LONGING AND BELONGING: A STUDY OF ACCULTURATION AND ENCULTURATION OF ETHNIC AUSTRALIAN STUDENTS AND ITS INFLUENCES ON PSYCHOSOCIAL CONSTRUCTS

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Dedicated to all those who have sought and seek a more promising future in
Australia.
STATEMENT OF AUTHENTICATION

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

....................................................

(Signature)

Nyrie Nalbandian

August, 2016
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“Sometimes you have to let a person go so they can grow. Because, over the course of their lives, it is not what you do for them, but what you have taught them to do for themselves that will make them a successful human being” (Marc Chernoff, 2012).

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ABSTRACT

Cross-cultural psychology researchers have revealed the psychological impacts of biculturalism, stressing the significance of adopting cultural proficiencies in both ethnic and mainstream cultures. Despite these findings prompting a proliferation of international research in both acculturation and enculturation in the last three decades, much more remains to be done to reveal the multi-faceted and intricate nature of these processes within the Australian context. Extending on the works by Miller (2007, 2010), this thesis adopted a mixed methods design to elucidate a more nuanced bilinear domain-specific model of acculturation and enculturation among ethnocultural adolescents within Australia’s most culturally diverse state, New South Wales. Additionally, the cross-sectional study examined the domain-specific relationships of these processes with a series of psychosocial and educational outcomes to inform current educational practices. To address the research gap for a reliable and valid assessment of these processes, the investigation adapted and developed a new psychometrically sound Domain-Specific Acculturation and Enculturation Measure (DSAEM). Survey data was collected among 200 secondary students attending one of four independent ethnic day schools. Students ranged from the ages of 11 to 16 years ($M = 13.48$ years, $SD = 1.31$) and consisted of 110 males and 90 females. Preliminary confirmatory factor analyses, invariance testing, as well as qualitative data, conveyed that the DSAEM holds promise as a valuable assessment tool for use within clinical and educational settings. Moreover, findings revealed significant associations between particular domains of acculturation/enculturation and various psychological and educational outcomes, providing further support for the bilinear domain-specific conceptualisation. Additionally, findings from qualitative interviews also illustrated the context-specific
and dynamic rather than static nature of acculturative and enculturative processes. Lastly, theoretical contributions as well as implications to clinical and educational practices are delineated.
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Aims

Statement of the Research Questions: Exploring Domain and Context Specificity

Research question 3.1.1: Domain specificity of acculturation and enculturation processes.

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CHAPTER 1: INTRODUCTION

“The debate over which model captures the acculturation process appropriately and whether existing instruments assess acculturation properly is still not completely resolved” (Kang, 2006, p. 669).

With an estimated 28.2 per cent of country’s residents born overseas, it is not surprising that Australia is one of the world’s most culturally diverse societies (Australian Bureau of Statistics, 2016). With over 260 different languages spoken and 270 ancestries, Australia prides itself on its multicultural identity (Department of Immigration and Citizenship, 2012). Given this cultural milieu, there is an increasing demand for new understandings about cultural processes to guide social, health, and education policies.

Culture is an integral part of an individual’s overall identity, it plays a pivotal role in identifying one’s roles and responsibilities and how individuals relate to one another. Depending on the environment, individuals are likely to develop, conserve or even disassociate with a culture. Acculturation and enculturation are two collective processes known to influence the cultural orientation of an individual or group. Acculturation can be explained as the collective changes to a cultural group or individual due to social interaction with another distinct culture (Matsudaira, 2006;
Redfield, Linton, & Herskovits, 1936; Yoon, Langrehr, & Ong, 2011), while *enculturation* is the conservation of one’s culture of origin through informal acquisition (Berry & Sam, 1997; Yoon et al., 2011). The paradox of concurrent acculturation and enculturation can be challenging but also critical to ethnocultural individuals (i.e., within the confines of this study, refers to individuals belonging to an ethnic group with a discrete culture and longer settlement histories within the country of settlement). Phalet and Schönpflug (2001) maintain that, “On one hand, cultural transmission in immigrant families is complicated by competing models and messages from the dominant culture in the host society. On the other hand, transmission is also more strongly motivated and more strenuously pursued in immigrant families as compared with non-immigrant families” (p. 186).

Given the cultural diversity within Australian society, the education sector has diversified its approach in providing independent educational services to cultural groups through cultural and religious based schooling programs. These independent ethnic day schools aspire to create the educational environments in which ethnocultural minority students are given the chance to develop and mature with the values and beliefs of their ethnoculture, in the hope of maintaining their cultural identity, whilst also developing cultural orientations toward the Australian culture. Despite aspirations to conserve the ethnoculture within these school settings, there is insufficient research examining the influence of acculturation/enculturation on the educational and psychosocial outcomes of students attending these schools. This dearth of research has been partially attributable to the lack of psychometrically sound, theoretically grounded, and contextually valid instruments which measure acculturative and enculturative processes.
Research in acculturation and enculturation has gained much attention across multiple disciplines in the last 25 years. Increased interest in acculturation and enculturation has been attributed to their relation to psychological well-being amongst cultural minorities (Hansford & Hattie, 1982; Kang, 2006; Rogler, Cortes, & Malgady, 1991; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987; Yoon et al., 2011). For example, a significant body of research from a number of countries, including Australia, has shown that acculturation and enculturation are moderating factors in the psychological well-being of ethnic minorities (Barrett, Sonderegger, & Sonderegger, 2002; Giavrimis, Konstantinou, & Hatzichristou, 2003; Roebers & Schneider, 1999; Sang & Ward, 2006; Ward, 2013). Nevertheless, current measures of these concepts are yet to overcome a series of methodological and theoretical shortcomings. Many acculturation and enculturation studies are: based on weak measures and models; fail to encapsulate contextual factors; small-scale; and sometimes inconclusive (Kang, 2006; Miller, 2007; Yoon et al., 2011). Furthermore, studies in acculturation and enculturation are plagued with inconsistencies. These are particularly evident within the conceptualisations, theories and methods employed within the research discipline. Upon review of the literature, discrepancies among the terminology, conceptual definitions, theoretical conceptualisations, samples, contextual measures, and response scales are evident. Additionally, the majority of the existing acculturation and enculturation scales are measures specific to foreign host societies (i.e., United States and China) and their respective ethnic groups, therefore there is an increasing need for multi-group acculturation and enculturation measures that can be applied to a number of multicultural societies. Hence, researchers (Hernandez, 2009; Matsudaira, 2006; Miller, 2007; Yoon et al., 2011)
have emphasised that much more remains to be done to elucidate research-derived consensus in acculturation and enculturation research.

Social psychologists have suggested that consensus needs to be achieved in regard to theoretical conceptualisations of the nature and structure of enculturation and acculturation, and measurement instruments need to be clearly established prior to the creation and implementation of interventions and policy reforms (Flannery, Reise, & Yu, 2001; Phinney, 1990; Yoon et al., 2011). As such, “the debate over which model captures the acculturation process appropriately and whether existing instruments assess acculturation properly is still not completely resolved” (Kang, 2006, p. 669). More recently, enhancements in ethno psychology research provides promising strategies to overcome existing methodological and theoretical limitations. These studies suggest that there is a greater probability of understanding the implications of acculturation and enculturation processes on psychosocial constructs by: a) targeting specific and multiple domains of acculturation and enculturation (e.g. cultural values); b) basing new measures on strong conceptualisations and theoretical models, such as the bilinear model; c) developing and utilising stronger measurement instruments; and d) encapsulating the influences of context (e.g., socio-political and ecological). Given these theoretical and methodological recommendations (Berry & Sam, 1997; Berry, 1997; Cuéllar, Arnold, & Maldonado, 1995; Kang, 2006; Miller, 2007; Ryder, Alden, & Paulhus, 2000; Tsai, Ying, & Lee, 2000; Yoon et al., 2011; Zea, Asner-Self, Birman, & Buki, 2003) the time is ripe for developing more sophisticated acculturation and enculturation measures which utilise these advances in theory and research. Accordingly, this thesis will take an individual differences approach to cross-cultural psychology to address these theoretical and methodological recommendations and overcome limitations in the extant literature.
Acculturation and enculturation have been conceptualised as unilinear, bilinear, and multidimensional cultural interaction practices which take place over a number of different group contexts (Kim & Abreu, 2001; Miller, 2007; Schwartz, Unger, Zamboanga, & Szapocznik, 2010; Stephenson, 2000; Tsai et al., 2000). Hence there has been much controversy around which theoretical conceptualisation is appropriate. The bilinear multidimensional and more recently, the bilinear domain-specific models of acculturation and enculturation have been of great heuristic value in research and have cultivated new ways for culture research. Literature which supports the bilinear multidimensional structure of acculturation and enculturation (e.g., Cortés, Rogler, & Malgady, 1994; Felix-Ortiz, Newcomb, & Myers, 1994; Mendoza, 1989; Miller, 2007; Miller, Yang, Hui, Choi, & Lim, 2011; Ryder et al., 2000; Stephenson, 2000; Tsai et al., 2000; Zea et al., 2003) indicates that these concepts cannot be adequately understood if their bilinear multidimensional nature is overlooked. The bilinear (alternatively known as the bidimensional) aspect of the model recognises that the culture of origin is independent of the mainstream culture, meaning that one can develop a new culture whilst preserving the culture of origin. The multidimensional facet simply refers to the various areas (values, knowledge, language, etc.) in which acculturation may take place. The advanced bilinear domain-specific conceptualisation denotes that acculturation and enculturation processes take place across various internal (i.e., identity and values) and external (i.e., language, knowledge and behaviours) domains. Further to this, the model hypothesises that each of these distinct domains account for the cultural orientation processes and most importantly, each of these domains must be differentiated when conceptualising acculturation and enculturation (Miller, 2007, 2010).
As part of a mixed methods study, this thesis presents a newly devised Australian acculturation and enculturation measure based on this advanced bilinear domain-specific conceptualisation. Furthermore, by adopting a mixed methods research design, the investigation addresses recommendations by Berry (1997) to encapsulate the role of context to embody the nature of acculturation and enculturation processes. These enhancements in measures, combined with recent developments in multidisciplinary theory and methodology, have provided the foundations for overcoming previous limitations within acculturation and enculturation research. By ensuring the strong linkage between measurement instruments and developments in theory, this study aims to build upon previous culture-specific and contextually limited findings across acculturation and enculturation studies for Australian ethnocultural communities. The following investigation develops, and adapts for use in Australia, reliable and valid acculturation and enculturation measures based on recent advances in research to theoretically conceptualise and test the nature, structure, and relation of these constructs to each other and to other psychosocial drivers of life potential. This thesis will present three synergistic studies which offer directions for future research, theory and practice. Study 1 aims to develop psychometrically sound and developmentally appropriate acculturation and enculturation measures for ethnocultural adolescents. The study creates valid instrumentation to advance this field of research and elucidate within-construct structure of these processes. Study 2 aims to investigate the relations between acculturation and enculturation and academic self-concept, academic motivation, multiculturation, and school belongingness, by adopting a sophisticated quantitative research design. Study 3 aims to elucidate the domain-specific as well as context-specific nature of
acculturation/enculturation. The study conducts qualitative interviews with ethnocultural adolescents attending ethnic day schools, to extend as well as methodologically triangulate the findings of Study 1.

This investigation has the potential to provide valuable insights into the nature of acculturation and enculturation which can guide future research and prospective political, social, and educational policies. Key strengths of the present thesis include: a) explicating the relation and potential impact of acculturation and enculturation processes on key psycho-social drivers of potential (e.g. academic self-concept; academic motivation); b) identifying the nature of acculturation and enculturation across ethnocultural adolescents; c) extending quality research to understudied minority groups; d) informing schools and communities of research findings for the enhancement of school programs, implementation of clinical interventions, and future policy developments; e) providing clinicians and researchers with theoretically grounded and psychometrically sound tools to measure domain-specific acculturation and enculturation; and f) contributing conceptual and theoretical advances to promote the value of ethnicity and multiculturalism throughout Australia.
CHAPTER 2: CONTEXT AND THEORY IN THE DYNAMICS OF
CULTURAL CONTINUITY AND CHANGE

Introduction

There is widespread agreement amongst researchers that there is an intricate pattern of continuity and reform in how individuals go about managing in a new society (Berry, 1997; Phinney & Ong, 2007). Although many studies have examined the adaptation of first generation immigrants, there is a paucity of research on these experiences among progressive immigrant generations, particularly within Australia. More specifically, the implications of adaptation on culture, both at the level of the group and the individual are yet to be examined using psychometrically sound domain-specific measures. Much of this can be attributed to the theoretical and methodological gaps which exist in acculturation and enculturation literature. Testable models of the nature and structure of acculturation and enculturation have been dubious and the point of much controversy across multiple disciplines (i.e., sociology, anthropology, psychology etc.). This is a limitation in that theory, research, and practice are all inextricably intertwined and any weakness in one area will affect the others.

Central to this chapter are theories of acculturation and enculturation across immigrant generations. Initially, this chapter will provide contemporary theoretical
definitions of concepts central to the current investigation as these concepts are often used interchangeably with one another, misconstruing their true meanings both within academic literature and society in general. The theoretical conceptualisations, frameworks and models of acculturation and enculturation will be reviewed and their underlying assumptions analysed and critically reviewed.

**Conceptualising and Defining Acculturation and Enculturation**

The theoretical definition of acculturation has been a contentious issue in a number of research fields such as psychology, sociology, and anthropology. The first definition of acculturation, proposed by Redfield et al. (1936), maintains that, “Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture patterns of either or both groups” (p. 149). Referring to Redfield et al.’s (1936) definition, Sam (2006) identifies three main ‘building blocks’ in the process of acculturation, these are contact, reciprocal influence, and change. An important precondition of acculturation is contact between two cultural groups or individuals from these groups who meet in a ‘constant’ and ‘direct’ manner. Nowadays, with advances in technology there are many ways for individuals or groups to interact (e.g., social networking, e-mail, or through the media; see remote enculturation), however the distinctive features of acculturative contact is that they must be ‘constant’ in that the contact needs to be over a sustained period of time (at least 24 hours); and ‘direct’ meaning within the same time and space (Sam, 2006). This direct contact does not refer to second hand contacts such as the experiences of another individual who may have been exposed to another culture or through indirect contact such as e-mail communication.
The second building block of acculturation is the *reciprocal influence*, which refers to changes that occur within the original cultural patterns amongst cultural groups (or individuals from these groups) as a result of direct contact (Sam, 2006). While Redfield et al.’s (1936) definition entails a mutual cultural influence across both groups, the reality of power differences across each of these groups means that one group usually has more of an influence on the other (Sam, 2006). For instance, members of an ethnocultural group would have greater power over newly arrived immigrant groups, as members of the ethnocultural group would be more familiar with the language and cultural norms of the host society culture, whilst also establishing social and professional networks.

The final building block of acculturation is *change*, which entails a ‘process’ and an ‘outcome’. The ‘process’ refers to ‘how’ acculturative changes come about, while the ‘outcome’ refers to ‘what’ changes occurred during the acculturation process (Sam, 2006). While the current cross-sectional study is appropriate to examine the ‘outcome’ question, it is not an appropriate research design to address the ‘process’ questions in acculturation research, which a longitudinal research design is better suited (Sam, 2006).

Even though Redfield et al.’s (1936) stance clearly emphasised the phenomenon of acculturation at the group level, Graves (1967) argued that acculturation also takes place at the level of the individual, establishing a new area of research currently known as *psychological acculturation*. Graves (1967) refers to psychological acculturation as the changes experienced at the level of the individual as a result of being in contact with other cultures, or participating in the acculturation that is occurring within one’s own culture. However, while acculturation may have a significant effect at the group level, this does not necessarily denote a significant
effect at the level of the individual within the group, as the degree to which individuals partake in these group changes may vary (Berry & Sam, 1997). Since this claim, counselling psychology research has focussed on psychological acculturation at the level of the individual as opposed to the group level (Yoon et al., 2011).

Enculturation is one form of cultural transmission (i.e., the teaching and learning of culture across progressive generations; Cavalli-Sforza & Feldman, 1981), which entails the acquisition of culture through interactions (i.e., school, play, family) and observations (i.e., listening and watching others engage in language or traditions) with others and their environment, with much of the learning commonly taking place without formal training (Berry, Poortinga, Breugelmans, Chasiotis, & Sam, 2011; Berry, Poortinga, Segall, & Dasen, 2002; Ferguson, Costigan, Clarke, & Ge, 2016). The outcome of this form of cultural transmission is competence in various facets of culture which may include language, traditions and values (Berry et al., 2002). In more traditional conceptualisations, enculturation occurs in childhood through vertical transmission (i.e., parental influences); oblique transmission (i.e., by socialising and interacting with other adults and institutions from the same ethnic culture) and horizontal transmission (i.e., by socialising and interacting with peers from the same culture; Berry et al., 2011; Cavalli-Sforza & Feldman, 1981; Ferguson et al., 2016). However, according to Ferguson and colleagues (2016), this conceptualisation is outdated and partially encapsulates the means in which individuals acquire and maintain their ethnic culture. Instead they propose remote enculturation, that is, the acquisition of culture from a distance through the means of ICT (i.e., Skype, satellite television, internet), holidays to the country of heritage, or exposure to traditions and foods. This form of enculturation is particularly relevant for individuals being raised outside of their family’s country of origin, particularly
when ethnic communities are small or non-existent, making it more difficult to have direct interactions with others from the same culture (Ferguson et al., 2016). Alternatively, individuals with access to larger ethnic communities provide individuals with the opportunity to enculturate through both the traditional and remote processes (Ferguson et al., 2016). As this process is a new field of inquiry, research on remote enculturation is scarce. However, like traditional forms of enculturation (e.g., Umaña-Taylor, Zeiders, & Updegraff, 2013), Ferguson et al. (2016) also hypothesise that remote forms of enculturation will also strengthen an individual’s cultural identity as well as family ties.

