The interview will last about 40-60 minutes.

4. I acknowledge that:

    (a) The possible effects of participating in the interview have been explained to my satisfaction;

    (b) I understand that my participation is voluntary;

    (c) I have been informed that I am free to withdraw from the project at any time without explanation or prejudice and to withdraw any unprocessed data I have provided;

    (d) The project is for research purpose only;

    (e) I have been informed that the interviews may be audio-recorded and I understand that audio files and transcripts will be stored at The University of Melbourne and will be destroyed after five years following the last date of publication;

    (f) I have been informed that my name will be referred to by a pseudonym in any publications arising from the research;

    (g) I have been informed that the confidentiality of the information I provide will be safeguarded subject to any legal requirements.

    (h) I have been informed that a copy of the research findings will be forwarded to me, should I agree to this.

I consent to this *interview* being audio-taped   ☐ yes ☐ no
(please tick)

I wish to receive a copy of the summary project report on research findings   ☐ yes ☐ no
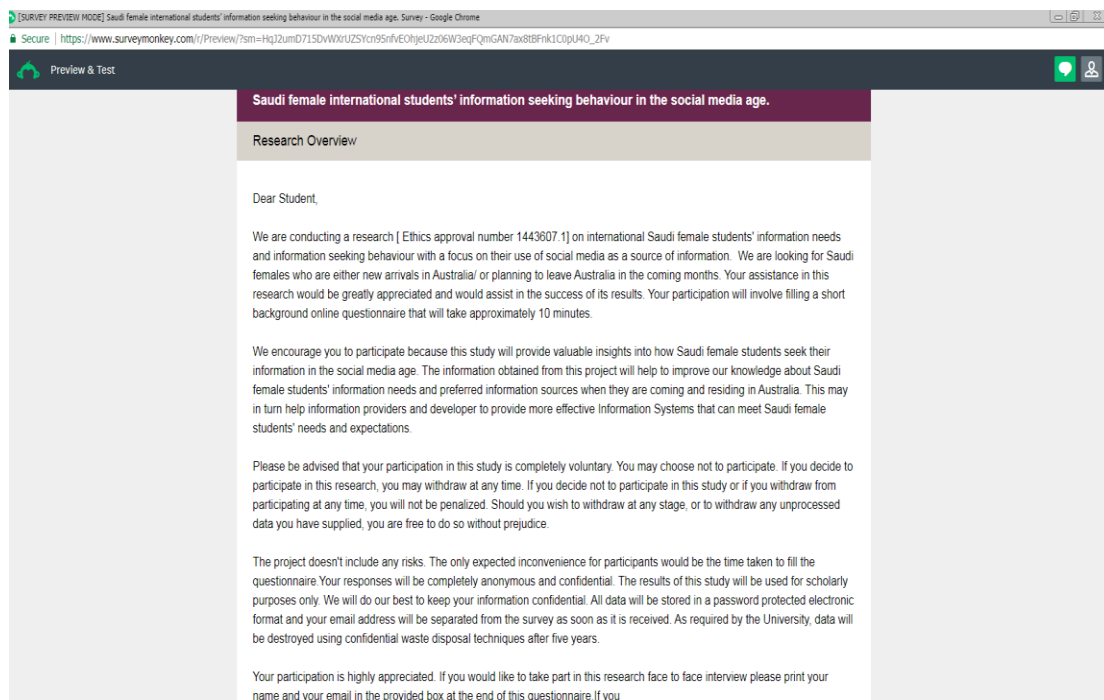(please tick)

Participant signature: Date:

Department of Computing and Information Systems
The University of Melbourne, Victoria 3010 Australia
T: +61 3 8344 1500   F: +61 3 9349 4596
W: http://www.cis.unimelb.edu.au/

Appendix 5: Study 1A's online recruitment message

We are conducting a research [Ethics approval number 1443607.1] on international Saudi female students' information needs and information seeking behaviour with a focus on their use of social media as a source of information. We are looking for Saudi females who are either new arrivals in Australia/ or planning to leave Australia in the coming months. Your assistance in this research would be greatly appreciated and would assist in the success of its results. Your participation will involve filling a short background online questionnaire that will take approximately 10 minutes.