In sum, the current thesis defines acculturation as a process by which individuals experience cultural change as a result of continuous first hand contact with other cultures (Miller, 2007). Distinct from this process, enculturation is defined as the maintenance of the culture of origin (Miller, 2007). Thus the fundamental differences between these constructs lies the culture of focus (i.e., new versus existing) and the process (i.e., change versus adherence). Despite earlier conceptual models which placed acculturation and enculturation as two opposing processes, with each construct at either end of a unilinear continuum, current bilinear literature defines these processes as independent of each other instead of opposing. This is largely because acculturation has been shown to take place independently of enculturation (Cortés, Rogler, & Malgady, 1994; Felix-Ortiz, Newcomb, & Myers, 1994; Mendoza, 1989; Miller, 2007; Miller, Yang, Hui, Choi, & Lim, 2011; Ryder et al., 2000; Stephenson, 2000; Tsai et al., 2000; Zea et al., 2003). This progressive argument is explicated further within Chapter 3.
Plural Societies

Over time, through the processes of globalisation and acculturation, societies such as Australia have become culturally plural. Culturally plural societies are those which host individuals from diverse cultural backgrounds, forming a multicultural society (Berry & Sam, 1997). Cultural groups within plural societies are not equal in power, giving rise to terms such as minority groups versus majority groups; and dominant versus non-dominant groups. To represent these differences in power, the current thesis will refer to immigrants and their progressive generations as ethnic or ethnocultural groups interchangeably with minority groups, while the national culture will be referred to as the host society culture interchangeable with the majority culture.

Acculturating Groups

All individuals living in a plural society experience some form of acculturation (Berry et al., 2011). Research in acculturation has focused particular groups of people, who are assumed to experience the most acculturation within culturally plural societies. These groups include refugees, asylum-seekers, sojourners, immigrants, expatriates, Indigenous people and finally ethnocultural groups. According to Berry et al. (2011), groups within plural societies were introduced in accordance with three factors: voluntariness, migration, and permanence. Voluntariness, refers to when individuals/groups find themselves in a plural society because they have sought out the arrangement voluntarily (e.g., international students) or because it was forced upon them (e.g., refugees; voluntary vs. involuntary). Migration, refers to the settlement of individuals/groups in a plural society who are far from their ancestral territory (e.g., expatriates), while others have
remained on home land (e.g., Indigenous people; sedentary vs. migrant). Finally, permanence refers to individuals/groups that have settled in a plural society indefinitely (e.g., migrants).

Current research on acculturation has stemmed out of an examination of the effects of European dominance over Indigenous peoples. Focus then shifted to changes experienced by immigrants whilst entering and later settling into a new society. The most recent focus has been on how various ethnocultural groups relate to and influence one another within plural societies (Berry, 2005). It is imperative to recognise that each acculturating group varies in power, size, resources, and rights, with each having a considerable influence on how groups/individuals within them engage in the acculturation process (Berry et al., 2011). Furthermore, the attitudes, motives, values, and abilities (psychological characteristics) of individuals within these groups is also highly variable (Berry et al., 2011), also influencing the acculturation and intercultural relations which are likely to take place within the host society. As the current study centres on ethnocultural groups within Australia, the following section will provide an overview focussing on two acculturating groups of interest, known as the immigrant and the ethnocultural groups.

**Immigrant Groups**

Characterised by groups of acculturating individuals who voluntarily move from one society to another on a permanent basis, immigrant groups are expected to have a comparatively easy acculturation experience and positive adaptation outcomes, especially when compared with refugees (Berry & Sam, 1997). Berry et al. (2011) explained that the ‘push factors’ (those factors which pressure them to leave) are much stronger amongst refugees when compared to immigrants, while the
‘pull factors’ (those factors which attract them to a new society) are much stronger amongst immigrants when compared to refugees. Pull factors, such as the yearning for improved social settings and quality of life, play a major role in attracting immigrants to a new society (Berry et al., 2011). Other motives for migration include employment opportunities, education, social, family, and community ties (Berry et al., 2011). Thus, immigrants are looked upon as ‘voluntary’ members of plural societies as they have moved not by force but by choice, usually in search of a better life (Berry et al., 2011).

**Immigrant adaptation in Australia.** As described by the Department of Parliamentary Services (2010) report, the first immigrants in Australia can be dated back to 1788, with the arrival of the first settlers and penal colonies. The early nineteenth century saw the arrival of more free settlers chiefly from Britain and Ireland. However, the Gold Rush brought an influx of immigrants from the Asia Pacific region, introducing Chinese miners and their families into an imagined ‘white’ community (Hage, 2000). Over the turn of the nineteenth century, immigration from the Asia Pacific region continued, and with the introduction of European immigrants, cultural diversity further increased within Australia. It was at the turn of the twentieth century with the introduction of the White Australia Policy that immigration patterns endured a dramatic shift. The report illustrated restrictions which were imposed on non-European migrants and in conjunction with the two World Wars and the Great Depression, immigration within Australia declined dramatically. Reform in immigration policies post World War II, overturned these trends and Australia soon welcomed a much needed increase in its labour force. During the Post Second World War period, Australia had become home for well over six million migrants and humanitarian applicants (Department of Parliamentary
Since this time, settlement of these applicants has largely been influenced by three government policies: the Assimilation Policies of 1947; the Integration Policy of the 1960s and 1970s; and the Multiculturalism Policy which resonates to this day (Department of Parliamentary Services, 2010).

The report notes that due to the strong demand for labourers at the end of the Second World War, the Australian Government introduced policies which increased migration in Australia. These policies largely favoured British migrants and European refugees. These migrants entered into a fundamentally Anglo-Australia, which was largely influenced by the White Australia Policy. The report indicated that these migrants were expected to assimilate by learning the national language and adopting the culture. Essentially the goal of the policy was to make these migrants indistinguishable from the Anglo-Australians. In the face of this policy, there were many differences placed between British migrants and non-British migrants: British migrants were treated as equals to Australian born citizens, while non-British migrants were considered to be inferior (Department of Parliamentary Services, 2010).

The Parliamentary report described social disparity between migrants from Non English Speaking Backgrounds (NESB) and those whose first language was English (mid – 1960s), with many NESB migrant groups facing poverty. Difficulties in the Australian schooling system, employment opportunities, and shortages in housing plagued NESB migrant groups (Department of Parliamentary Services, 2010). Additionally, exclusions from the aged pension and other welfare benefits also contributed to the adversity. It was at this time that the Australian Federal Government recognised the discriminatory nature of these assimilationist immigration policies, prompting reform of the White Australia Policy and the
introduction of the Racial Discrimination Act, essentially outlawing discrimination based on ethnicity (Department of Parliamentary Services, 2010). The revised policy recognised the need for equality amongst the way migrant groups were received in Australia and also recognised that the expectation that migrants would abandon their ethnic language and culture was far from realistic (Department of Parliamentary Services, 2010). The late 1960s to the mid 1970’s saw the introduction of policies adopting integration strategies for immigrants and the abolishment of the White Australia Policy altogether (Ward & Mak, 2016). The integration policies recognised that migrants who become part of the host society (i.e., Australia) should not have to renounce their ethnic culture and heritage. Furthermore, the reforms recognised the need for more immigration resources and self-help programs to meet the needs of Australian migrants (Department of Parliamentary Services, 2010).

By the late 1970’s, multiculturalism was introduced into migration policies led by the recommendations made in the Galbally (1978) report. Today multiculturalism is used to reflect the cultural, linguistic, and ethnic diversities within Australia. The multiculturalism policy attends to the possible challenges and the prospects presented by cultural diversity within Australia. Nowadays the policy is based on the four fundamental principles of: civic duty, which requires the social structures and principals to be upheld by all Australians; cultural respect, which provides Australians of various ethnicities to express their cultures, traditions, and religions whilst allowing others to do the same; social equity, which enables Australians to live a life free from discrimination and enforces equity in the treatment and opportunities of all persons regardless of language, gender, race, religion, and culture; and productive diversity, which allows Australians to enjoy the fruits of diversity, by maximising the social and economic advantages that diversity presents
Australian migration policies have evolved over the last century, not only influencing the ever changing visage of Australia, but also the settlement experience for its migrants.

According to a public opinion analysis conducted by Markus (2011) Australian’s continue to maintain a favourable standpoint on multiculturalism. However, the report also outlined a public preference for migrants to adopt the Australian way of life and depart from their ethnic or traditional ways, indicating a preference for an assimilationist acculturation strategy (Markus, 2011; Ward & Mak, 2016).

**Ethnocultural Groups**

The current study largely focuses on acculturation and enculturation which take place among ethnocultural students, as they strive to maintain their cultural heritage in the face of increasing ethnic diversity within New South Wales (NSW), where massive intercultural contact is taking place. Berry et. al. (2011) refer to ethnic groups with discrete cultures and longer settlement histories within the country of settlement as ethnocultural groups. This can best be described as clusters of people who have established themselves within a plural society and are the descendants of immigrants who have established themselves into recognisable groups with a sense of their native backgrounds (Berry et al., 2011). These groups can be sustained with either continual migration of people from the same cultural background or sometimes exist independently of migration flows with their strong sense of ethnic culture (Berry and Sam, 1994).
According to Berry and Sam (1994), of all the aforementioned acculturating
groups, the ethnocultural group has the fewest problems adapting as the groups are
fairly sedentary and are usually settled into the new society on a voluntary and
permanent basis. These progressive generations of immigrants are raised in an
acculturative environment and interaction with multiple cultures is the norm.

Studies have shown that conservation of ethnic identity and culture
(enculturation) are leading concerns of ethnocultural groups (e.g., Berry & Sam,
1997; Phinney, 1990). Berry and Sam (1994), suggest that the cause behind this may
be attributed to the choices of identity available to progressive generation
immigrants. For instance, first generation immigrants have a stronger sense of
identity, whereas their children are in a situation where they would have to make a
decision on how they would like to identify themselves, by their ethnic identity (e.g.,
Greek), by their national identity (e.g., Australian) or a combination of these (e.g.,
Greek – Australian). The current study examines patterns of continuity and change
across four ethnocultural groups, Armenians, Greeks, Jewish people, and Lebanese.

Armenians in Australia

The settlement of the first Armenian settlers in Australia can be dated as far
back as the 1850s during the Gold Rush. The prospect of wealth and opportunity in
Australia drew Armenians from Calcutta during this time, but this did not initiate a
mass Armenian settlement. During the First World War, a small group of Armenians
sought refuge in Australia away from the atrocities (e.g., Armenian Genocide) taking
place in their homeland. However, it was not until the early 1960s that Australia
welcomed a mass migration of Armenians. Interestingly, many of these Armenians
emigrated from Middle Eastern countries. The migration of Armenians from Egypt,
Syria, Lebanon, and Iran to Australia is largely considered to be involuntary. Much of the movement has been attributed to the political instability within the Middle East with the growth of nationalistic governments (Kirkland, 1984). By 1966, it is estimated that 10,000 Armenian Diasporians had made Australia home. The attraction to Australia was largely brought about by the presence of family members and friends who had established themselves during earlier periods. A study by Kirkland (1985) showed that 83% of Armenians in this study, chose to settle in Sydney for various reasons. Some had family and friends located there, others were lured by employment prospects, the climate, or the establishment of the NSW Armenian community. Representing the core of Armenian heritage the first Australian-Armenian Apostolic church was established in the Sydney suburb of Chatswood. The establishment of the first Armenian Church in Australia initiated the first settlement of new arrivals and the resettlement of many Armenians to the North Shore area of Sydney. The increasing Armenian presence in the North Shore also began the launch of many Armenian organisations including the establishment of the first Armenian Sunday School. The North Shore was soon known as the ‘Armenian Centre’, the heart of the Armenian community in Sydney. Despite this, over time, factors such as the socio-economic differentiation and the housing market in Sydney instigated further dispersal of Armenians across Sydney with settlement in the Lane Cove and Ryde areas. Nonetheless, Armenians all over Sydney continue to travel to the North Shore to engage in their culture and ethnic enculturation and socialisation through the means of Armenian organisations which have been established since mass migration in the early 1960s. Today Australia is home to over 60,000 Armenians and maintains and conserves its cultural roots through Armenian day
schools, strong religious and ethnic programmes which include, sporting organisations, youth groups, charities, and folkloric dance lessons.

**Greeks in Australia**

Greek-Australians first arrived in NSW, Australia as far back as the 1810s and today make a significant contribution to the cultural diversity within the state (New South Wales Heritage Office, 2001). By the 1910s the Greek communities inhabited urban areas including Redfern, Newtown, Paddington, Balmain, and Manly. With subsequent migrations, the majority of Greeks today reside in the Canterbury, Marrickville, Rockdale, Botany, and Kogarah areas.

Greek emigration can be dated as far back as the ancient times. Today Greek communities span the globe, with the largest diasporian community in the United States, followed by Australia, the former Soviet Union, and Canada. With a lengthy history of emigration, over time the Greeks derived the phrase ‘*Mavri Xenitia*’, which translates to ‘black foreign land’, to express their departure and longing of the homeland (New South Wales Heritage Office, 2001). This expression was derived as Greeks have generally been ‘pushed’ out of their homeland due to unfavourable political and economic conditions in the country. Prior to World War II, Greek migration was slow and steady with an estimated 2,000 to 3,000 Greeks residing in NSW, this small settlement being the birthplace of the ‘Greek ethnic community’ in Sydney. However, this pattern of migration changed post World War II, with an unprecedented number of new Greek arrivals building and transforming the communities throughout the state. Between 1947 and 1954 the Greek-born community in Australia rose to over 25,000 and by 1961 had reached to over 77,000
individuals (New South Wales Heritage Office, 2001). This Post World War II period also saw the establishment of Greek cultural and ethnic organisations.

As the Greek migrants valued their language and culture as part of their Greek-Australian identity, many Greeks thought it was crucial for their children to learn the Greek language while also appreciating their history, religion, and culture. Thus Greek schooling was established in 1914, comprising of a separate organising body, curriculum, and teaching staff (New South Wales Heritage Office, 2001). The Greek schools provided students with opportunities to: establish stronger Greek ethnic ties with the ethnocultural community; preserve linguistic and cultural traditions across generations; and alleviate the generational divide with their parents and grandparents (New South Wales Heritage Office, 2001). In addition to pioneering Greek schooling in Australia, the community has also established strong religious and ethnic programmes, youth groups, charities, folkloric dance lessons, and other activities throughout Australia.

**Jewish People in Australia**

According to a report by the NSW Jewish Board of Deputies (2013), the first Jewish people arrived as early as 1788 with the first fleet of British ships. It is reported that the human cargo included eight to fourteen Jewish convicts. In more recent migration history, Jewish settlers have arrived from multiple regions from around the world. Between 1933 and 1961, migration of Jewish people spiked, with large arrivals from Europe many of whom were trying to escape Nazism (NSW Jewish Board of Deputies, 2013). This resulted in the establishment of synagogues, Jewish day schools, Jewish community organisations, and welfare societies aimed at aiding the integration of immigrants whilst also continuing their strong commitment
to Israel (Jerusalem Centre for Public Affairs, 2006). The 1970s saw three arrivals of Jewish immigrants, these were all attributable to a series of push and pull factors. The arrival of Jewish refugees from the Soviet Union arrived through a number of different programs such as the Special Humanitarian Programme. Push factors for this group included the Soweto uprising in 1976 and the Sharpeville massacre of the 1990s (Jerusalem Centre for Public Affairs, 2006). Despite establishing a strong Jewish diaspora in Australia, some Jewish people from Israel had very strong ideological and emotional ties with their homeland; so strong were these ties that an estimated 10% of the Australian Jewish population made aliyah (emigrated to Israel).

Perhaps some of this emigration can attributed to the current issues faced by the Jewish-Australian community. A report prepared by Jeremy Jones, for the Jerusalem Centre for Public Affairs (2006) outlines that the Jewish communities face a number of internal and external challenges. Internal challenges include meeting the needs of the growing aging population within the community, while external challenges include terrorist threats and anti-Semitism. In more recent times the Jewish community has been at the forefront in combating racist activities. Despite these efforts, racism against other minority groups such as Asian, Indigenous or Arab/Muslim Australians has resulted in a simultaneous increase in incidents of anti-Jewish violence and terrorization (Jerusalem Centre for Public Affairs, 2006). Fortunately the Australian Government has since responded to these incidences with increased support from counterterrorism agencies whilst also changing legislation to protect all Australians from such threats (Jerusalem Centre for Public Affairs, 2006). These ‘push’ factors may have played a significant role in the emigration of Jewish-Australians.
Even so, Sydney is host to about 40,000 members of the Jewish Australian community, with the two-thirds residing in the Eastern Suburbs of Vaucluse, Randwick, Bondi, and Double Bay areas, close to the Jewish Community Centre and other Jewish community facilities and organisations. The remaining members of the community settled in the Northern Suburbs, generally between the Chatswood to St Ives areas (NSW Jewish Board of Deputies, 2013). With its strong connection to Israel and continued traditions and organisations, the Jewish Australian community continues to contribute and enhance Australian multiculturalism. The community has also established strong religious and ethnic programmes, youth groups, and charities which facilitate the conservation of the Jewish religion.

It is important to note that like Armenians, the Jewish identity is multifaceted, with many Jewish sub-cultures existing as a product of the Israeli diaspora. Brought on by mass expulsion and migration, the notion of ‘Jewish culture’ continues to be contested since the Twentieth Century (Gilman, 2011). For the purposes of the current study the term “Jewish culture” will encapsulate two subcultures including both the Ashkenazi Jews (European Jews) and the South African Jews (as these were the only two Jewish subcultures which made up the Jewish participant pool).

**Lebanese in Australia**

Beginning in the 1880s, Lebanese settlement has a long history in Australia. Although Lebanese migrants settled all over the country, the majority of the immigrants settled in NSW. Lebanese immigration has been divided into three waves: the first took place from the 1880s until the beginning of World War II; the second took place post World War II; and the third spanned the period between 1976 until 1990 during the Lebanese civil war (Migration Heritage Centre, 2008).
According to the Migration Heritage Centre (2008), all three waves of migration were influenced by a series of ‘push’ factors which influenced mass migrations. These push factors included: Turkish oppression; conflict between the Christians and the Druze (1860s); exploitative feudal system; studying abroad; the poor state of the economy; and the lack of land available to citizens. In addition, ‘pull’ factors, such as positive reports of successful migration of family and friends and reports of opportunities in Australia, prompted chain migrations.

Today there are many Lebanese enclaves within NSW, and can be found in the South Western Suburbs region (specifically Campsie, Lakemba, Bankstown and Canterbury); the Hornsby/Thornleigh areas; and the Parramatta and Harris Park areas. Since settlement in these regions, the Lebanese-Australian community has established a number of ethnic, cultural, and religious organisations throughout NSW, the most well-known of which is the Our Lady of Lebanon Maronite Church which comprises its own community hall, school, village, and youth associations which were established in 1972. A characteristic of the Lebanese community in NSW is its diversity of religions. Contrary to the other ethnocultural groups, the Lebanese community is “not a single harmonious and united community… rather a collection of distinctive religious communities bound together by the natural understanding that other communities are different and cannot be trusted” (Migration Heritage Centre, 2008, p.28). The Lebanese migrations prior to 1947 were primarily Christian (mainly Maronite, Melkite, and Orthodox) in origin with a handful of Muslims. However, this changed post World War II, especially after the civil unrest in the 1970s, with one third of all Lebanese in NSW now Muslim. These arrivals saw the establishment of the Imam Ali Mosque in Lakemba and the establishment of the Lebanese Moslem Association (LMA) in 1956 which oversees religious and youth
services, including the operation of seven high schools. For the purposes of the current study the term “Lebanese culture” will encapsulate only those Lebanese of Maronite Christians backgrounds. This group was of particular interest as they have longer histories as a result of earlier migration and settlement within NSW.

Significance and Implications for the Current Study

Studying ethnocultural groups is a significant pursuit for a number of reasons. First, much of the existing research initiated by the Federal and State Governments regarding settlement of immigrants, has been problem-orientated: focused on policy reform with the exclusion of minority ethnic populations, such as the Armenians (Kirkland, 1984). A great deal of the available information on these four ethnocultural groups is generated by the group themselves, and as such, official statistical or governmental reports concerning these immigrant groups within Australia are scarce.

Second, the Armenians are not the most prominent ethnic group within Australia, as they have an estimated population of only 60,000 Armenians, with New South Wales hosting the largest population of the Armenians in the country. Due to the relatively small populations, acculturation research on this group has been overlooked.

Third, with lengthy histories of emigration, both Jewish people and Armenians in Australia have not necessarily emigrated from their national countries of origin; rather many have lived in the Middle East and parts of Europe. Consequently, many of the official records on migration have identified Armenians as Iranians, Lebanese, or Egyptians, and Jewish people as Polish, South African or Russian. Even with multiple migration experiences across generations, the Armenian
and Jewish identities remain salient, making these ethnocultural groups particularly interesting to study.

In contrast to these smaller ethnocultural groups, the Lebanese and Greek communities within NSW have a much stronger presence in Australia. As these two communities are larger in size, State Government reports are more accessible. In NSW alone 132,773 individuals identified themselves as having Lebanese ancestry while only 55,778 individuals were born there (Australian Bureau of Statistics, 2006; Migration Heritage Centre, 2008). Furthermore, an estimated 181,751 individuals claim to have Lebanese ancestry with 86,599 Lebanese born individuals in Australia, making up 2.3% of the NSW population (Australian Bureau of Statistics, 2006). Interestingly, many studies of these groups revolve around first generation immigrants. However, given that a large portion these ethnocultural group members have not experienced migration first-hand, inquiries to explicate processes facilitating cultural continuity across post first generation ethnocultural group members is scarce (i.e., in Australia) and further inquiry into this field of research is deemed necessary.

The current study will collectively investigate the individual differences in acculturative and enculturative experiences of these understudied ethnocultural groups in Australia, whilst also expanding the breadth of existing acculturation and enculturation theory. It is only by exploring multiple ethnocultural groups that researchers can better understand the complexities, patterns, and contrasts of acculturation/enculturation and their products. The current study will create a survey tool for use within these ethnocultural groups to more sensitively examine cultural continuity (i.e., enculturation) within them, as well as understand how they acquire and adapt to the Australian culture. The current investigation provides ethnocultural
groups with their accounts of enculturation as a cultural transmission process, allowing them to devise more effective initiatives to maintain their cultural heritage, thus, enabling all Australians to relish the fruits of a diverse society for many generations to come.

**Cross-Cultural Psychology: The Interpretive Position of the Current Investigation**

Currently, there are three fields of psychology which conduct research on culture: (a) cross-cultural psychology, (b) cultural psychology, and (c) Indigenous psychology (Berry et al., 2011; Greenfield, 2001). Embedded in the notion of universalism - the theoretical position that all human beings share basic underlying psychological processes (and that culture may influence how these are developed and exhibited) – cross cultural psychology studies take place in the context of the culture of interest, with the consideration of both ecological and socio-political factors (Berry et al., 2011; Spering, 2001). Unlike cross-cultural psychology, cultural psychology is driven by the idea of relativism – that is a theoretical position which argues that culture influences behaviour in individuals and that such behaviours can only be examined when measuring or considering one’s cultural background (Berry et al., 2011; Spering, 2001). Finally, Indigenous psychology is a body of empirical research which focuses on “local psychological concepts for which there are no equivalents in English or other European languages” (Berry et al., 2011, p.19). Thus, like cultural psychology, this domain of research emphasises the notion of relativism, because the focus of this type of research is on “culturally unique psychological concepts”, essentially with the aim of overcoming western biases in psychological research (Berry et al., 2011, p. 20; Greenfield, 2001).
Stemming from these areas of psychology are three areas of debate which include: (1) the previously described relativism versus universalism; (2) culture as internal versus external to the individual; and (3) the psychological organisation of cultural differences (Berry et al., 2011). Firstly, the dichotomy of universalism and relativism continues to be contested amongst researchers, that is whether universalism emphasises the psychic unity across humans (i.e., cross-cultural psychology), or whether relativism stresses the importance and influences of culture on human behaviour (i.e., Indigenous psychology). Secondly, the debate focuses on the degree to which culture is conceptualised as internal (i.e. beliefs, values) and part of an individual, versus external – that is customary contexts (e.g., political organisations) espoused to the individual. Thirdly, the psychological organisations of cultural differences and how these have been presented have also been a point of contention. According to Berry et al. (2011), the very core of this debate focuses on the “extent to which various differences in behaviour between two cultures should be seen as related to each other or as independent from each other” (p. 9). The debate contends whether culture should be explained as a system (i.e., a comprehensive set of factors in which a cultural system creates confines to what does and does not belong to the system), or as domains (e.g., individualism versus collectivism; Berry, 1994), attitudes, cognitive abilities, customs, and practices. While explicating these debates in detail is beyond the scope of the current research, it is necessary to delineate the interpretative position of the current investigation.

The current study adopted a cross-cultural psychology approach to measuring acculturation and enculturation (acknowledging the multidisciplinary nature of these fields), with the aim of: (a) studying the variations across acculturation and enculturation, whilst considering both ecological and socio-political contexts (Berry
et al., 2011); and (b) evaluating the validity within current psychological theory across multiple contexts and making adjustments to these so that they become universal (Triandis et al., 1972, p. 1). On the first debate of universalism versus relativism, this study takes the position toward moderate universalism which is consistent with Berry and colleagues (2011). This position contends that there are fundamental psychological processes within all humans which are generally expressed similarly and some differently across contexts and that research, policy and practice must be informed by both. On the second debate, the position of this study is that there are both internal and external contextual conditions in which individuals develop certain behaviours and construct meanings and both these external and internal conditions need to be considered to attain more holistic understandings of these behaviours and their meanings. The third debate contends how cultural differences should be organised. The standpoint of this study is that while more comprehensive and multifaceted explanations of cultural processes are susceptible to empirical scrutiny (Berry et al., 2011), it allows researchers to explain cultural patterns and differences compendiously.

Conceptual Framework for Contextualizing Acculturation and Enculturation

The ecocultural framework. Initially coined the Ecological-Cultural-Behavioural model (Berry, 2011), the objective of the now ‘ecocultural’ paradigm is to examine and understand behaviours within context (Berry, 2011; see Figure 2.1). With a similar framework proposed by psychologist Bronfenbrenner (1979), the ecocultural framework aims to explain diversity in human behaviour or psychology by considering the influences of ecological (i.e., an environmental setting in which individuals interact with – in an urban-industrial society such as Australia this may
include the consideration of the socio-economic background) and socio-political (i.e., cultural norms, values and attitudes) contexts (Berry et al., 2011). Consistent with the ideas of universalism, the two key concepts used to explain this conceptual framework are interaction – which is the basis for a reciprocal relationship between the self and the ecosystem; and adaptation – which indicate the sum of changes which occur across both the self and the ecosystem (Berry, 2011; Berry et al., 2011). The strength with the ecocultural framework is that it recognises that cultures are not static, but dynamic and have the ability to change and recreate themselves over time and context and identifies that:

…no single individual possesses all of the culture of the group to which one belongs; the culture as a whole is carried by the collectivity, and indeed is likely to be beyond the biological and psychological capacity (to know or do) of any single person in the group (Berry, 2011, p. 99).
Thus, emphasising yet again the dynamic and multifaceted nature of culture and cultural processes, a more pragmatic and reasonable explanation of the cultural experience is proposed when compared to the static conceptualisations of the past.

Figure 2.1. Ecocultural framework depicts the classes of influences which are considered in cross-cultural psychology, adapted from Berry (2011). The flow of the conceptual framework is from left to right and demonstrates how variables at the level of the group can influence individuals.
where adaptation is considered to be a final static outcome. In light of the cyclic and metamorphic conceptualisations of culture and cultural processes, the current study will utilise the ecocultural framework and its three features of: (1) ecological and socio-political factors (i.e., contextual factors); (2) process variables such as acculturation and enculturation; and (3) psychological outcomes, to gain a deeper understanding of acculturation and enculturation and their relations to psychological outcomes among ethnocultural adolescents.

A Conceptual Framework for Acculturation and Enculturation Research

Extending from the ecocultural framework, Berry has also proposed one of the most widely used and recognised frameworks for studying acculturation (Berry, 1992, 2003). The theoretical framework (Figure 2.2) shows the relationships of acculturation at the level of the group and the individual (psychological acculturation). The original framework (Berry, 1992) was criticised for a number of conceptual shortcomings (see Horenczyk, 1997). Most notable was that the acculturation model focussed on the attitudes of the ethnic minority groups only, without taking into consideration the influences and attitudes of the host society culture (Ghuman, 2000). Additionally, the original model did not recognise that acculturation changes can take place by both ethnic minorities and the host society, thus implying that these acculturative changes only occur to the ethnic minority groups. Since these critiques, Berry (2003) has revised the original theoretical framework to display the reciprocal acculturative influences of cultures. These influences, which occur at the level of the individual, come about prior to cultures coming into contact with each other and during cultural contact (Sam & Berry, 2010). Specific factors which are said to moderate acculturation prior to cultural
contact include the compatibilities of: cultural values, norms, personality, demographics, migration motivations (ethnic minority culture only), socio-economic status, and attitudes across both cultures. Factors which have been known to moderate acculturation during cultural contact include: the amount of exposure to the culture (host society culture to ethnic minority culture and vice versa); the amount of social support available; and resources available. The revised framework recognises that both the acculturating individuals/groups as well as the new society contribute to a number of cultural and psychological qualities which influence the acculturation experiences of both groups (Berry, 2003).

During psychological acculturation, Sam and Berry (2010) suggest that psychological changes occur to individuals from both groups (i.e., ethnic minority and host society members). These changes have been categorised into two domains known as behavioural shifts (e.g. such as dressing, speaking or eating differently) as supported by the behavioural or cultural learning approach (discussed subsequently in this chapter), and acculturative stress (e.g., problem appraisal, stressors and stress phenomena) which is supported by the affective perspective (also discussed in a subsequent section; Berry & Sam, 1997; Sam & Berry, 2010). Furthermore, adaptation has also been characterised as either psychological or sociocultural in nature. Adaptations which are psychological may include changes to one’s self-concept or well-being, while adaptations which are considered to be socio-cultural may include the knowledge of cultural norms and values, interpersonal or intergroup relations, and the acquisition of a new language (Berry & Sam, 1997; Sam & Berry, 2010; Ward, 1996).
Figure 2.2. Berry’s framework for conceptualising acculturation, adapted from Berry and Sam (2016) and Berry and Sam (1997). The left of the framework shows acculturation phenomena at the level of the group, while the right of the framework displays acculturation at the level of the individual (psychological acculturation), one of the focuses of the current investigation. Featuring at the top of the framework at the individual level are moderating factors which exist prior to acculturation and at the bottom are moderating factors arising during acculturation. Through the centre of the framework, which flows from left to right, both the ethnic culture (Culture A) and the host society culture (Culture B) initially make contact. These bring about changes with many of their collective features (such as political and social structures), which then affects the acculturating individual. These result in a number of acculturating changes, which are either behavioural or stress related. These later proceed to an individual’s adaptation, which can be either psychological or sociocultural in nature. Berry stresses that this central section of the framework is highly variable as the resulting psychological acculturation and proceeding adaptation are influenced by group level factors as well as individual moderating factors prior to and during the acculturation process (Berry and Sam, 1997).
Essentially, the framework presents important variables that must be considered when conducting research on psychological acculturation. While Berry and Sam (1997) strongly suggest that ignoring any one of these classes of variables will result in an incomplete study of acculturation, they have recognised that there is no single study to date which has utilised and verified all the aspects of the framework which is composite in nature and has built upon numerous smaller acculturation studies (Berry & Sam, 1997).

**Theoretical Perspectives of Acculturation Theory**

The theoretical perspectives of acculturation have evolved since its classical definition by Redfield and colleagues (1936). Redfield et al. defined acculturation as, the sum of changes which occur to individuals within a group as a result of contact with a different culture. This perspective later progressed with Berry’s (1980) proposal that these changes occur through four domains: biological, physical, economic, and social. With further development of the theory, Berry (1990) indicated two levels change, these include the level of the group and the level of the individual. At the level of the group, changes affect the social structure, economic, and political organization of the group. However, at the level of the individual, changes are more likely to affect the identity, values, attitudes, and behaviours (Sam, 2006). These changes at the level of the individual are currently referred to as psychological acculturation, the main focus of the current study. With reference to psychological acculturation, Ward (2001) has documented three theoretical perspectives of change, naming these “The A, B, C’s of Acculturation”, referring to the Affective, Behavioural, and Cognitive respectively. The Affective perspective is comprised of a stress and coping theoretical framework; the Behavioural perspective
focuses on cultural learning perspective; while the Cognitive perspective refers to social identification framework (Berry et al., 2011). More recently, research has seen a push toward introducing a Developmental perspective to acculturation research. Although this has not been accepted as a theoretical framework to date, the following chapter will consider issues relevant to Developmental aspects of psychological acculturation as a new theoretical perspective by adding perspective ‘D’ to Ward’s (2001) “A, B, C’s of Acculturation” approaches (Berry et al., 2011; Sam & Berry, 2010).

**Affective perspectives: Stress and coping research.** Reflected by the works of Berry and colleagues, the affective framework of acculturation highlights the emotional features of acculturation. More specifically, the perspective focuses on the “life changes during cross-cultural transitions, the appraisal of these changes, and the selection and implementation of coping strategies to deal with them” (Ward, 2001, p. 427). Sam and Berry (2010) suggest that these life changes, which occur during such a transition, may qualify as stressors, especially when the individual has limited social capital and coping mechanisms. Thus, acculturative stress is a stress reaction in response to life changes which occur during cross-cultural transitions. However, not all cross-cultural transitions are stressful, as there are a number of moderating and mediating factors which influence a group’s and individual’s perceived acculturative experience. These moderating and mediating factors need to be considered prior to and during acculturation. Factors such as age, gender, education, and personality occur prior to acculturation, while factors such as the length of time one has resided in the host culture, the acculturating attitudes and behaviours, and the social capital tend to occur during acculturation. Drawn from the Lazarus and
Folkman’s stress model (1984), Berry founded the acculturative stress model (Berry, 1997).

These stressors are generally affiliated with newly arrived migrants. Thus, research exploring possible stressors experienced by members of ethnocultural groups and progressive generations of migrants have been scarce. However, research in bicultural identity integration (subsequent section in current chapter) has shown that individuals who possess two cultural orientations simultaneously are also susceptible to experiencing higher levels of stress and anxiety if they perceive a clash between their two cultural identities (Benet-Martínez & Haritatos, 2005; see bicultural identity integration section below).

Berry’s ecocultural framework is helpful in delineating the interactions between the acculturating individual and their ecological and socio-political environment. Parents across all cultures are social agents for ethnocultural youth, overtly and covertly teaching them the values and desirable behaviours resulting in developmental outcomes (Koepke & Denissen, 2012; Super & Harkness, 1997). Still, as ethnocultural children acculturate at a faster rate than their parents and with cultural values varying across cultures, intercultural and intergenerational conflict between parents and children may occur (Phinney, Ong, & Madden, 2000). Most commonly noted have been the discrepancies between European/American and non-Western cultural values, with European/American cultures considered to be individualist cultures and non-Western cultures labelled as collectivist (Hofstede, 1980). The collectivism values tend to have a larger emphasis on group interdependence and are generally more prominent in non-Western cultures such as the Armenians. The Armenian culture has a strong family system with children expected to stay at home until they get married and have a sense of obligation to the
family (Bakalian, 1993; Jendian, 2008). The individualism values are more consistent with those of the Australian culture, which emphasises independence, greater equality between family members and less emphasis on duty toward family. Contrary to the collectivist cultures, young adults are encouraged to move out of the home, even though this is becoming increasingly difficult to achieve due to financial constraints (i.e., sharp increase in property prices; Phinney, Ong, & Madden, 2000). When migrant families from collectivist cultures settle into individualist societies, they are suddenly confronted with a culture far from what they are familiar with. With their offspring being raised and acculturating in a society with values and norms incongruent with that of their ethnoculture, intergenerational cultural conflicts are likely.

Such intergenerational cultural discrepancies between migrants and their offspring have also been noted as an acculturation stressor (Phinney et al., 2000). An increase in parent-child discrepancy sees an increase in intercultural conflict, with discrepancies of cultural values and behaviours causing the greatest amount of acculturative stress in Asian and Latino cultural groups in the United States (Cervantes, Fisher, Córdova, & Napper, 2012; Hwang & Wood, 2009; Lui, 2015; Miller, Kim, & Benet-Martínez, 2011; Portes & Rumbaut, 2006). In fact, according to Lui (2015) the effect size is comparable to those between discrimination and mental health in the United States. Thus, suggesting intercultural conflict as a risk factor of mental health which has also been related to lower academic achievement in offspring (Lui, 2015). While Gecas and Seff (1990) found a high level of perceived consistencies of values between parents and their offspring, the study did not distinguish between perceived congruence and actual value congruence between parents and children in the United States. According to a series of earlier studies,
perceived parent-child value congruence is greater than actual similarities (Acock & Bengtson, 1980; Whitbeck & Gecas, 1998).