We encourage you to participate because this study will provide valuable insights into how Saudi female students seek their information in the social media age. The information obtained from this project will help to improve our knowledge about Saudi female students' information needs and preferred information sources when they are coming and residing in Australia. This may in turn help information providers and developer to provide more effective Information Systems that can meet Saudi female students' needs and expectations.

Please be advised that your participation in this study is completely voluntary. You may choose not to participate. If you decide to participate in this research, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice.

The project doesn't include any risks. The only expected inconvenience for participants would be the time taken to fill the questionnaire.Your responses will be completely anonymous and confidential. The results of this study will be used for scholarly purposes only. We will do our best to keep your information confidential. All data will be stored in a password protected electronic format and your email address will be separated from the survey as soon as it is received. As required by the University, data will be destroyed using confidential waste disposal techniques after five years.

Your participation is highly appreciated. If you would like to take part in this research face to face interview please print your name and your email in the provided box at the end of this questionnaire.If you require any further information, or have any concerns, please contact Mrs Binsahl 0432429398. Email : hbinsahl@student.unimelb.edu.au

If you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics,The University of Melbourne, on ph: 8344 2073, or fax: 9347 6739.

1. ELECTRONIC CONSENT: Please select your choice below.
Clicking on the "agree" button below indicates that:
• you have read the research overview
• you voluntarily agree to participate
If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

Appendix 6: Study1-Participants' Demographic details

Participant code	Age	Region	Accompanied by	Degree being studied	English level	Funding type	Discipline	Months in Australia
P1	26	Hijaz	Husband and children	ELICOS	Average	KASP	Social Studies	6
P2	30	Hijaz	Brother	ELICOS	Average	KASP	Business	14
P3	28	South	Husband	ELICOS	Very Good	KASP	Arts	10
P4	28	Hijaz	Husband and children	ELICOS	Very Good	KASP	Information Security	2
P5	25	North	Father	ELICOS	Average	KASP	Computer Science	5
P6	37	Hijaz	Husband and children	ELICOS	Average	Saudi University	Business	3
P7	24	Hijaz	Husband and children	ELICOS	Average	KASP	Computer Science	4
P8	30	Najd	Husband and children	ELICOS	Good	KASP	Computer Science	8
P9	34	Najd	Husband and children	ELICOS	Good	Saudi university	Information Systems	2
P10	30	Hijaz	Father	ELICOS	Very Good	Work sponsor	Health	4
P11	21	Hijaz	Brother	ELICOS	Very good	Self-funded	Health	8
P12	31	Najd	Husband and children	Bachelor	Good	KASP	Media	18
P13	27	North	Father	ELICOS	Average	Saudi University	Health	4
P14	38	Hijaz	Husband and children	Masters	Good	Saudi University	Fashion	18
P15	30	Najd	Husband and children	Masters	Good	KASP	Computer Science	16
P16	34	Hijaz	Brother	Masters	Good	KASP	Computer science	16
P17	30	Hijaz	Brother	ELICOS	Average	KASP	Education	6
P18	35	North	Husband and children	Masters	Good	KASP	IT	18
P19	33	Hijaz	Brother	Master	Good	Saudi University	Fashion	18
P20	25	Hijaz	Brother	ELICOS	Average	Self-Funded	Education	8
P21	24	Najd	Father	Master	Good	KASP	Law	16
P22	25	Hijaz	Brother	ELICOS	Average	KASP	Business	11

Participant code	Age	Region	Accompanied by	Degree being studied	English level	Funding type	Discipline	Months in Australia
P23	34	North	Husband and children	ELICOS	Average	Saudi University	Health	7
P24	35	Najd	Husband and children	Master	Good	Saudi University	Business	18
P25	30	North	Husband and children	ELICOS	Average	Work	Education	7

Appendix 7: Examples of Study 1 interview questions

Interview Questions	Examples
Study 1A (2015)	
Specific questions about recent arrivals' Information needs and sources used to search for new information	- Can you tell me about the information you sought before and after your arrival to Australia? How did you search for that information: did you use personal contacts, the internet and/or social media? Which language did you use in your search activities? - Tell me about your social network (e.g. friends)? Have you used social media to gather or share information? Any challenges when sourcing information through using social technologies? If YES, could you please give examples?
Questions about the impact of the transition from Saudi Arabia to Australia in terms of ISB	- Any challenges when seeking information? Have you checked your institution for your information needs?
Study1B (2017)	
Questions about ISB changes resulting from the transition to Australia	- Have you noticed any changes in the way you seek your information now after living a period of about two years in the Australian cultural and digital environment? If YES, what were the ISB changes?

Appendix 8: Study 1A's validation consultation report

Introduction

Over the last six years, Australian institutions have witnessed enrolments from an increasing number of Saudi female students (SFIS). In 2014, there were 10,400 Saudi students sponsored by the Saudi government through the King Abdullah Scholarship Program[31] in Australia, 999 of whom were women1. This is almost 200% increase compared to 2009, which had 3,614 students that included 520 female students. The main reason for the increase was the King Abdullah Scholarship Program (KASP), which is launched in 2005, that allows Saudi students to pursue higher education degrees by studying in western universities.

As Saudi Muslims, these women's lives are centred on their Islamic faith. Thus, religious needs, such as prayer rooms, halal food, and a society that respects their beliefs and lifestyle practices are extremely important. Additionally, unlike other international female students and even Muslim females, part of the conditions of their study is that Saudi women must be accompanied by a mahram, a male relative. The women are therefore part of a family group, where they may also have children to place in schools or kindergartens. In fact, in the Saudi society, Saudi women often depend on their husbands or 'mahrams' to deal with any commercial or government matters and they are therefore relatively inexperienced in managing their affairs. However, as new arrivals in Australia their greatest adjustment is coping with mixed genders in public places; simple matters such as sitting next to a man on public transport, or putting an argument forth in public are very difficult. Fitting in the self-dependent search education system is another challenge as they used to be passive receivers in Saudi. Saudi women understand that part of their government's plan in awarding the scholarships is to broaden Saudi international experiences, and that the abovementioned problems will arise in their pursuit of an international qualification.

SFIS are supported in Australia by the department of Academic Affairs of the Saudi Arabian Cultural Commission[32]. This body acts as a facilitator between the sponsoring

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[31] The Australian Department of Education and Training and Department of Foreign Affairs and Trade

[32] Saudi Arabian Cultural Mission: http://www.sacm.org.au/E/pages/student-section.html

organisation in Saudi Arabia, the student and the respective Australian university. It deals with issues related to academic progress, healthcare, and day-to-day living; additionally, in each Australian capital city there are Saudi Clubs where students may seek advice, pursue interests, and entertainment, and this network supports similar clubs operating in Australian universities. Finally, there are social media links in both Arabic and English across these entities.

Purpose of This report

- to summarize, some of the research findings on SFIS' information needs and information-seeking practices

- to solicit your participation, including your opinions and insights, on a series of initiatives with a view to their implementation by your institution. Any comments on the suggested initiatives for educational service providers would be highly appreciated.

- to request your cooperation in an interview in November or December, 2016, which will enable the recording of further recommendations for the study.

Findings

The major findings sourced from interview data are as follows:

1. Information sought prior to arrival to Australia

Prior to their arrival, SFIS researched

- the Australian lifestyle, culture and safety online.
- Australian's weather and finding accommodation were also cited by some SFIS.
- In fact, only five IT background SFIS out of the 25 SFIS sought general academic information such as course requirements.

2. Sources of pre-arrival to Australia information

SFIS tend to source their information in Arabic while they are in Saudi Arabia. Examples of popular sources are following; online sources such as

- Google (Mubt3th and Saudi Club in Melbourne websites) and informal social media sources such as Twitter, What's App and Instagram. Findings of this study show changes in SFIS' use of social media. In Fact, unlike other international students, SFIS reported their discontinuity of using Facebook and that they

instead prefer the more familiar Instagram and Twitter for communications and information sourcing.

- SFIS also reported a number of offline sources such as their networks of Saudi contacts through family, and through friends in Australia; official workshops and briefings provided by the Saudi Ministry of High Education.

- ELICOS offers are provided by the ministry prior to their travel. However, university course offers they have to provide after their arrival.

- Only two reported their access to their university's website to check the requirements of their course. These students were from IT background with good level English

3. Information sought after arrival in Australia

The information most sought after arrival was still related to daily needs and lifestyle choices. SFIS reported their access to information related to

- creating bank account, accessing childcare/schools; scholarship related information (e.g. creating online account on SACM website, getting financial guarantee), accommodation, use of public transport; location of halal restaurants and prayer rooms; preferred food and retail shops; weekend entertainment.