**Behavioural perspectives: Cultural learning approach.** Largely influenced from Argyle’s (1969) research on social and interpersonal skills, the cultural learning perspective focuses on the attainment of the necessary skills required during cultural transitions and engagement with the host society culture (Berry et al., 2011). However, as immigrants are unfamiliar with the social norms of the host culture, they may lack these skills, encountering difficulties during cultural transitions. When transitioning into a new society, immigrants are expected to learn the culturally specific behavioural skills that can include the host society language, social etiquettes, and other non-verbal and verbal communicative conventions that would allow more effective engagement with the host society. In contrast to the affective perspective, the cultural learning perspective is more applied than theoretical in nature, as it emphasises social skills and interaction (Masgoret & Ward, 2006). Furnham and Bochner (1986) suggest that social skills training should be incorporated into cultural learning programs for immigrants, however despite this recommendation Ward (2001) also suggests that an increase in the amount of interaction with members from the host society can also assist in the acquisition of such skills.

**Cognitive perspectives: Social identity approach.** Social identity theory is the basis for the Cognitive perspective of acculturation theory (Turner & Tajfel, 1986). This perspective focuses on how individuals perceive themselves (in-group) and those around them (out-groups) during intercultural contact (Tajfel, 1981). Such self-identification also entails pride, evaluation of one’s ethnocultural group, as well as engaging in behaviours, language, and values associated with that particular
cultural group (Ward, 2001; Phinney 1992). The theory comprises three psychological processes, from which ethnic identity emerges. These are: (1) social categorization - behavioural and physical characteristics which create social identity; (2) social comparison - the comparison with others based on statuses, such as financial; and (3) psychological work - the need to attain positive distinctiveness, which entails positive feelings toward an individuals’ cultural group as classified by the host society (Tajfel, 1981). Perhaps the most significant points of Tajfel’s (1981) argument with relation to these findings is the need to: 1) maintain a positive social identity both at the level of the group and at the level of the individual; and 2) the ability to reclassify and build one’s own and others, identities to maintain or increase self-esteem or a positive self-concept.

Similarly, according to the self-worth theory, individuals strive to attain and maintain a sense of worth and belonging in groups or societies which value success, therefore making an individual as worthy as their accomplishments (Covington, 1998, 2000). According to Covington (2000) achievements in adolescents may be academic, that is either achieving personally meaningful academic goals; value success based on achieving status and recognition; or avoiding failure. Whatever the strategy, each of these students link their self-worth (within a society) to their academic achievement (Covington, 2000).

In an effort to possess a positive social identity, minority group members need to distinguish themselves from other cultural groups, with intergroup evaluations concentrating on the preservation of positively valued distinctiveness for one’s own cultural group (Turner, 1996). In instances when individuals perceive that their identity is lacking positive distinctiveness (e.g., being part of a minority group which is devalued by the majority culture or by many cultures within the context of a
multicultural society) they may resort to the use of *identity management strategies* (Turner & Tajfel, 1986). The three strategies which have been covered in the identity management literature, include *individual mobility* – to change one’s cultural identity to a culture that possesses more positive distinctiveness by the out-group (e.g., emphasise the part of one’s cultural identity which attains greater positive distinctiveness by the receiving society); *social competition* – attempts to enhance the cultural distinctiveness of their existing cultural group through the means of cultural competition (e.g., Asian ethnocultural students try to outperform their host-national peers in mathematics); and *social creativity* – the ability to rebuild the social comparisons drawn between the cultural groups in a more positive framework (e.g., Italians establishing specialist stores which only sell food products specialised for cooking their native dishes; Turner & Tajfel, 1986).

Social identity can be explained by three models. The first is the model of assimilation. According to this model, a new cultural identity is adopted at the expense of the heritage culture. In other words, the individual progresses toward identifying with the values, language, behaviours, identity, and knowledge of the host society culture, whilst separating themselves from their ethnic culture. This model is generally depicted as a linear continuum with the host culture on one end of the continuum and the ethnic culture at the other. Measures of this unilinear model include the Acculturation Rating Scale for Mexican Americans (ARMSA: Cuéllar, Harris & Jasso, 1980) and the acculturation scale developed by Ghuman (1994) for Asian adolescents in Canada and the United Kingdom (Ward, 2001). If enforced through government policy, this model of cultural identity has clear implications for migrants, forcing them not only to adapt to their new living environment but to
culturally assimilate to the ways of their new host society at the expense of their own culture.

Acculturation literature has traditionally focused on intergroup relations and has overseen the pull and push effects of intragroup relations (Schwartz, Vignoles, Brown, & Zagefka, 2014). According to Schwartz and colleagues, the interactions with other cultures as well as one’s own heritage culture provide individuals with a multitude of motives and processes which shape acculturative and enculturative processes at the level of the individual. These intragroup dynamics are essentially creating boundaries of the cultural group (Wenzel, Mummendey, & Waldzus, 2007). According to a study by Marques, Abrams and Serodio (2001) in subjective group dynamics of cultural group members, individuals who diverge from the group standards are considered to be ‘black sheep’, as their behaviours jeopardise the meaning or the boundaries of the cultural group identity. While this may be a strict interpretation of these intragroup dynamics, it does provide a socio-political explanation for the switch between various acculturative and enculturative domains across various contexts.

**Bicultural identity approach.** The second model of cultural identity is the bicultural perspective. Unlike the previous unilinear assimilation model, the bicultural model suggests that one is able to balance both cultural identities by placing the individual in the centre of a unilinear continuum with the host culture at the one end and the ethnic culture on the other end of the continuum. Biculturalism is viewed as being the middle ground between separatism (when individuals or groups preserve their ethnic culture and avoid interaction with other cultures) and assimilation (when individuals or groups shed their ethnic culture and adopt a new dominant culture) (Berry, 2005; Ward, 2001). Here the cultural identities are
interdependent and counterbalancing forces. Acculturation measures which are based
on this model include the Acculturation Rating Scale for Mexican Americans – II
(ARSMA- II: Cuéllar, Arnold, & Maldonado, 1995); the Asian Self-Identity
Acculturation Scale (SL-ASIA: Suinn, Rickard-Figueroa, Lew, & Vigil, 1987); the
Short Acculturation Scale for Hispanics (Barona & Miller, 1994) and the
Multicultural Acculturation Scale (Wong-Rieger & Quintana, 1987). This model
progressed from the assimilation model in that biculturalism was a desirable outcome
of acculturating for migrants, allowing them to balance both cultural identities
simultaneously. Despite this advance in model and theory, this perspective failed to
measure individuals who strongly identify with both their host society and ethnic
cultures from those who weakly identify with both (Ward, 2001).

Bicultural identity integration. Developed by Benet-Martínez, Leu, Lee,
and Morris (2002), the Bicultural Identity Integration (BII) is a process which
examines differences in the way individuals structure two cultural identities at the
same time with a particular focus on how these identities intersect and whether they
are compatible or conflicting with each other. Individuals with high BII are easily
able to cohesively integrate their two cultural identities into their lives and are also
described as possessing compatible identities (Benet-Martínez & Haritatos, 2005;
Phinney & Devich-Navarro, 1997). In contrast, those with low BII are still
considered to be bicultural, however these individuals are more receptive to cultural
conflicts between their two identities and perceive these cultures as discordant, thus
possessing the urge to select one culture over the other, unable to maintain both
simultaneously (Benet-Martínez & Haritatos, 2005; Phinney & Devich-Navarro,
1997).
According to Hong, Morris, Chiu, and Benet-Martínez (2000), individuals possess the ability to hold more than one cultural identity concurrently, with individuals shifting between these two identities when prompted by contextual cues (i.e., also known as cultural frame switching). Extending upon this, Benet-Martínez and colleagues (2002) found that BII can moderate cultural frame switching. The study demonstrated that Chinese-American participants with high BII exhibited culturally consistent behaviour when subjected to Chinese and American cultural cues, while low BII Chinese-American participants exhibited culturally incongruent behaviours when exposed to these same cultural cues. The study essentially demonstrates that variations lie within biculturalism and that these variations can play a significant role in the behaviour and cognitive performance of bicultural individuals (Benet-Martínez & Haritatos, 2005). More recent works of BII researchers have noted two dimensions of BII: cultural distance and cultural conflict. Cultural distance captures the extent to which the two cultures of a bicultural identity are perceived to be disassociated. On the other hand, cultural conflict reflects the perceived clash between the two cultures. Recent research has demonstrated that individuals who experience low levels of BII-distance are less likely to experience anxiety (Hirsh & Kang, 2015). Additionally, Tadmor, Galinsky and Maddux (2012) noted that individuals with low levels of BII-distance showed more creativity and cognitive complexity. Contrary to the findings of BII-distance, higher levels of BII-conflict among individuals elicited anxiety (Hirsh & Kang, 2015); however it also exhibited some positive cognitive outcomes, with individuals showing higher levels of metacognition (Thomas, Brannen, & Garcia, 2010). Thus, BII goes beyond Berry’s ‘integration’ outcome of acculturation as it provides a deeper explanation of how one combines two cultures and how these identities can be in conflict or
congruence at the level of the individual. It also provides explanations of how biculturalism itself is not uniform and can vary at the level of the individual with considerable impacts on both cognitive and behavioural functions.

**Berry’s four-fold theory.** The most supported model in recent times within cross-cultural psychology is the independent bilinear model of cultural orientations. This model represents the host society and ethnic cultures on two independent continua, suggesting that the host society culture is independent to the ethnic culture. This means that the level of identification with one culture does not affect the level of identification with the other culture. In contrast to the bicultural model, this model also has the ability to measure individuals who have a strong or weak identification with both cultures as each culture is measured independently. Adding to this model is Berry’s (1974, 1980) strategies of acculturation. The four strategies of acculturation, which are identified as assimilation, separation, integration, and marginalisation, were developed with the dichotomization of the responses to two questions: “Is it of value to maintain the heritage culture?” and “Is it of value to maintain relations with other groups?” (Ward, 2001, p.417). Individuals scoring highly or responding yes for both questions are said to be integrated; those scoring low or responding no to both questions are said to be marginalised; those that respond yes to cultural preservation and no to intergroup relations are said to be separatists; while those who respond no to cultural preservation and yes to intergroup relations are said to be assimilated. While this bilinear model of acculturation is the most highly cited and used model to date, it also comprises a number of theoretical and measurement limitations which are discussed in further detail in the ‘Linearity’ subsection of Chapter 3. The third model (bilinear) of acculturation which considers the host society and ethnic cultures as independent domains is the most appropriate model to explore cultural issues. Not
only does it have strong empirical support, but it also appears to be consistent with the multicultural policies adopted by many plural societies, such as that currently effective in Australia (Ward, 2001).

**Developmental perspectives.** The developmental perspectives of acculturation are not widely accepted amongst researchers of acculturation as the perspectives do not have clear theoretical origins; instead the perspectives are built on “strands of ideas highlighting the importance of including developmental issues in acculturation” (Berry et al., 2011, p. 318; Sam & Berry, 2010). As developmental and acculturative changes occur simultaneously among immigrant children and youth, researchers have found it difficult to distinguish the two processes from each other. Researchers have instead recognised developmental issues which are largely influenced by acculturation that include: cultural identity (Phinney, 1990); family relationships (Fuligni, Yip, & Tseng, 2002); peer relationships (Fandrem, Strohmeier, & Roland, 2009); and the development of self (Kwak, 2003). According to this perspective (which extends from Erik Erikson’s (1968) ego identity model), identity is not automatically attained by individuals. Instead, it develops from childhood into adulthood over time through the processes of exploration, deliberation and commitment. According to the developmental theory, ethnic identity becomes salient during adolescence and leads to a resolute or achieved identity by adulthood. During development, individuals are expected to sequentially experience ethnic identity diffusion (no clear identity) followed by either identity foreclosure (a commitment without exploration) or moratorium (a period of exploration) finally reaching an achieved ethnic identity into late adolescence to adulthood (Phinney & Ong, 2007). The central research question in such developmental studies of acculturation relates to whether immigrant children and youth should be treated
differently to their more culturally adapted peers, considering that they are acculturating and dealing with developmental tasks concurrently (Sam & Berry, 2010). The one exemption to this movement is the work by Phinney (1990), who offers a developmental theory explaining how youth obtain their ethnic and national identities during the process of acculturation. Phinney’s developmental theory suggests that children and youth of immigrants are more likely to retain their ethnic identity with increasing age (Phinney, 1990). While the theory has not been widely validated, research which supports a developmental perspective of identity include studies by Phinney and Tarver (1988) and Phinney (1989).

**Enculturation as a Process of Cultural Transmission**

Like acculturation, cultural transmissions are processes encapsulated within Berry’s ecocultural framework, these occur through two means, enculturation and socialization (Berry et al., 2011). Enculturation is described as the covert acquisition or the ‘enfolding’ of the individual within a larger ecocultural setting (Berry et al., 2011; Ferguson et al., 2016). In turn, this allows them to obtain the necessary cultural facets, allowing them to engage successfully within their cultural setting. On the other hand, socialization is explained as the overt and deliberate instruction of cultural facets within one’s cultural group with the purpose of developing cultural continuity within that group (Ferguson et al., 2016).

Considering that enculturation is a process of cultural transmission, the following section will first explicate theoretical models of cultural transmission. Subsequent sections will delineate: facilitators of cultural transmission; the contents being transmitted; as well as mechanisms of the processes.
A multidisciplinary perspective. Like the field of acculturation, there are many disciplines which have contributed to research on cultural transmission; as such conceptualisations of the processes vary across, biological, anthropological, sociobiological and sociological perspectives. Cavalli-Sforza and Feldman (1981) were the first to contribute to the field proposing that cultural transmission is not biological in nature, rather perhaps a result of social orientations, behaviours and skills which have been transmitted from parents to their offspring through social or psychological means (Schönpflug, 2001).

Moreover, cultural anthropology maintains that such transmission of culture takes place through a cognitive form of cultural acquisition. They contend that individuals absorb established conceptual facets, which are diffused in an implicit manner (Schönpflug, 2001). Nevertheless, Boyer (1994), Berry et al. (2011), Phalet and Schönpflug (2001), and Vathi (2015) as well as others argue that cultural transmission does not comprise predetermined facets of culture which are transmitted uniformly. Instead they argue that cultural transmission simply provides the cultural stimuli that “trigger roughly similar spontaneous inferences in most subjects” (Boyer 1994, p. 408). In other words, preservation of the entire culture is not passed down to progressive generations due to differences between individuals and their exposure to varying ecological and socio-political environments (Phalet & Schönpflug, 2001). Due to the variation in context at the level of the individual, research in culture transmission must be examined at the level of the individuals as opposed to the level of the group.

Different from this perspective, sociologists conceptualise cultural transmission using the notion of cultural capital. Proposed by Bourdieu (1977), the cultural capital theory contends that cultural and linguistic proficiencies and the
relationship with culture can only be elicited by family upbringing within a host society. Cultural capital is developed implicitly during socialization within the home and other cultural institutions (Reese, Arauz, & Bazan, 2012).

Within cross-cultural psychology, Schönpflug (2001) evaluates the extent and selective aspect of cultural transmission. Specifically Schönpflug (2001) examined the impact of “transmission belts”, that is factors or modes of transmission which mediate cultural acquisition. Thus, extending on Schönpflug’s (2001) work, the following section will: a) explicate modes of transmission; b) delineate content which is transmitted; and c) outline mechanisms of cultural transmission.

**Transmitters and contents of transmission.** According to Cavalli-Sforza and Feldman (1981), there are three modes or types of transmitters of cultural transmission: vertical, oblique, and horizontal with each differing in the type of cultural content they transmit. Vertical transmission from parents involves the transfer of cultural facets to their offspring. According to Schönpflug (2001), some of these facets include: attitudes, cognitive development, educational status, gender roles, political and religious beliefs, and language use. Horizontal transmission is when one acquires cultural facets from daily interactions with peers from their own culture throughout development (Berry et al., 2011). While oblique transmission is the acquisition of cultural facets from adults and institutions from ones culture. Schönpflug (2001) outlines that both these modes may transmit: adolescent behaviour, language, morals, values, consumer behavioural, altruistic behaviour, gender roles, attitudes, gender roles and aspirations. As indicated by Schönpflug (2001), some of these traits can be transmitted through multiple modes (i.e., vertically and horizontally), with other traits such as intelligence, and cerebral dominance transmitted biologically.
Schönpflug (2001) indicates that “Homogeneity of transmitters with reference to the transmitted contents ensures the greatest transmission effects” (p. 132). This means that if parents, teachers, and peers are consistent in the type of cultural facets (i.e., values, language, traditions etc.) they transmit, successful cultural transmission is more probable.

Mechanisms of transmission. According to Schönpflug (2001) the processes of cultural transmission take place over two stages. The first stage entails the awareness of cultural facets/ information, while the second stage is the acceptance of these. Facilitators (i.e., parental, peer etc.) mediate cultural transmission by creating exposure to both overt and covert cultural cues to receivers, thus enabling them to experience both stages of transmission. Thus, externalisation on the part of the transmitter and internalisation on behalf of the receiver are two significant mechanisms of cultural transmission processes.

Implications for the Current Investigation

As seen by the four perspectives and Berry’s ecocultural and acculturation frameworks, acculturation and enculturation are complex areas of inquiry in cross-cultural psychology. With the increase in cultural diversity amongst societies, this area will expand and its complexities will become more evident, as experiences of acculturation and enculturation across groups and individuals are heterogeneous in nature. Despite this, empirical research has yielded relatively consistent findings on the A, B, C, and Ds of acculturation (Ward, 2001), suggestive of some common psychological denominators.

Berry’s theoretical framework of acculturation attempts to show the interconnections and integration between the A, B, C, + D perspectives of
acculturation, whilst also outlining the irregular nature of the process as a result of key ecological and socio-political variables both at the level of the group and the individual. Thus, studies by Ward (2001) and Berry and Sam (1997) caution cross-cultural researchers of the potential pitfalls in this area of study, warning that researchers must not presuppose the ‘absolutism’ in the acculturation process and its adaptation outcomes given that intercultural contact takes place with a number of ecological and socio-political influences both from the host-society and the minority cultures. One of the central aims of the present investigation is to measure acculturation and enculturation across ethnocultural groups, however this presents its challenges, as each cultural group and its members are affected by varying contextual factors which influence the way they acculturate and enculturate in the receiving society. Thus, the present study not only adopts the view that contextual information is crucial in understanding the effect of such contextual variables on acculturation and enculturation (both at the level of the groups and the level of the individuals engaging in the process), but examines the fundamental patterns and processes underlying these differences using Berry’s ecocultural framework.