- In terms of information relating to academic needs, the findings are as follows: only at this stage when SFIS started their ELICOS course, studies dominated their information requirements.

4. Sources of post-arrival information

SFIS reported their reliance on Arabic online and offline sources for their post arrival information. Examples of common sources used by SFIS are:

- *Google, Saudi Club in Melbourne* website and twitter accounts for childcares and accommodation
- SACM for scholarship information
- *Asking close female* friends or family member for urgent and sensitive daily information
- *Calling a female doctor* (whose been suggested by other Saudi women who had been living in Australia and had experience) to seek general, personal or health-related information.

- With regards to *academic information*, SFIS also reported their preference to use Arabic language sources (word f mouth of friends or previous Saudi students via Saudi club in Melbourne twitter, Saudi educational agent), especially when they seek information related to university or course choices, or were perhaps placed, in courses by the Cultural Mission;

- *SFIS avoided the direct information provided by university sources* as these were in English and not multilingual; homeland experience of helpful English-language instruction was not widespread; use of English-language university sources was found to be essential, but often inaccessible, for navigation of course administration, particularly in relation to the curriculum; SFIS had limited research skills and were unsure how to effectively use university libraries and their myriad databases – thus, SFIS used either Google or Arabic language sources, sometime asking their friends to guide their work, or using Arabic sources for research, subsequently translating these into English

5. Challenging information to find

- *Childcare* where cited as main concerns for them. They referred to the traditional methods such as asking Saudi friends OR visiting nearest childcare. Finding Childcare is very difficult due to the long waiting list and the costly price of these services especially childcares are not funded by the Saudi government.

- *Study offers* for themselves and their mahrams. Recently, SACM refuses to give financial guarantee to students who got their study offers through an agent.

- *Academic challenges especially for ELICOS students* due to their language low level, limited academic search skills and be in a class with Saudi males- in Saudi students are passive receiver

- *Legal challenges* (visa and issues with their institutions such as their legal rights as international students if they face any non-academic issues such as discrimination or racism)

6. Factors influence SFIS' access to Australian official websites for their daily information

When SFIS questioned about the reasons they don't access Australian institutions' formal/ informal sites for their pre- and post-arrival daily-needed information, a number of reasons were emerged as follows;

- The availability of offline (e.g. calling friends) and online Arabic resources like Mubtaath and Saudi Club in Melbourne websites and on Twitter or other media as the main reason to prevent them from using Australian sources.

- Lack of awareness of Interpretation services provided by Australian governments such as immigration and paying bills as well as Lack of awareness of the online services provided by their institutions was the second reason. In fact, most of SIFS including those with good English didn't even know that their institution website could provide non-academic information, such as finding accommodation, doctor or childcare, in addition to the academic information it provides.

- Language deficiency was also identified as a barrier preventing SFIS of using Australian websites.

- Finally, some SFIS who tried the services provided by their institution (e.g. accommodation) found the available services don't meet their cultural needs (family accommodation).

7. The Impact of Saudi culture

SFIS especially older and married students and those (wearing niqap) reported a struggle when communicating with males in general and Saudi males in particular, at least in their early days of living in Australia; this is due to their homeland experience of a highly gender-segregated society, which strictly prohibits any interaction between non-related opposite sex. The impact of the Saudi gender-segregated culture can also be seen when the students ask for a help. For instance, SFIS reported their avoidance of asking help from the service provider of their institution, especially when the provider was a male. SFIS also reported increased reliance on their mahram, especially the majority reported less experience in managing their official matters including educational needs. They also reported less efficiency in using digital and library resources.

Recommendations

In this section, a set of recommendations are described which may positively support SFIS in their information seeking activities prior to and following their arrival in Australia. Each recommendation is listed in the following table. Your comments would be most appreciated. Note: Participation is completely voluntary and responses, which

will form an important part of the overall study, will be treated as confidential following ethical privacy constraints in accordance with The University of Melbourne Ethics Council. Please contact me on mobile number (0432429398) or email me on Haifa.binsahl@gmail.com.