At the group level, it is especially important to consider the national policies on immigration and culture, as multicultural societies provide a wider range of acculturative and enculturative opportunities than assimilationist societies (Vathi, 2015; Ward, 2001). As discussed in the previous section of this chapter, Australia’s multicultural policy, with its principles of civic duty, cultural respect, social equity, and productive diversity allow all its citizens more opportunities to acculturate and enculturate than the assimilationist White Australian Policies of the past.

Other important considerations which will be made in this current investigation relate to the similarities and dissimilarities within the receiving society
and the cultural minorities within it. Lalonde and Cameron (1993) have suggested that cultural differences, such as perceived acceptance or discrimination across either group, influence acculturative outcomes (i.e., assimilation, integration etc.) during cross-cultural contact, whilst also influencing adaptation outcomes, be psychological or socio-cultural in nature (Ward, 2001). Thus, the current study considers cross-cultural patterns and differences in acculturation/enculturation among individuals from minority ethnocultural groups within Australian society. Whilst measuring acculturation/enculturation, the study will also consider a series of contextual factors at the level of the individual. However, given the large variety of variables to consider when quantifying acculturation/enculturation, measuring all of these was beyond the scope of the quantitative portion of this investigation. Instead a series of qualitative interviews were conducted to explore variations in acculturation and enculturation processes across a sample of adolescent students across four cultural contexts (i.e., Armenian, Jewish, Lebanese and Greek). Thus guided by both the ecocultural and acculturation frameworks recommended by Berry and colleagues (2011) and Berry and Sam (2016), the current investigation explores individual differences and similarities in acculturation and enculturation processes. Here, the data is collected at the level of the individual with the interpretations remaining at the level of the individual (not the culture).

**Chapter Summary**

Acculturation and enculturation are some of the most challenging areas of research in cross-cultural psychology due to their multifaceted structure. There are multiple intricacies that need to be considered when measuring a culture, however as acculturation and enculturation research in the current study involves the
consideration of more than one culture, the intricacies and complexities are amplified. Through his frameworks, Berry provides a conceptual scope in which the current investigation will take place. Additionally, theoretical frameworks and perspectives offered by prominent psychological theorists will receive attention, with the consideration of more traditional (i.e., affective, behavioural and cognitive) and cutting edge (i.e., developmental and bicultural identity integration) theories, to investigate the universal complexities of acculturation and enculturation.
CHAPTER 3: EXPLICATING ISSUES IN ACCULTURATION/ENCULTURATION THEORY, RESEARCH AND IMPLICATIONS FOR SCHOOL ADJUSTMENT

Introduction

Over the past three decades, acculturation and enculturation research has gained increased attention by cultural and cross-cultural psychologists. In spite of the plethora of research interest on these processes, the theoretical conceptualisation, structure and measurement of these constructs remain controversial, creating disparity in research findings and the conclusions drawn from them. This lack of consensus in the studies creates challenges for researchers and practitioners to inform, develop, and enhance immigration and educational policies and consequently interventions. Thus, central to this chapter is a critical appraisal of existing theoretical and methodological issues and limitations of existing acculturation and enculturation measures and their implications for the development of a new instrument, entitled the Domain-Specific Acculturation and Enculturation Measure (DSAEM). Further to this, the chapter will provide a brief review of current research relating to possible relations between acculturation and enculturation and psychosocial outcomes, specifically, academic self-concept, academic motivation, multicultration and school belongingness.
Elucidating Theoretical and Methodological Issues in Acculturation and Enculturation Research

Today acculturation and enculturation have been conceptualised as: 1) unilinear, 2) bilinear, and 3) domain-specific cultural interaction practices which take place over a number of different group contexts (Kim & Abreu, 2001; Miller, 2007; Schwartz et al., 2010; Stephenson, 2000; Tsai, Ying, & Lee, 2000). Hence, there is little agreement as to which theoretical conceptualisation is appropriate. The following section will present the distinctive elements of all three models of acculturation and enculturation, their assumptions, and limitations. Further to this, methodological and conceptual issues and limitations in this area of research will also be addressed.

Theoretical Issues

Standardised terminology. To date, acculturation research has suffered from a number of definitional issues which has caused much confusion and miscommunication in the conceptualisation of acculturation (Miller, 2007). In particular, the terminology used to describe the acculturation processes has been inconsistent across researchers within the field. For example, in describing the acculturation and enculturation processes on a single continuum or two independent continuums, some researchers have used the terms “unilinear” and “bilinear” (Zea et al., 2003) while other scholars have used the terms “unidimensional”, “bidimensional”, and “multidimensional” (Abe-Kim, Okazaki, & Goto, 2001; Ryder, Alden, & Paulhus, 2000; Tsai et al., 2000). For the purposes of the current study and to increase conceptual clarity as well as continuity across this field of research, “unilinear” and “bilinear” will be used to describe the single dependent continuum...
versus two independent continuum models, while domains will refer to the various
areas in which acculturation may take place (i.e., language, knowledge, values, etc.).

**Linearity.** While the majority of recent studies have shown a preference for
bilinear models of acculturation (Cortés et al., 1994; Felix-Ortiz et al., 1994;
Mendoza, 1989; Stephenson, 2000; Tsai et al., 2000; Zea et al., 2003), many of the
measures based on unilinear models continue to be applied (Cuéllar et al., 1980;
Marin, Sabogal, Marin, Ostero-Sabogal, & Perez-Stable, 1987; Suinn et al., 1987).
According to a meta-analysis of 138 empirical studies from APA journals showed
that a majority 44.4% of acculturation and enculturation measures were grounded in
unilinear conceptualisations (Yoon et al., 2011). The difference between the two
models lies in how the culture of origin relates to the mainstream culture (Ryder et
al., 2000).

**Unilinear models.** The unilinear model of acculturation and enculturation has
been extensively covered in the psychology literature (Yoon et al., 2011). The
unilinear model purports that acculturation and enculturation take place over a single
continuum (see Figure 3.1). In this model, acculturation takes place at the expense of
enculturation (Yoon et al., 2011). Thus, the theory proposes only one acculturation
outcome, that being assimilation.

![Figure 3.1. A unilinear unidimensional model of psychological acculturation and enculturation.](Image)

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Most acculturation studies which have adopted the unidimensional/unilinear model utilise demographic variables, including the number of years one has lived in the new culture, one’s generational status, and the age at which one immigrated (Ryder et al., 2000). These proxy measures assume that the individual will adapt to the majority culture with greater contact and experience that comes with time. It is said that the process continues over generations until progressive generations of immigrants are impossible to differentiate from the rest of the majority culture. For example, McCrae, Yik, Trapnell, Bond, and Paulhus (1998) examined the personality characteristics of specific ethnic groups and found that first generation Chinese immigrants to North America had personality traits similar to individuals living in Hong Kong. In addition, they found that the descendants of these Chinese immigrants had personality traits that were more similar to those of North Americans.

Many researchers have criticised the unilinear model and its underlying assumptions. One such criticism stems from the contention that an individual is unable to preserve the values, behaviour, and identity of the culture of origin whilst adopting the mainstream culture (Cuéllar et al., 1995). Ryder et al. (2000) have also criticised the unilinear model as being unable to distinguish individuals who relate strongly with both the culture of origin and the mainstream culture and individuals who are unable to relate to either culture. Finally the unilinear model of acculturation has only one outcome (i.e., assimilation), meaning in the current study, that one is either Australian or not.

**Bilinear models.** In contrast to the unilinear model, theorists for the bilinear model of acculturation propose that individuals can preserve their ethnic culture while acculturating to a host culture (Yoon et al., 2001; see Figure 3.2). The
literature shows two types of bilinear acculturation. The first is a number of
acculturation outcomes which have been proposed by Berry and colleagues. Current
literature also refers to these as ‘strategies of acculturation’ and even ‘acculturative
attitudes’. As delineated in Chapter 2, Berry (1997) proposed four acculturation
outcomes, each varying in the amount of adaptation an individual experiences with
the majority culture. However, this conceptual model has not been immune from
criticism. For instance, some researchers have argued that the correlations amongst
the four sub-scales suggest that they may all share a fundamental latent construct
(Rudmin, 2003; Rudmin & Ahmadzadeh, 2001). All four constructs were not found
to be independent enough from each other to be considered as equally exclusive
subscales. Furthermore, the use of arbitrary cut-offs to segregate data into four
acculturative outcomes has also been widely criticised. The implications of
implementing such subjective cut-offs will be discussed in further detail in
progressive sections (see ‘Dichotomization of acculturation measures’). Thus,
additional empirical research to elucidate the linearity and latent structure of this
conceptual model is necessary.

The second type of bilinear scale is based upon two statistically independent
continua, of minority and majority cultures. This model is widely used within
acculturation measures (Chung, Kim, & Abreu, 2004; Cortés et al., 1994; Cuéllar et
al., 1995; Felix-Ortiz et al., 1994; Kim, Atkinson, & Yang, 1999; Marín & Gamba,
1996; Mendoza, 1989; Stephenson, 2000; Tsai et al., 2000; Zea et al., 2003) and
comprises two subscales measuring the ethnic culture (minority culture) and the host
society culture (majority culture) as it posits that acculturation may occur at the same
time as enculturation and that one is not influenced by the other (Kim, Laroche, &
Tomiuk, 2001).
Bilinear models of acculturation and enculturation are based on two underlying assumptions. Firstly, the bilinear model implies that an individual may vary in the degree to which they identify with values, behaviours, and language associated with a particular culture. Some individuals may base their self-identity solely on their culture, while others may base their self-identity on other factors such as religion. The second assumption of the bilinear model is that an individual is capable of maintaining multiple identities, with each identity varying in strength (Ryder et al., 2000). In an examination of the linearity of acculturation models, multivariate analyses are conducted. Where high negative correlations are found between the items of the two subscales, unilinearity is suggested. In cases where no correlations are detected between the majority and minority subscales, bilinearity is suggested. In the instance that both subscales display high correlations, it is

Figure 3.2. The bilinear model of psychological acculturation and enculturation.
suggested that the two subscales may be overlapping and/or measuring the same construct (Matsudaira, 2006).

Studies comparing the two models continue to show mixed results. For instance, Flannery et al. (2001) propose the use of the unilinear scale as a succinct proxy measure of psychological acculturation and the bilinear modelled scales for more theoretically based investigations. On the contrary, Ryder et al. (2000) assert that if the assumptions of the bilinear model are accurate, the unilinear model of acculturation will lead to an imprecise and unreliable conceptual framework of acculturation. Furthermore, they suggest that the bilinear scales consider a wider range of cultural factors than the unilinear models, which allows researchers to identify independent influences on both enculturation and acculturation processes. Accordingly, the bilinear model provides researchers with a measure which is more practicable within a multicultural context and provides a more functional operationalization of the constructs. Hence, the current study will be grounded on the understandings underpinning a bilinear model of acculturation, which affirms that an individual may maintain their culture of origin whilst also adopting the culture of their host society such that both acculturation and enculturation will be considered as distinct constructs.

**Domains.** The various domains of acculturation can be divided into two categories: those that test for *overt changes* and those that test for *subjective internal changes* (Matsudaira, 2006). The overt changes focus on the behavioural and attitude domains. These include, but are not restricted to, the proficiency and preference of language use, choices in clothes worn and food eaten (Cuéllar et al., 1995; Kim et al., 1999; Matsudaira, 2006; Mendoza, 1989; Stephenson, 2000; Suinn et al., 1987; Tsai et al., 2000). The subjective internal changes refer to the domains that reflect on the
values, beliefs, and identity of the individual (Cuéllar et al., 1995; Kim et al., 1999; Mendoza, 1989; Suinn et. al., 1987). Schwartz et al. (2010) propose three domains of acculturation and enculturation: practices, values, and identification. Similarly, Cuéllar et al. (1995) identified three levels of acculturation and enculturation: behavioural (e.g., language and food); affective (e.g., emotions and identity); and cognitive (e.g., beliefs and values). More recently, Kim and Abreu (2001) identified four domains: behaviour, values, knowledge, and cultural identity. Interestingly, based on a content analysis of quantitative acculturation research, Yoon et al. (2011) found that among 42 acculturation and enculturation measures, 23 domains of acculturation and enculturation were identified, most which overlapped in their meaning and operationalization across measures. Overall, researchers have identified one or more of the following five domains of acculturation and enculturation: behaviour, identity, knowledge, language, and values (Yoon et al., 2011; Zea et al., 2003).

**Internal and external (overt) domains.** While the bilinear multidimensional model of acculturation seems to be the recently accepted model among social and cross-cultural psychologists, researchers have rarely explored how various domains of acculturation and enculturation are related to one another and to numerous outcome variables. Where such testing has taken place, some domains have notably been found to relate to one another, with a number of conceptual and theoretical overlaps being noted (Yoon et al., 2011). Further to this, Zane and Mak (2003) have noted that there is a heavy emphasis on the testing of behaviour and attitude domains, with the oversight of internal domains, which has conspicuously resulted in biased acculturation measures. This becomes especially concerning as Wolfe, Yang, Wong, and Atkinson (2001) noted that overt and subjective internal changes have differing
rates of modification when exposed to a new culture. The researchers noted that the overt changes are easily altered to adapt to the socio-political requirements of the new society. In contrast, subjective internal changes are more resilient to the influences of the host society culture (Cuéllar et al., 1995). Accordingly, it is necessary for acculturation scales to assess both external/overt and internal changes to accurately measure general psychological acculturation (Matsudaira, 2006). Consistent with the study by Zea et al. (2003) and the recommendations made in the extant literature, this study will test five domains of acculturation. These include three overt domains (behaviour, knowledge, and language) and two subjective internal changes (values and cultural identity).

**Domain-specificity of acculturation and enculturation measures.** The domain-specific acculturation strategy hypothesis was proposed by Miller and Lim (2010; Figure 3.3), which contends that acculturative processes can occur across behavioural and value domains. Miller describes the domain generic approach (i.e., aggregate measures) hypothesises acculturation as being the one underlying factor which “accounts for the engagement in culture-specific behaviour and values”, however it is not able “to differentiate between acculturation domains” (Miller, 2010, p. 179). Contrary to this approach, the domain-specific hypothesis presupposes that each of these underlying domains (i.e., behaviours and values) individually explain cultural engagement, therefore making it imperative to “differentiate between domains when conceptualising the acculturation process” (Miller, 2010, p. 179).
Testing of the bilinear domain-specific model among Asian Americans revealed a robust and superior model when compared to all domain generic and unilinear domain-specific models (Miller, 2007, 2010; Miller et al., 2013). Thus, the findings of the study supported the notion that Asian Americans can engage with two different cultures concurrently as well as internalise acculturation processes across specific value and behaviour domains. Findings indicated low factor correlations across domains suggesting that levels of participation in the behaviour domain did not predict levels of participation in the values domain. Miller’s work on domain-specificity has been pivotal in moving beyond the Berry’s fourfold theory, as it emphasised and demonstrated the multifaceted and more dynamic nature of acculturative processes by examining within-individual differences.
Given domain-specific research is still in its infancy, there exists a paucity of research which tests the hypothesis. In their meta-analysis of acculturation measures Yoon et al. (2011) demonstrated that 62.3% of acculturation and enculturation measures were presented as aggregate scores (i.e. sum of all domains) with only 28.4% presenting dimension-specific scoring of these phenomena (i.e., separate acculturation and enculturation scores). This is particularly concerning considering that research has shown that internal and external domains of acculturation and enculturation change at various rates and with differences being largely attributable to contextual factors (e.g., immigrant generation, acculturating groups, cultural vitality in the area of residence; see Wolfe et al., 2001). Such domain-specific differences at the level of the individual are not encapsulated in aggregate measures of acculturation and enculturation, subsequently oversimplifying the complexities and intricacies of these phenomena. Currently, Australian clinicians and researchers lack such domain-specific tools of acculturation and enculturation. Such measures have the potential to evaluate more precise forms of these processes, to better inform psychological and educational interventions and policies, which may enhance the future settlement and adaptation of new arrivals and their progressive generations.

Additionally, much of the current work conducted on domain-specific acculturative processes has focused on Asian American and college samples (e.g., Miller, 2010; Miller, Yang, Hui, Choi & Lim, 2011; Miller et al., 2013). To increase the generalizability of this hypothesis, further research across non-college and non-Asian American samples must be conducted. Furthermore, current studies on domain-specificity have been limited to behaviour and values domains, as such future research must consider more nuanced domains of these processes across the bilinear domain-specific model. Finally, existing Australian research has not
explored the socio-political and ecological influences (i.e., contextual influences) on domain-specific acculturation and enculturation. Such contextualisation of domain-specific acculturation not only has the potential to address the questions of ‘how’ and ‘why’ individuals acculturate and enculturate across various domains, but has the potential to inform and generate more specialised immigration and educational policies, clinical practices and interventions.

Methodological Issues

Dichotomization of acculturation measures. Numerous studies have categorised participants into acculturation outcomes (e.g., assimilation, integration, separation, and marginalisation) or strategies (Berry, 1997; Cuéllar et al., 1995; Yoon et al., 2011). For statistical purposes, researchers dichotomise variables with arbitrary cut-off points to segregate data into different acculturation outcomes or strategies. The justifications offered for the dichotomization in acculturation studies have been to: follow the practices of previous research; simplify the presentation of results; and to examine moderator effects (Berry, 1997; Cuéllar et al., 1995; MacCallum, Zhang, Preacher, & Rucker, 2002). The allocation of these cut-off points is controversial and inconsistent within this research field. Furthermore, these cut-offs may cause individual participants to fall into inaccurate acculturation outcomes or more than one category which may result in biased findings. To avoid dichotomization of variables in the current study, cut-off points will not be used and as such these constructs will be treated as continuous variables.

Study samples. A recent content analysis of 42 acculturation/enculturation scales found that the majority of these studies were conducted on Latino/as (30.4%) and Asians/ Asian Americans (51.4 %) (Yoon et al., 2011). Thus, there seems to be a
skew in the choice of ethnic samples in acculturation and enculturation studies, with the majority of research being conducted within the United States. Moreover, the majority of study samples were recruited from tertiary institutions, followed by communities and kindergartens (Yoon et al., 2011). While this study will also be conducted within the school context, this will be the first study of which the researcher is aware to compare and contrast the acculturation and enculturation of multiple minority groups within New South Wales, the most culturally diverse state in Australia.