Table A7.1. Recommendations emerging from the Results of Study

Recommendation		Explanation on the activities that can be undertaken
1. Understanding the unique Cultural Needs (e.g. family needs)		• Updating University websites to reflect information that satisfy the unique needs of this group of international students(e.g. childcare, location of prayer rooms and other cultural needs) • Closer collaboration with the Saudi Cultural Mission or the Saudi Club in Melbourne in producing Arabic content that meets Saudi women's needs. Please let me know if you want to collaborate with the Saudi Embassy and Saudi Club in Melbourne so I can send you their contact details or facilitate a meeting or workshops to help you work together. • Service provision for accommodation in line with SFIS' needs (e.g. single or shared accommodation isn't an option for SFIS. Family and private accommodation needed)
2. Increasing SFIS' awareness of Australian institutions' assistance services		• Revisiting existing information webpages content to make sure of its usefulness ease of use and attractive interface. • Creating simple and easy to understand online and offline promotions on various services provided by Australian institutions. • Academic staff (e.g. teachers, lecturers or supervisors) always need to remind their students with the places they can go to seek their help and keep in mind some of them are shy to ask due to language or presence of Saudi males • Providing Arabic information booklets at the airport containing all the websites that they might need during their stay in Australia (e.g, Real estate, PTV, Study at Melbourne, Institutions websites..etc). This can be done by closer collaboration with senior Saudi students or the Saudi Club in Melbourne who can help in producing the appropriate Arabic content that meet the needs of Saudi students. Again, please let me know if you want to collaborate with the Saudi Club in Melbourne so I can facilitate a meeting or I can send you their contact details so you can work together.
3. ElICOS	*3a. Orientation*	• Providing staffs who speak Arabic language to assist new students. • Senior Saudi female students can be engaged in the orientation program to advice and support new arrival SFIS. (buddy program) • Design new ELICOS training programs to help SFIS to enhance their online search skills • Provide ELICOS service providers with training programs on the cultural differences (e.g. Saudi gender segregation culture) • Design new ELICOS modules that discuss the use of English websites when moving between countries.

Recommendation		Explanation on the activities that can be undertaken
		• Making Arabic female counsellors available for health-related, legal and further study application matters and inform the students about this service.
	3b.Classroom Practices (gender-segregation implication)	• Educators are advised to 1)- initiate orientation classes where the students are trained and prepared to be in a mix class, 2)- separate new comers Saudi female and males when forming any study groups till they get used to having male classmates • To help new SFIS in their adjustment process and networking challenges, gender-segregated social event arranged by the tutor or organisation could offer an opportunity for Saudi women to contact with other female international students , even if just a weekly coffee break to start breaking down barriers among international students. This could be arranged on an on-going basis (policy) through the Saudi Club in Melbourne, the Saudi Cultural Mission, Saudi and their representatives in Melbourne
4. University websites and social media		• Allow for website customization to accommodate translation services into specific language (e.g. Arabic). • When designing information websites, it is recommended to use fewer and more easily understood words, more attractive pictures as 'one picture can convey a thousand words'. (most of SFIS don't like to read) • Given the fact that one size doesn't fit all, it is recommended to conduct frequent survey to assess international students' views on support services (website use, online links, social media in use) (SFIS don't use FB) • Educators need to be trained on about the cultural sensitivity aspects associated with technology use (e.g. SFIS' negative attitude towards posting personal photos or revealing personal details, such as address or age)

Conclusion

This paper outlines the information-seeking issues that Saudi women students (SFIS) experience in Australia. Underlying their concerns are social and educational systems that are very different to those they have experienced in Saudi Arabia. Language issues, availability of Arabic sources, lack of awareness of services provided by their institutions and difficulty in asking for help from males were found to be the main factors preventing SFIS from referring to Australian sources.

SFIS, perhaps more than any other group of international students, confront a new reality on a number of fronts: responsibility for decisions, managing family issues, studying in a different educational system and adjusting in a radically different social and cultural environment. These matters require intense support for SFIS and participants are offered several ideas to improve the universities' coordination in offering information and assistance. Responses to the recommendations from the reader will assist in both improving this study, and hopefully the future experiences of many other Saudi women students in Australia.

Further Resources

For more reading on this topic, see:

Binsahl,H. ,Chang,S. & Bosua, R. (2015). Exploring the factors that impact on Saudi female international students' use of social technologies as an information source. *PACIS Pacific Asian Conference on Information Systems.*

Binsahl, H., Chang,S., & Bosua, R.(2015). Identity and belonging: Saudi female international students and their use of social networking sites. *Journal of Migration and Culture*.