**Demographics.** Demographic factors such as generational status have been shown to have a strong influence on cultural identity (Cortés et al., 1994; Mendoza, 1989). Mendoza’s (1989) study showed that assimilative responses increased with greater exposure to the host society culture. The study by Cortés and colleagues (1994) has shown that, with an increase in the length of residence within a host society, an individual’s identity with the host society culture increases whilst weakening in the ethnic culture. In addition, the study found that those born within the host society culture assimilate much faster than those born overseas.

To date psychological acculturation measures “have no established external criteria” (Matsudaira, 2006, p. 479). Instrumental validity is usually established with demographic variables, such as generational status and the number of years one has resided in the host society culture. Nonetheless, such proxy variables do not necessarily reflect psychological acculturation. For example, many acculturation scales ask survey participants the number of years they have resided in the host society, using this as a measure of one’s exposure to the host society culture. This assessment is not necessarily accurate as many minority cultures build and reside in ethnic enclaves, exposing them more to their ethnic culture than the host society.
culture. Therefore, the number of years an individual has resided in a host society is not necessarily an accurate indication of the amount of interaction that individual has had with the new culture. Dependency on such proxy variables may create errors within the validity of acculturation measures (Matsudaira, 2006).

Validating measures using mixed methods. To overcome errors in validity testing, this study will combine both qualitative and quantitative methodologies. As acculturation and enculturation are processes of internal (in addition to external) qualitative changes, survey measures of these processes are expected to quantifiably measure these subjective changes at the level of the individual (Matsudaira, 2006). However, Fontana, and Frey (1994) have recognised the value of semi-structured interviews in extracting the manner in which individuals perceive issues and the motives behind their responses to them. More specifically, semi-structured interviews provide researchers with the ability to assess a more detailed account of the various levels of cultural interaction at the level of the individual during the acculturative and enculturative processes as well as more detailed analyses of interactions with culturally specific domains. Thus, it is invaluable to adopt a mixed methods approach which allows the qualitative methods to test the content validity of quantitative scales. This synergy will allow the validation of quantitative results with qualitative interviews, in addition to providing more informative context specific insights.

Context. The definitions of acculturation and enculturation describe exchanges between individuals and their physical and social environments (Kim et al., 2001; Lee, Yoon, & Liu-Tom, 2006). In addition, Berry (1997) discussed the contextual influences on acculturation and enculturation. These include demographic (e.g., population increases), economic (e.g., poverty), political (e.g., immigration
policies), and psychological influences (e.g., self-esteem and dealing with stress) in both the society of origin and the society of settlement. An understanding of the context provides greater insight into the influences of the acculturation and enculturation processes and the acculturative strategies adopted by individuals within the host society. For instance, such an understanding would provide insight into how a child may be acculturated within the context of his/her friendship group and concurrently carry traditional values and behaviours at home with family. Furthermore, the acculturation experience of an individual within a community with little cultural diversity would differ from the experience of an individual settling in a community with greater cultural diversity. While context seems to be discussed as a key influence of acculturation and enculturation, very few studies have measured its effects within the Australian context. Berry and Sam (1997) argued:

The main point of the framework is to show the key variables that should be attended to when carrying out studies of psychological acculturation. We suggest that any study that ignores any of these broad classes of variables will be incomplete, and be unable to comprehend individuals who are experiencing acculturation (p. 300).

The framework referred to above makes reference to the acculturation framework proposed by Berry (1997), which advises a number of moderating factors existing prior to and arising from the acculturation process at the level of the individual. One such moderating factor of acculturation is social appraisal. Beiser, Turner, and Ganesan (1989) found that social acceptance buffers the stresses encountered during the acculturation process. To gain additional insight into the influence of social appraisal on the acculturation of the individual, this study will test for multiculturation. Multiculturation is the perceived acceptance of one’s culture
and its values and norms within a host society (Bodkin-Andrews, O'Rourke, Grant, Denson, & Craven, 2010). Further to this, as previously noted, a number of semi-structured interviews will be conducted to gain greater insight into student acculturation and enculturation experiences and the influences of varying contexts on these processes.

**Multi-group measures vs. culture specific measures.** Of the publically accessible acculturation instruments systematically assessed by Celenk and Vijver (2011), 60.9% were found to be culturally specific, with the majority of measures focusing on the acculturation of minorities within the Unites States (i.e., Mexican-Americans, Hispanic-Americans and Native Americans). As the process of acculturation is not homogenous across groups and individuals, Celenk and Vijver (2011) suggest that cultural specific measures target culturally specific domains and account for more culturally specific moderators and mediators. However, developing multiple measures to assess multiple groups within plural societies such as Australia’s, is impractical. A single universal measure to test for multiple groups is more feasible; however this type of measure may overlook vital cultural nuances across groups. To overcome this issue, the current investigation adopted a mixed methods approach, comprising of semi-structured interviews which can provide detailed culturally specific acculturative behaviours, attitudes, values, and norms which may be overlooked or unaccounted for by the DSAEM self-report measure. Matsudaira (2006) and Hollifield (2002) suggest that acculturation scales should always be validated with interview data, assisting in the overall examination of content validity of developed scales.

**Response scales.** Most acculturation instruments comprise paired questions to cover both minority and majority cultural orientations for specific domains of
Kang (2006) identified three response scale formats used in most acculturation scales. These are: *the frequency format*; *the proficiency format*; and *the endorsement format*. The *frequency format* explores the incidence of specific behaviours and is usually made up of paired questions similar to the aforementioned example combined with a response scale ranging from *not at all* to *very much*. The *proficiency format* explores the competence of language and cultural knowledge (e.g., How well do you speak English? / How well do you speak Spanish?). In this case the response scale may range from *not very well* to *very well*. Finally, the *endorsement format* rates statements relating to cultural behaviours or experiences and how strongly individuals agree or disagree with them or to what extent the statements listed are true to them (e.g., I think of myself as being Australian / I think of myself as being Chinese; I think of myself as being Chinese Australian). In this case response scales may range from *strongly disagree* to *strongly agree*. The response scales for a number of bilinear acculturation instruments have recently come under scrutiny with some measures demonstrating a lack of independence between minority and majority cultural orientation scales. Kang (2006) found that this has partially been due to the adoption of the *frequency format* response scale in these measures. For instance, the responses to the questions ‘How much do you speak English at home?’ and ‘How much do you speak Chinese at home?’ cannot be independent from each other as the time spent speaking Chinese takes away the time one spends speaking English and the time devoted to speaking the two different languages cannot exceed 100% of the time spent speaking (Kang, 2006). As a result, such questions are not conceptually independent and consequently not representative of the bilinear orthogonal model of acculturation they claim to base their instruments on. Such scales include the General
Ethnicity Questionnaire (Tsai et al., 2000); Asian American Acculturation Inventory (Flannery et al., 2001); Acculturation Scale for Vietnamese Adolescents (Nguyen & Von Eye, 2002); and the Language, Identity, and Behavioural Acculturation Scale (Birman, Trickett, & Vinokurov, 2002) which all displayed negative moderate correlations between their minority and majority culture subscales ($r = -.60, -.55, -.53$, and -.62; Kang, 2006). Kang (2006) illustrates that the studies which are most successful in displaying orthogonality are those which exclude frequency and proficiency response scale formats and use the endorsement format only, such as the Vancouver Index of Acculturation (Ryder et al., 2000). In keeping with the Ryder et al. (2000) study, the current study will adopt the endorsement response scale format. Nonetheless, excluding frequency and proficiency scale formats may cause some implications for this field of research, especially considering that existing studies have shown a positive effect of language proficiency and their use on immigrant adaptation (Berry, Kim, Minde, & Mok, 1987; Birman et al., 2002; Kang, 2006).

**Implications for the Current Investigation**

The literature presented in this section has examined the extant theoretical and methodological issues in acculturation and enculturation research. These problems need to be addressed in order to achieve more robust measures supported by strong theoretical origins. Given the current disparity in theoretical models of acculturation and enculturation, the position adopted by the current investigation is to build upon the strengths among the current models, whilst addressing the current theoretical gaps and limitations overlooked in studies to date. Accordingly, this study will adopt the bilinear domain-specific model of acculturation and enculturation, as this position recognizes the ability for individuals to adopt a new culture without
affecting the culture of origin. Furthermore, this study recognizes the multiple
domains of acculturation and enculturation, testing for external/overt (language,
behaviours, and knowledge) as well as subjective (values and identity) or internal
changes among individuals.

The present study also acknowledges that contextual variables such as social
structures have a large influence on psychological acculturation and enculturation.
As such, the study uses a number of demographic variables to test for differences in
psychological acculturation and enculturation across generational status. However,
the study will not be dependent on such proxy variables, rather it will extend
contextual measures to multiculturation and school belongingness. In addition, the
design of the study will incorporate a number of semi-structured interviews to shed
more light on the influences of these contextual variables, whilst also providing an
external criterion to establish instrument validity and reliability.

As the Australian populace is not culturally homogenous, there is a need to
move beyond culture-specific measures of acculturation and enculturation. As such
the current study aims to develop a measure which encapsulates the underlying
patterns of acculturative and enculturative processes to enable its use across various
cultures. Further to this, with a steady rate of migration and refugee intakes,
Australia’s need to adapt policies and procedures to ensure the fair treatment of its
new citizens and their progressive migrant generations has never been more
profound. Yet, policy makers, counsellors and interventionists continue to struggle
with the enhancement of cost effective programs and interventions as there is no
systematic measure which assesses how individuals tackle immigration and
adaptation across both their ethnic and new mainstream cultures. To address these
real world challenges, the current study aims to devise a bilinear domain-specific
measure of acculturation and enculturation which overcome the aforementioned theoretical and methodological issues through strong conceptual underpinnings.

**Exploring the Psychosocial Adjustment Outcomes of Acculturation and Enculturation Among Ethnocultural Adolescents**

Schools settings are believed to be one of the main acculturation contexts for ethnocultural adolescents and considered to be small societies of settlement (Berry et al., 2011). As such, school adjustment is an important outcome for acculturating adolescents (Vedder & Horenczyk, 2006). Cross-cultural research has demonstrated links between cultural minority status and ethnic identities to an increased sense of psychological and school adjustments, among acculturating groups and individuals (Abu-Rayya, 2006; Phinney, Chavira, & Williamson, 1992; Smith & Silva, 2011). There is little consensus with respect to the relations between ethnic identity, acculturation, enculturation and their effects on psychosocial outcomes. Generally, research has shown that individuals who possess salient ethnic identities have higher on self-esteem and psychological well-being (Andriessen & Phalet, 2002; Liebkind, 2006). However, other studies have demonstrated that salient ethnic identities do not always promote adaptation and adjustment among acculturating individuals (Farver, Narang, & Bhadha, 2002; Phinney, 1990; Umaña-Taylor, Diversi, & Fine, 2002; Valk, 2000; Verkuyten, 1995). More recent findings suggest that there are consistent positive correlations between cultural identity and psychological adjustments (Chae & Foley, 2010; Umaña-Taylor, 2004). While there is a surge of interest in ethnic identity and its relation to psychosocial and school adjustment outcomes, there is a scarcity of domain-specific research which explores the relations of acculturation/enculturation on such outcomes.
Many conflicting research findings have originated from international studies with societies which vary in their cultural milieu and in turn their socio-political ideologies to that of Australia’s. Additionally, research in the effects of domain-specific acculturation and enculturation on school adjustment and psychosocial outcomes are currently sparse (Kim, 2007; Miller, 2010). Some studies have examined the links between Berry’s acculturative outcomes and school adjustment factors in an effort to explore the multifaceted and complex nature of these processes. However, these were operationalised using single-item scales which compromise the psychometric integrity of the measures, essentially increasing the chances of measurement error (Nunnally, 1978; Spector, 1992). Further to this, with so many studies demonstrating the psychosocial and school adjustments among ethnocultural and immigrant youth within the context of culturally heterogeneous school cohorts, the question remains, how would ethnocultural students adjust within more culturally homogeneous school settings? With the recognition that the effects of acculturation and enculturation are context-specific (Andriessen & Phalet, 2002), there is a need for future research to examine the impact of more culturally homogenous schooling environments on the relationships between acculturation/enculturation with school adjustments among ethnocultural adolescents.

Different from existing cross-cultural research, the current study will explore individual differences in domain-specific acculturation and enculturation and its association with a series of psychosocial outcomes within the context of ethnic day schooling. These include, academic self-concepts, academic motivations, multiculturation and school belongingness. The following sections will explicate existing theoretical models of these psychosocial constructs as well as highlight the
scarcity of studies focusing on these constructs and their relation to acculturative experiences of the student.

**Academic Self-Concept**

At its most fundamental level, academic self-concept is an individual’s perception of their academic abilities (Dyson, 2003; Hattie, 1992; Parada, Marsh, Craven & Papworth, 2005). Perceptions are formed through “attitudes, feelings, and knowledge about our abilities, skills, appearance, and social acceptability” (Byrne, 1984). Historically, the conceptualisation of self-concept has been the subject of much controversy. Initially, there was debate on the structure of self-concept with some arguing for a unidimensional model and others a multidimensional approach. In the unidimensional model, self-concept was conceptualised as a single construct and self-perceptions were not divided into domains (Marx & Winne, 1978). This view was later challenged by Shavelson, Hubner, and Stanton (1976) who argued that studies adopting the unidimensional structure of self-concept provided inadequate attention to the methodological issues. In addition, studies based on the unidimensional model lacked consistency with the theory, definition, and measurement, thus presenting ambiguous and misleading findings (Byrne, 1984; Hansford & Hattie, 1982; Shavelson et al., 1976). Shavelson et al. (1976) theorised self-concept as a multidimensional hierarchical construct. In the proposed hierarchical model, general self-concept was at the apex, followed by second-order factors of non-academic self-concept and academic self-concept. Thereafter, academic self-concept was divided into subject specific self-concepts (e.g., English Self-Concept) and the non-academic portion divided into social (interactions with individuals), emotional (feelings) and physical self-concepts (physical appearance
and ability) (Shavelson et al., 1976). Today, the multidimensional structure of academic self-concept is the most widely supported amongst researchers, with multiple studies conducting factor analyses supporting the multi-dimensionality of academic self-concept (e.g., Byrne & Gavin, 1996; Guérin, Marsh, & Famose, 2003; Marsh & Craven, 2006; Marsh, Tracey, & Craven, 2006). As such, researchers must interpret earlier conceptualisations of self-concept with caution, given the more recent advances in the field.

Both general and academic self-concept are of particular interest in acculturation and enculturation research as the maintenance of a positive self-concept is challenging for acculturating individuals, especially when there is discord between the heritage and the new culture (Rumbaut, 1996). This dissonance between cultures has been a source for acculturation stress among acculturating groups and members of the group, especially when faced with discrimination and separation, in turn negatively affecting both the general self-concept and academic self-concepts of these individuals (Cokley & Patel, 2007; Mirsky, 1997; Ulman & Tatar, 2001). Upon immigration and settlement into a new culture, migrants and their families must contend with the acquirement of new norms, behaviours which in turn make adjustments to the self-concept of individuals (Wong-Rieger, 1984). Changes in self-concept may include changes to ethnic identity, values and perception of competence in the new culture (Ulman & Tatar, 2001). Acculturating adolescents not only contend with the development of their self-identity, they must also manage the development of their cultural identity or cultural-self (Phinney, 1989; Ullman, 1987).

Despite these challenges, research has found significant and positive correlations between academic self-concept and acculturation (Cavazos-Rehg & DeLucia-Waack, 2009; Cokley & Patel, 2007; Giles, Bourhis, & Taylor, 1977;
Gudykunst & Ting-Toomey, 1990; Miller & Hoogstra, 1992; Phinney, Romero, Nava, & Huang, 2001). In their study of 198 Asian American college students, Cokley and Patel (2007) hypothesised that students with high academic self-concepts would also be highly enculturated in their Asian values. Contrary to expectations, the study found that academic self-concept had a positive and significant relation with acculturation and a negative relationship with the enculturation of Asian values (Cokley & Patel, 2007). Upon closer examination of the Academic Self-Concept Scale (ASCS), the researchers speculated that the surprising findings may be due to the manner in which academic self-concept is operationalised as an individualistic psychological construct within the ASCS. This was problematic since the Asian American culture is considered to be more collectivist than individualist, with members of this cultural group giving more weight to family and group perceptions than individual evaluations of themselves. Thus, this highlights the need for more culturally appropriate measures of academic self-concept. Another small scale study with 150 Latino adolescent students attending bilingual schooling in the United States also demonstrated acculturation as a significant predictor of self-esteem (Cavazos-Rehg & DeLucia-Waack, 2009).

Studies of cultural identity have also demonstrated positive correlations with self-esteem (Chae & Foley, 2010; Umaña-Taylor, 2004). These studies have generally revealed that a sense of belonging to a cultural group, especially in relation to one’s cultural heritage promote self-esteem (Turner & Tajfel, 1986). According to social identity theory, individuals yearn for a sense of belonging to create a sense of well-being. A more recent study which explains this theory was conducted by Dong, Lin, Li, Dou, and Zhou (2015). The cross-sectional study with 342 Uyghur college students demonstrated acculturation attitudes as a significant mediator of the
relationship between cultural identity and self-esteem. Despite recommendations by Liebkind (2006), which suggest that cultural identity is a separate entity to acculturation and identity being more stable than acculturative processes, social identity theory suggests otherwise. According to social identity and developmental theorists, cultural identity like self-identity is more malleable and developmental in nature during adolescence. Thus, explicating that identity like acculturative processes is not static but a dynamic process during this time of development (Turner & Tajfel, 1986). As such, while these mediating models of cultural identity, acculturation and self-esteem may be applicable to individuals in youth and early adulthood (i.e., in college) the same theoretical stance would not necessarily hold in the operationalisation of acculturation among adolescents. As such the current study considers cultural identity as a domain of acculturative and enculturative processes among adolescents. The operationalisation of cultural identity within the study of Dong and colleagues (2015) has emphasized the importance of developmental considerations researchers must make when measuring and testing for correlates and outcomes of acculturation and enculturation. Additionally, another limitation of this study was the utilisation of single-item scales to measure acculturative attitudes. While this approach may be efficient and reduce the length of self-report measures, they compromise on psychometric integrity as these scales increase the chances of measurement error when compared to multi-item scales (Nunnally, 1978; Spector, 1992).