Binsahl,H., Chang,S., & Bosua,R. (2015). Information-seeking challenges when moving across cultures: The case of Saudi Female International Student in Australia. *ISANA International Academy Association Conference*. Awarded 'Best Conference Paper'.

Appendix 9: Study 2- Participants' Demographic details

Participant Code	Age	Region	Accompanied members	Degree Completed	Discipline	Employment status	length of return back	Period in Australia
R1	31	Hijaz	Husband and children	Masters	Marketing	Unemployed	16 months	7years
R2	23	Najd	Brother	Bachelor	Law	Unemployed	8 months	8 years
R3	46	Najd	Husband and children	PhD	Arts	Employed	8 months	8 years
R4	32	North	Husband and children	Masters	Education	Unemployed	15 months	4 years
R5	31	Najd	Husband and children	Masters	Marketing	Unemployed	5years	3years
R6	34	Hijaz	Husband and children	PhD	Health	Employed	18 months	8years
R7	31	Hijaz	Brother	Masters	Computer Sc.	Unemployed	3 years	6 years
R8	25	Hijaz	Husband	Bachelor	Graphic design	Unemployed	3 months	5years
R9	31	Najd	Husband and children	Bachelor	Finance	Unemployed	14 months	7 years
R10	33	Hijaz	Husband and children	Diploma	Arts	Unemployed	2 months	6 years
R11	35	Hijaz	Husband and children	PhD	Health	Employed	4 months	7 years
R12	30	Hijaz	Brother	Masters	Education	Unemployed	16 months	3 years
R13	32	North	Husband and children	Masters	IT	Unemployed	4 years	3 years
R14	23	East	Husband and children	Diploma	Graphic design	Unemployed	3 months	3 years
RR15	30	East	Husband and children	Masters	Health	Unemployed	4months	2 years
R16	40	Hijaz	Husband and children	PhD	Fashion	Employed	2 years	6 years
R17	33	Hijaz	Brother	ELICOS	English	Unemployed	8 months	8 months
R18	36	South	Husband and children	Masters	Mathematics	Unemployed	4 years	4 years
R19	27	North	Brother	Master	Health	Employed	5 months	3 years
R20	34	Najd	Husband and children	Master	Science	Employed	3 years	4 years
R21	30	North	Husband and children	Master	Education	Employed	2 years	4 years
R22	37	Hijaz	Husband and children	PhD	Health	Employed	6 months	5 years
R23	30	North	Husband and children	Master	Education	Employed	3 years	4 years
R24	32	Najd	Husband and Children	Master	Science	Employed	2 years	3 years
R25	23	Hijaz	Brother	ELICOS	English	Unemployed	Education	8 months

Appendix 10: Examples of Study 2 interview questions

Interview Questions	Examples
Specific questions about the pre-departure information needs and information sources of SFIS	- Can you tell me what information you sought before your departure from Australia? - How did you search for that information? Did you ask your personal contacts (e.g. sister, friend) or search using the internet (e.g. Google, social media. websites, forums)? What was the origin of the sources (Saudi, Australian, or International)? Which language did you use for your search? What were the challenges you faced, if any, when you were seeking your answers?
Questions about the impact of the Australian cultural and digital transition experience on Saudi female graduates' ISB	- Can you tell me how the transition to Australia impacted on your ISB? Did you notice any changes in your ISB when you were living in Australia (the media for networking with friends, language you used when sourcing information, source preferences) from your ISB before you came to Australia? How and why? - If you experienced any changes in your ISB resulting from your exposure to the Australian cultural and digital environment, could you tell me the reasons behind the change?
Questions about ISB challenges returned SFIS experienced after moving back to the Saudi Arabian cultural and digital environments	- Now that you have spent time back in Saudi, have you faced any transitional challenges related to the way you seek your information? - How would you describe your ISB since you returned? Is it more similar to your behaviour when you were in Australia or to your behaviour when you were in Saudi before you went to Australia? - Are any changes in your ISB patterns and practices, what do you think the changes are, and how have they changed from what you used to do when you were in Australia? - What are the factors which may lead to changes in your ISB? - Could you please give any suggestions and recommendations to both Saudi and Australian decision makers (e.g. Ministry of Higher Education, Australian universities and information providers…etc.) that may help future Saudi female students not to face the transitional challenges (e.g. information, career or educational challenges) you faced before, during and after your scholarship lifetime?

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