While these studies have been fundamental in elucidating the complexities of acculturation and enculturation as predictors of academic self-concepts among ethnocultural individuals, they are also limited in their assessments. Although these findings have underscored how acculturative and enculturative processes can affect
the way ethnocultural individuals can self-evaluate, they fail to give sufficient consideration of the more recent multifaceted conceptualisations of academic self-concept systems and acculturation/enculturation processes. That is, research is lacking more comprehensive studies examining the more intricate relations of domain-specific acculturation and enculturation on domain-specific academic self-concepts (e.g., the predictive relation between acculturation language and English self-concept or Math self-concept). Studying the relations between domain-specific acculturation and enculturation with domain-specific self-concept enables researchers to provide more holistic, precise and practicable tools and recommendations to clinicians and education practitioners. Such research would be particularly beneficial in informing the enhancement and tailoring of assessments and interventions of domain-specific self-concepts among ethnocultural students who are still contending with identity and cultural issues. Improvements in self-concept may serve as a powerful tool by improving resiliency of individuals during experiences of acculturative and enculturative stress (i.e., discrimination, isolation, etc.), thus improving individuals an overall sense of emotional stability, sense of security and general well-being (Berry, Phinney, Sam, & Vedder, 2006).

**Academic Motivation**

At its most basic level, motivation can be defined as being ‘moved to do something’, that is, an individual who is ‘activated toward an end is considered motivated’ (Ryan & Deci, 2000, p. 54). Motivation is known to manipulate an individual’s ability to acquire and apply knowledge and skills (Dweck, 1986), nevertheless conceptions of academic motivation continue to be elusive. Motivation theory has evolved substantially over time with perspectives of biological origin,
which were later followed by the behavioural-mechanistic perspective (Barker, 2006). Most recently, theories on motivation have been grounded in the social-cognitive perspective. However, there is still a lack of consensus amongst researchers on the conceptualisation of academic motivation as a construct. Even within the current social-cognitive perspective, there exist a number of theories which endeavour to explicate motivation as a construct, including goal theory, self-efficacy theory, attribution theory, and expectancy-value theory. Today, academics (Duda & Nicholls, 1992; Dweck, 1986; Marsh, 1994; Marsh, Craven, Hinkley, & Debus, 2003; Thorkildsen & Nicholls, 1998) believe that academic motivation involves two overarching motivation orientations: learning and performance orientations. 

Learning orientations refers to the urge to increase competence; to master something new; self-referenced acquisition; the internal enthusiasm to improve the individual self, based on an individual’s internal values and standards which are not influenced from external sources (Dweck, 1986; Marsh et al., 2003). In contrast, Performance Orientations refers to the processes in which individuals seek approval of their abilities from external sources through social comparisons, with aspirations for positive judgement and an avoidance of negative judgements of their competencies (Dweck, 1986; Marsh et al., 2003).

Through closer analysis of measures and motivation terminology Marsh (1994) and Heyman and Dweck (1992) recognised a number of conceptual overlaps and assumptions in the application of motivation scales. For instance, Marsh (1994) conducted a factor analysis of two motivation scales, both testing for learning and performance orientations. While the learning orientation scales, Mastery and Goal, were found to be representative of learning orientations, the Competition scale of one of the instruments was found not to be reflective of performance orientation, rather it
was found to be representative of learning orientations. In addition, Heyman and Dweck (1992) cautioned researchers to be vigilant and not assume that differences in scale names are representative of differences in measures. Marsh (1994) also forewarned researchers of misleading notions in the use of learning and performance orientation scales. He alerted motivation researchers to avoid two assumptions: \textit{jingle} (scales with the identical terms represent the same construct); and \textit{jangle} (scales with dissimilar terms represent different constructs) (Marsh, 1994; Marsh et al., 2003).

Further to this, Murphy and Alexander (2000) also contend that some studies adopt similar labels for different constructs and in other instances various labels are used to refer to the same construct. In attempts to distinguish and converge motivation terms and concepts, researchers have created more confusion with their interpretations, theoretical origins, and measurement (Marsh et al., 2003).

To avoid further disparity, Marsh et al. (2003) recommended that researchers “pursue construct validity studies more vigorously to test interpretations of the measures” (p. 192). Marsh et al. (2003) proposed that selected constructs in motivation theory are best represented using two higher-order (HO) factors: Performance Orientations and Learning Orientations. To operationalize this proposition, Marsh et al. (2003) adapted existing scales into eight motivation orientations (Mastery, Intrinsic, Cooperative Individual, Ego, Competition, Approach Success, and Avoid Failure) to create the School Motivation Questionnaire (SMQ) and subjected it to a Hierarchical Confirmatory Factor Analysis (HCFA). Results showed sufficient support for the HO factor model.

Motives for emigration and immigration have been covered in acculturation research (Dow, 2011; Williams & Berry, 1991). Yet there seems to be little focus on the impact of acculturation/enculturation and associated strategies on students’
academic motivation. A study by Walker, Deng, and Dieser (2001) focused on the impact of cultural self-construal on student motivations within outdoor recreation/physical education classes. The study focused on the influence of culture on motivation, rather than the impact of the acculturation process or strategies on motivation. Similarly, research by Kumar (2006) focused on identifying challenges faced by migrant youth living in pluralistic societies often confronted with multiple and sometimes conflicting cultures. Her research has theoretically and empirically demonstrated that feelings of dissonance are enhanced when schools utilise performance-goal approach instead of a mastery focus, meaning that schools which focus on competition and acknowledgment hinder rather than enable motivation among culturally diverse youth (Kumar, 2006; Kumar & Maehr, 2010). Another study by Yan and Berliner (2011) focussed on the motivations of international students and their motivations for studying abroad. The qualitative study found that Chinese international students were marginalised within their host society (United States) and were academically motivated in the “hope for social acceptance” within Western society (Yan & Berliner, 2011). According to Zusho and Clayton (2011), the best cross-cultural studies focussed on the goal theory approach which was conducted by McInerney and colleagues (e.g., McInerney & Ali, 2006; McInerney, Marsh, & Yeung, 2003). McInerney’s research has generally noted more cross-cultural similarities than differences, with mastery goal approach considered to be beneficial for all students regardless of their cultural heritage (McInerney & Ali, 2006). Other cross-cultural trends include extrinsic rewards as a negative predictor of continuing education among Asian, European, Australian, and Aboriginal samples (McInerney et al., 2003), thus, his work to supports the universalism of goal theory. As such, throughout his research studies there is a greater tendency toward within-
group differences of motivation rather than between-group differences (i.e., cross-cultural differences). Accordingly, the current study will also take a cross-cultural universal approach to measuring motivation. By exploring the role of acculturative and enculturative processes on academic motivations across a culturally heterogeneous (across four cultures) ethnocultural sample, the current study will look beyond the mean-level differences across cultural groups and contend with the question of how academic motivations differ within adolescent ethnocultural groups (Pintrich, 2003).

A gap in motivation literature relating to the acculturation and enculturation processes is apparent. As it stands, acculturation and enculturation literature is yet to explore domain-specific effects of these processes on factors of motivation. Research has overlooked these relations among post first generation migrants, with many of the current studies conducted either in tertiary institutions (e.g., Yan & Berliner, 2011), homogenous schooling environments (e.g., Walker, Deng, and Dieser, 2001) across Asian or Latino samples. There is little Australian research which looks at such relations beyond first generation migrants and even less (globally) on these relations within more culturally homogenous schooling contexts (e.g., ethnic day school environments). By utilising a universal approach, the current study will employ psychometrically sound measures to investigate how motivational factors differ across domain-specific acculturative and enculturative processes across more culturally homogenous schooling contexts, to make empirical claims which aim to advance theory and practice in both motivational and cross-cultural psychology disciplines.
School Belongingness

Much like the previous outcomes, school belongingness of migrants or ethnocultural adolescents does not include measures of acculturation, however research does suggest that domains of language, behaviour and identity are pivotal in the schooling experiences of individuals belonging to these groups (Trickett & Birman, 2005). For instance, research has noted strong correlates between language competency in the heritage language and academic achievement among a cohort of Vietnamese adolescents in the United States, suggesting that ethnic language competency provides students with the tools to connect with their heritage culture through their ethnic communities which enhance achievement (Bankston & Zhou, 1997). On the other hand, the same study observed that behavioural domains of acculturation and enculturation were linked to adaptation within schools. The study found that Vietnamese students who culturally socialised with Americanised Vietnamese or other Americans had a negative impact on school adjustment, however it is noteworthy that the study was conducted within the context of a culturally heterogeneous school (Bankston & Zhou, 1997). Conversely, research has also demonstrated the benefits of not culturally socialising with American peers (Gibson, 1988), while another study by Eisikovits (1995) have shown no effect between a lack of cultural behaviours with the majority culture on school adjustment. Overall, these conflicting findings may be due to the various conceptualisations of cultural behaviours and school adjustment, alternatively, it also highlights the complexities of these relations with various contexts generating a range of outcomes. Different from the previous domains, the identity domain has received much more attention in school belongingness and adjustment research, however many of these studies operationalised school adjustment through academic achievement scales or
student grades (e.g., Portes & Zady, 1996; Portes & Zhou, 1993; Wood & Clay, 1996). A study by Trickett and Birman (2005) found that high American acculturation related to an increased sense of school belongingness among adolescent refugees. Furthermore, stronger relations with school belongingness were noted when American acculturation took place in conjunction with parental support. However when students rated low on American acculturation, parental support did not have any impact on school belongingness. More specifically, the study found that while American identity domain predicted school belongingness, behavioural and language domains did not. While this study is the first of its kind to use domain-specific acculturation measures to explore relations with school belongingness and demonstrated domain-specific relations with this outcome, the study took place within one school and only tested first-generation Soviet refugee adolescents. Furthermore, unlike most research studies, Trickett and Birman (2005) also explored the relations between enculturative domains and school belongingness; however no significant correlations were noted. Like this study, future research in acculturation and enculturation must focus on domain-specific effects on school belongingness, considering the multifaceted conceptualisations of these processes. Unfortunately much of the current research in this area utilises unilinear or generic measures of these acculturation and enculturation and have taken place in cultural heterogeneous schooling contexts. One could hypothesise very different results within a more homogenous schooling ecology, as more research is required to understand not only the domain-specific effects of acculturation and enculturation on school belongingness, but also to enhance understandings of the role of the schooling context, by conducting research in more culturally homogenous schooling environments.
It is worth noting throughout this thesis the term school attachment is used interchangeably with school belongingness due to the lack of discriminant validity in school belongingness scales (Parada, 2006). This is further explicated in Chapter 6.

**Multiculturation**

Conceptualised as a positive process of respect, acceptance and pride originating from the larger society toward a cultural minority, multiculturation is an adaptive psychosocial process that may enhance the resiliency among ethnic and Indigenous adolescents and youth (Bodkin-Andrews, Denson, & Bansel, 2013). Bodkin-Andrews, Craven, and Martin (2006) developed a quantitative measure of perceived multiculturation among Indigenous Australian students and suggested that multiculturation is the:

antithesis of ‘a’cculturation, and instead be a form of perceived ‘multi’culturation. A process where a minority group member has perceived that their culture, and its values and norms within it, are being accepted as a valued part of the more mainstream majority. In other words, this may be multiculturalism at its best. (p. 6)

Thus, while acculturation processes focus on the adoption of the new facets of culture (i.e., the behaviours, language, norms, and lifestyle), muticulturation is the acceptance and respect of an individual’s culture by the larger society in its current state (Berry, 2011; Bodkin-Andrews et al., 2010). According to Bodkin-Andrews and colleagues (2010), muticulturation would be an easier psychosocial process to adjust to when compared to acculturation, as it may alleviate the stress processes (see affective perspective of acculturation) such as discrimination during settlement. Research has demonstrated that efforts to enhance and endorse a positive sense of
cultural identity may increase a sense of control among minority groups (e.g., Schmitt & Branscombe, 2002). Research of Indigenous students has demonstrated that multiculturation among Indigenous students lowered levels of absenteeism as well as significantly increased their academic self-concept (see Bodkin-Andrews et al., 2010; Bodkin-Andrews et al., 2013).

While multiculturation has been used within the context of Indigenous psychology, rarely has it been utilised within the domain of cross-cultural psychology. This raises the question, are there domain-specific benefits of acculturation and enculturation processes on the perceived cultural respect (i.e., multiculturation) among migrants and their progressive generations? The current study will utilise multiculturation as a measure of perceived cultural respect from the larger Australian community and examine whether there are domain-specific relations of acculturation/enculturation with multiculturation among ethnocultural adolescents.

**Implications for the Current Investigation**

The previous section has surveyed the extant literature pertaining to acculturation and enculturation and its psychosocial correlates and outcomes. Considering the quality of intercultural relations is a significant factor in the well-being, school adjustment and psychological outcomes among immigrant and ethnocultural adolescents, research on the domain-specific effects of acculturation and enculturation is extremely sparse (Andriessen & Phalet, 2002). Despite advances in the theoretical conceptualisation of acculturation and enculturation, many studies continue to test these constructs using outdated generic (i.e., aggregate scales) and unilinear scales. As demonstrated by more recent works, acculturation and
enculturation are more complex and multifaceted in their relations with psychosocial outcomes than previously envisaged. Accordingly, the relations between these constructs and potential psychosocial correlates need to be examined at the level of individual domains to achieve theoretical and methodological synergy as well as stipulate the specific domains responsible for these differences in psychosocial outcomes. As seen in the abovementioned studies, many of the studies have fallen into the trap of cultural essentialism, linking success and failures to specific cultural groups, instead of addressing the underlying more universal psychological processes which may attributing to these findings. Thus, the current study will make attempts at unpacking and disentangling these processes and their relations to a series of psychosocial constructs, by focusing on within-group differences (i.e., taking an individual differences approach to cross-cultural psychology research; see Berry, 2011) rather than a cultural differences approach.

Additionally, some studies cited throughout this section revealed that acculturation and enculturation had a positive influence on psychosocial outcomes, while others reported a lack of consistency with previous research findings. Many of these nuances in these findings (across and sometimes within studies) may be attributable to the diversities in the scales utilised to measure acculturation/enculturation (e.g., single-item, unilinear, bilinear-multidimensional measures, the use of proxy measures (such as generational status), variations in the scales utilised to measure outcomes as well as other methodological disparities such as the sample (the age of participants, generational status, gender) and context in which the studies have taken place. With oversimplified theoretical frameworks and paradoxical findings, it would be difficult to persuade policy makers to invest into educational and psychological programs and interventions within the ethnic day
schooling context. Consequently, it is essential for research to determine whether or not acculturation/enculturation processes are empirically associated with positive psychosocial outcomes. By addressing these limitations in current cross-cultural research, it is anticipated that more consistent findings will be achieved in the examination of acculturation/enculturation and its relations to psychosocial outcomes. Accordingly, the current investigation aims to contribute to the rigour and integrity of research utilising an individual differences approach of acculturation/enculturation research.

**Chapter Summary**

This chapter provided a critical review of: (a) the theoretical shortcomings within acculturation and enculturation research; (b) methodological inadequacies within these studies; and (c) the relationships between acculturation and enculturation and psychosocial correlates. Since research in acculturative and enculturative phenomena is still developing due to conceptual, theoretical as well as methodological challenges, research findings in the field often lack continuity or convergence. More specifically, the most prominent challenges include: the lack of consensus on the conceptualisation of these processes and the inconsistencies in their operationalisation (as unilinear versus bilinear). To achieve greater continuity in the field, investigators must address these incongruities across studies to enable greater cross-study comparisons in the future.

With regard to acculturation/enculturation and psychosocial correlates, the research reviewed also demonstrated that much more needs to be done to achieve research-derived consensus. One of the main trends was the lack of consistency in the findings between acculturation/enculturation and its relation to psychosocial
outcomes. As previously noted, much of these inconsistencies have been attributed to the continuity in the operationalisation of acculturative and enculturative processes, with most studies utilising aggregate scores and extremely limited research drawing on the domain-specific relations with these psychosocial constructs. Furthermore, many of these studies focused on between-group differences, with cross-cultural research in acculturation/enculturation often overlooking within group differences. As aforementioned, the present investigation aims to contribute to the advancement and rigour of acculturation/enculturation research by employing robust and powerful research methodologies to address current theoretical and methodological shortcomings identified in the extant literature. As such, the chapter also discussed the implications of these theoretical and methodological inadequacies for the design of the current study. The following chapter presents the overarching aims, hypotheses and research questions driving the three studies within the current investigation.
CHAPTER 4: AIMS, HYPOTHESES, AND RESEARCH QUESTIONS

Introduction

The primary aim of this research was to measure domain-specific acculturation and enculturation and their associations with psychosocial outcomes of students attending independent ethnic day high schools in New South Wales. To accomplish this overarching aim, the study comprised three interrelated studies and drew upon a concurrent triangulation mixed methods research design (see Chapter 5). Study 1 aimed to develop and test the psychometric properties of a newly developed instrument which measures the acculturation and enculturation of high school students and tested the psychometric properties of existing instruments utilised in the present investigation. Study 2 explicated the relations between acculturation and enculturation and psychosocial constructs (e.g., academic self-concept, academic motivation) for the total sample and in relation to gender, age, and immigrant generations. Study 3 comprised of a qualitative study which was designed to validate and extend upon the findings of Study 1 by providing further insight into domain and context specificity of acculturation and enculturation. When available, unexpected insights from interviews relating to the associations between acculturative/enculturative domains and academic and psychosocial outcomes were also utilised to inform the findings of Study 2.
Extending from previous research, this chapter presents the aims, research questions, and their rationale for each of the three studies within the current investigation. Hypotheses were devised where previous theory or research in acculturation and enculturation provided sufficient guidance to develop predictions. Research questions were developed when inconsistencies were identifiable in existing research or when research evidence on the topic was limited.

Aims are numbered for each of the three studies comprising the present investigation. Research questions and hypotheses are numbered corresponding to each of the aims of the study with a three digit number within each of the studies so that each of the research questions and hypotheses correspond with their respective aim. The first digit in the number combination represents the study (1, 2, or 3), while the second identifies the number of the aim, and the third signifies the number of the research question or hypothesis pertaining to that specific aim. For instance Research Question 1.1.1 refers to Study 1, Aim 1, and Research Question 1.

Study 1: Psychometric Properties of Newly Developed Acculturation and Enculturation Instruments and Existing Instruments

Acculturation and enculturation research in Australia lacks domain-specific measures which are both reliable and valid. As discussed in Chapters 3, while there are many culture-specific and multi-group measures of these processes, they are either contextually invalid for use within the Australian context or may contain some theoretical or methodological issues which require further attention. As Miller and colleagues (e.g., Miller, 2007, 2010; Miller et al., 2013) have contended, the field of acculturation and enculturation must explore the possibility of within-individual differences in acculturative and enculturative processes which are not considered
within aggregate measures currently used in Australia. Thus by extending upon the works of Miller and colleagues, the present study aims to overcome these theoretical and methodological issues by adapting (some items from existing measures) and developing a new domain-specific measure of acculturation and enculturation, which can encapsulate the intricacies and nuances of these processes within individuals. It is noteworthy that the DSAEM focused on the measurement of the external domains of acculturation and enculturation (i.e., language, knowledge and behaviours). The internal domains (i.e., values and identity) were only explored qualitatively in Study 3, as these domains have been more complex to capture quantitatively in the past (Matsudaira, 2006). Therefore, based on these current challenges in adequately encapsulating ‘how much’ students engage in these domains, it was deemed necessary to first consider ‘why’ and ‘how’ students are engaging with them. These insights will inform the future development of more holistic and robust quantitative measures of these domains.

Accordingly, Study 1 aimed to demonstrate that the Domain-Specific Acculturation and Enculturation Measures (DSAEM), and the existing instruments used in the present investigation are valid and robust measures. To assess the psychometric properties of the developed measures as well as the existing measures, this study investigated the reliability of each instrument, the a priori hypothesised factor structure (i.e., the configuration of factor loadings, variances, covariances, and unique errors), factorial invariance of the factor structure (to ensure that the theoretically derived factors were applicable to different sub-samples: gender and year level), and the factor structure of the battery of instruments when combined. Modifications to both the DSAEM and the existing measures were considered, the implementation of these changes have been explicated in detail within Chapter 6.
Aims

More specifically, Study 1 aimed to:

1. Test the psychometric properties of the newly developed Domain–Specific Acculturation and Enculturation Measures (DSAEM) and to test the instruments’ factorial equivalence across gender and grade; and

2. Test the psychometric properties of existing measures of psychosocial outcomes (academic self-concept; academic motivation; school attachment; and multiculturation) and to test the instruments’ factorial equivalence across gender and grade; and

3. Test the factor structure of all the six measurement scales is maintained when they are all combined and administered as a student survey.

Statement of the Research Questions: A Priori Model of the Newly Developed Acculturation Measure

Research question 1.1.1: Internal consistency of the newly developed acculturation measure. Will the internal consistency of the newly developed acculturation measure for secondary students show acceptable reliability estimates?

Research question 1.1.2: Factor structure of the newly developed acculturation measure. Will Confirmatory Factor Analysis demonstrate that the newly developed DSAEM has a domain-specific 3 factor (i.e. language, knowledge and behaviours) acculturation structure where all items load onto only those corresponding factors they were designed to measure and distinct factors will be found? (see Figure 4.1).
Figure 4.1. Pictorial representation of the a priori model of domain-specific acculturation. The CFA model for the proposed domain-specific structure comprises 15 observed indicators (small rectangles) and 3 latent constructs (ovals) or latent factors. Straight lines indicate the effect of a latent factor on an observed indicator (i.e., a factor loading). Each factor consists of 5 indicators, leading to 5 loadings. Each indicator loads only on its respective factor. Covariances among the latent factors are indicated by curved lines. No correlations between uniquenesses were hypothesised or modelled. The 3 proposed factors were Acculturative Language, Acculturative Knowledge, and Acculturative Behaviours.
Statement of the Research Questions: The Revised Acculturation Measure

Research question 1.1.3: Internal consistency of the revised acculturation measure. Will the internal consistency of the revised acculturation measure for secondary students show acceptable reliability estimates?

Research question 1.1.4: Factor structure of the revised acculturation measure. Will Confirmatory Factor Analysis demonstrate that the revised DSAEM has a domain-specific 3 factor (i.e. language, knowledge and behaviours) acculturation structure where all items load onto only those corresponding factors they were designed to measure and distinct factors will be found? (see Figure 4.2).
Figure 4.2. Pictorial representation of the revised model of domain-specific acculturation. The CFA model for the revised domain-specific structure of the acculturation measure comprises 9 observed indicators (small rectangles) and 3 latent constructs (ovals) or latent factors.

Research question 1.1.5: Invariance of factor structure of the revised acculturation measure. To what extent will the factor structure of the revised acculturation measure be similar for males and females as demonstrated by CFA tests of invariance? To what extent will the factor structure of the revised
acculturation measure be similar for Years 7/8 and Years 9/10 students as demonstrated by CFA tests of invariance?

**Statement of the Research Questions: A Priori Model of the Newly Developed Enculturation Measure**

**Research question 1.1.6: Internal consistency of the newly developed enculturation measure.** Will the internal consistency of the newly developed enculturation measure for secondary students show acceptable reliability estimates?

**Research question 1.1.7: Factor structure of the newly developed enculturation measure.** Will Confirmatory Factor Analysis demonstrate that the newly developed DSAEM has a domain-specific 3 factor (i.e. language, knowledge and behaviours) enculturation structure where all items load onto only those corresponding factors they were designed to measure and distinct factors will be found? (see Figure 4.3).
Figure 4.3. Pictorial representation of the a priori hypothesised domain-specific model of enculturation. The CFA model comprises 15 observed indicators (small rectangles) and 3 latent constructs (ovals) or latent factors. The 3 proposed factors were enculturative language, enculturative knowledge, and enculturative behaviours.
Statement of the Research Questions: The Revised Enculturation Measure

**Research question 1.1.8: Internal consistency of the revised enculturation measure.** Will the internal consistency of the revised enculturation measure for secondary students show acceptable reliability estimates?

**Research question 1.1.9: Factor structure of the revised enculturation measure.** Will Confirmatory Factor Analysis demonstrate that the revised DSAEM has a domain-specific 3 factor (i.e. language, knowledge and behaviours) enculturation structure where all items load onto only those corresponding factors they were designed to measure and distinct factors will be found? (see Figure 4.4).
Figure 4.4. Pictorial representation of the revised model of domain-specific enculturation. The CFA model for the revised domain-specific structure of the Enculturation comprises 9 observed indicators (small rectangles) and 3 latent constructs (ovals) or latent factors.

Research question 1.1.10: Invariance of factor structure of the revised enculturation measure. To what extent will the factor structure of the revised enculturation measure be similar for males and females as demonstrated by CFA tests of invariance? To what extent will the factor structure of the revised
enculturation measure be similar for Years 7/8 and Years 9/10 students as demonstrated by CFA tests of invariance?

**Statement of the Hypotheses: Academic Self-Concept (ASDQ 2)**

**Hypothesis 1.2.1: Internal consistency of the ASDQII measure.** Hypothesis 1.2.1 predicted that tests of reliability will demonstrate acceptable reliability estimates for each of the four factors as measured by the ASDQ II (General Self-Concept, Maths Self-Concept, English Self-Concept and School Subjects Self-Concept).

**Hypothesis 1.2.2: Factor structure of the ASDQII measure.** Hypothesis 1.2.2 predicted that Confirmatory Factor Analysis would support the four a priori factors of General Self-Concept, Maths Self-Concept, English Self-Concept and School Subjects Self-Concept of the ASDQ II (see Figure 4.5).
Figure 4.5. Hypothesised a priori factor structure of the ASDQII.

**Hypothesis 1.2.3: Internal consistency of the revised ASDQII measure.**

Hypothesis 1.2.3 predicted that tests of reliability will demonstrate acceptable reliability estimates for the revised four factors measured by the ASDQ II (General
Self-Concept, Maths Self-Concept, English Self-Concept and School Subjects Self-Concept).

**Hypothesis 1.2.4: Factor structure of the revised ASDQII measure.**

Hypothesis 1.2.4 predicted that Confirmatory Factor Analysis would support the four revised factors of General Self-Concept, Maths Self-Concept, English Self-Concept and School Subjects Self-Concept of the ASDQ II (see Figure 4.6).

*Figure 4.6. Revised factor structure of the ASDQII.*

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**Hypothesis 1.2.5: Factorial invariance of the revised ASDQII measure.**

Hypothesis 1.2.5 predicted that student responses to the revised ASDQ II factors will be similar for both male and females as demonstrated by CFA tests of invariance. The Hypothesis 1.2.5 also predicted that student responses to the revised ASDQ II factors will be similar for both Years 7/8 and Years 9/10 students as demonstrated by CFA tests of invariance.

**Statement of the Hypotheses: School Motivation Questionnaire (SMQ)**

**Hypothesis 1.2.6: Internal consistency of the SMQ.** Hypothesis 1.2.6 predicted that tests of reliability will demonstrate acceptable reliability estimates for each of the two factors as measured by the SMQ (Intrinsic Orientation and Competition Orientation).

**Hypothesis 1.2.7: Factor structure of the SMQ measure.** Hypothesis 1.2.7 predicted that Confirmatory Factor Analysis would support the two a priori factors of Intrinsic Orientation and Competition Orientation of the SMQ (see Figure 4.7).
Hypothesis 1.2.8: Internal consistency of the revised SMQ. Hypothesis 1.2.8 predicted that tests of reliability will demonstrate acceptable reliability estimates for each of the two revised factors as measured by the SMQ (Intrinsic Orientation and Competition Orientation).

Hypothesis 1.2.9: Factor structure of the revised SMQ measure. Hypothesis 1.2.9 predicted that Confirmatory Factor Analysis would support the two revised factors of Intrinsic Orientation and Competition Orientation of the SMQ (see Figure 4.8).
Hypothesis 1.2.10: Factorial invariance of the revised SMQ measure.

Hypothesis 1.2.10 predicted that student responses to the revised SMQ factors will be similar for both males and females as demonstrated by CFA tests of invariance. Hypothesis 1.2.10 also predicted that student responses to the revised SMQ factors will be similar for Years 7/8 and Years 9/10 students as demonstrated by CFA tests of invariance.

Statement of the Hypotheses: School Belongingness (SBS)

Hypothesis 1.2.11: Internal consistency of the SBS measure. Hypothesis 1.2.11 predicted that the internal consistency of the SBS measure for secondary students will be demonstrated by acceptable reliability estimates.
Hypothesis 1.2.12: Factor structure of the SBS measure. Hypothesis 1.2.12 predicted that Confirmatory Factor Analysis would support the a priori factor of attachment of the SBS (see Figure 4.9).

![Diagram of School Attachment](image)

Figure 4.9. Hypothesised a priori factor structure for SBS. It is important to note that due to low discriminant validity of the original School Belongingness measure which comprised of three factors (i.e., Acceptance of School Rules, School Attachment and School Support), the current investigation surveyed only the School Attachment factor (Parada, 2006).

Hypothesis 1.2.13: Factorial invariance of the SBS measure. Hypothesis 1.2.13 predicted that student responses to the SBS will be similar for both males and females as demonstrated by CFA tests of invariance. Hypothesis 1.2.13 also predicted that student responses to the SBS will be similar for Years 7/8 and Years 9/10 students as demonstrated by CFA tests of invariance.

Statement of the Hypotheses: Multiculturation

Hypothesis 1.2.14: Internal consistency of the Multiculturation scale. Hypothesis 1.2.14 predicted that the internal consistency of the Multiculturation scale for secondary students will demonstrated by acceptable reliability estimates.
Hypothesis 1.2.15: Factor structure of the Multiculturation scale.

Hypothesis 1.2.15 predicted that Confirmatory Factor Analysis would support the a priori unidimensional factor structure of the Multiculturation scale (see Figure 4.10).

Figure 4.10. Hypothesised a priori factor structure for Multiculturation Scale.

Hypothesis 1.2.16: Internal consistency of the revised Multiculturation scale. Hypothesis 1.2.16 predicted that the internal consistency of the revised Multiculturation scale for secondary students will demonstrated by acceptable reliability estimates.

Hypothesis 1.2.17: Factor structure of the revised Multiculturation scale.

Hypothesis 1.2.17 predicted that Confirmatory Factor Analysis would support the revised unidimensional factor structure of the Multiculturation scale (see Figure 4.11).

Figure 4.11. Revised factor structure for the Multiculturation Scale.
Hypothesis 1.2.18: Factorial invariance of the revised Multiculturation measure. Hypothesis 1.2.18 predicted that student responses to the revised Multiculturation measure will be similar for males and females as demonstrated by CFA tests of invariance. Hypothesis 1.2.18 also predicted that student responses to the revised Multiculturation measure will be similar for Years 7/8 and Years 9/10 students as demonstrated by CFA tests of invariance.

Statement of the Research Question: Instrument Battery

Research Question 1.3.1: Factor structure of the assessment battery. Will the factor integrity of the various measures utilised in the current investigation hold when all measurement scales (DSAEM, ASDQII, SMQ, SBS, and Multiculturation) are combined?

Study 2: The Impact of Acculturation and Enculturation on Psychosocial Outcomes

Using Structural Equation Modeling (SEM) and Hierarchical Multiple Regression Analyses (HMRA) techniques Study 2 focused on examining the possible relations between acculturative and enculturative processes (i.e., predictor variables) and a series of psychosocial outcomes (i.e., outcome variables). The study proposes to fill a substantive gap within educational and psychological research, as the relations between acculturative and enculturative processes has not been examined with relation to the aforementioned psychosocial outcomes, beyond first generation immigrants and certainly not within the context of ethnic day schooling within Australia. Further to this, rarely have psychosocial outcomes been explored utilizing bilinear domain-specific measures of acculturation/enculturation and assessed at the
level of each domain. The following section provides a set of research aims, followed by a series of research questions to address each of these objectives.

**Aims**

Study 2 aimed to:

1. Examine the predictive relations between Acculturation Language and Enculturation Language factors and students’ academic self-concept, academic motivation, school belongingness and multiculturation; and
2. Examine the predictive relations between Acculturation Knowledge and Enculturation Knowledge factors and students’ academic self-concept, academic motivation, school belongingness and multiculturation; and
3. Examine the predictive relations between Acculturation Behaviour and Enculturation Behaviour factors and students’ academic self-concept, academic motivation, school belongingness and multiculturation; and
4. Explore relations between DSAEM factors and psychosocial outcomes when accounting for student demographic characteristics (i.e., control variables).

**Statement of the Research Questions: Predictive Relations Between DSAEM Factors and Psychosocial Outcomes**

**Research question 2.1.1: Relations between Acculturation Language and Enculturation Language DSAEM factors and academic self-concept, academic motivation, multiculturation and school belongingness factors.** What are the predictive relations between Acculturation Language and Enculturation Language factors and academic self-concept, academic motivation, multiculturation and school belongingness outcomes?
Research question 2.2.1: Relations between Acculturation Knowledge and Enculturation Knowledge DSAEM factors and academic self-concept, academic motivation, multiculturation and school belongingness factors. What are the predictive relations between Acculturation Knowledge and Enculturation Knowledge factors and academic self-concept, academic motivation, multiculturation and school belongingness outcomes?

Research question 2.3.1: Relations between Acculturation Behaviour and Enculturation Behaviour DSAEM factors and academic self-concept, academic motivation, multiculturation and school belongingness factors. What are the predictive relations between Acculturation Behaviour and Enculturation Behaviour factors and academic self-concept, academic motivation, multiculturation and school belongingness outcomes?

Statement of the Research Questions: Explore relations between DSAEM factors and Psychosocial Outcomes when accounting for demographic characteristics

Research question 2.4.1: Relations between acculturation and enculturation and academic self-concept whilst controlling for the effects of student demographic characteristics. What are the relations between student demographic characteristics and academic self-concept? What are the relations between the acculturation and enculturation factors and academic self-concept factors, once taking into account student demographic characteristics (i.e., gender, grade, cultural background)?
Research question 2.4.2: Relations between acculturation and enculturation and academic motivation whilst controlling for the effects of student demographic characteristics. What are the relations between student demographic characteristics and academic motivation? What are the relations between the acculturation and enculturation factors and academic motivation factors, once taking into account student demographic characteristics (i.e., gender, grade, cultural background)?

Research question 2.4.3: Relations between acculturation and enculturation and multiculturation whilst controlling for the effects of student demographic characteristics. What are the relations between student demographic characteristics and multiculturation? What are the relations between the acculturation and enculturation factors and multiculturation, once taking into account student demographic characteristics (i.e., gender, grade, cultural background)?

Research question 2.4.4: Relations between acculturation and enculturation and school belongingness whilst controlling for the effects of student demographic characteristics. What are the relations between student demographic characteristics and school belongingness? What are the relations between the acculturation and enculturation factors and school belongingness, once taking into account student demographic characteristics (i.e., gender, grade, cultural background)?

Study 3: Exploring Domain and Context Specificity of Acculturation/Enculturation Among Ethnocultural Adolescent Students

Research on acculturation and enculturation has recently recognized the more dynamic nature of these processes at the level of the individual, with differences
lying across both context and domains types. As such, it is imperative to capture these context-specific variants within individuals across various domains, with the aim of generating more holistic yet multifaceted understandings of these acculturative and enculturative phenomena. Additionally, while many studies have developed quantitative scales to measure these processes, rarely have they been examined or validated against emic accounts (i.e., insider perspective). Semi-structured interviews were conducted to explicate the distinctions, patterns and complexities of acculturative and enculturative experiences among adolescents attending independent ethnic day schools in New South Wales. The study aims to advance this field by providing insight on the complexities of these processes across both domains and context, essentially moving beyond previous static conceptualisations and highlighting the utility as well as the significance of domain-specific measures for both researchers and practitioners.

Aims

The overarching aim of Study 3 is to enrich, validate and extend the results from Study 1 by comparing and contrasting perspectives of students and their perceptions of:

1. Acculturation and enculturation as domain-specific processes; and

2. Distinctions, patterns and complexities of acculturative and enculturative processes across various contexts.
Statement of the Research Questions: Exploring Domain and Context

Specificity

Research question 3.1.1: Domain specificity of acculturation and enculturation processes. Are the processes of acculturation and enculturation domain-specific among adolescent students attending ethnic day schools in New South Wales? Is the factor structure of the DSAEM supported? To address this research question students will be asked to provide insight into:

(a) What makes an individual a member of their cultural group?
(b) What are the most important components/parts of their culture?
(c) How, when and why they engage in language?
(d) How, when and why they adopt and use their cultural values?
(e) How, when and why they identify with their culture/s?
(f) What are their knowledge and understandings about their culture/s; how were these understandings attained; and are they happy with their current knowledge, why, why not?
(g) How, when and why they engage in cultural behaviours, customs, and traditions?

Research question 3.2.1: Context specificity of acculturation and enculturation processes. What are some of the distinctions, patterns and complexities of acculturation and enculturation processes across various contexts among adolescent students? To address this research question insights from interview data were used to explore the role of:

(a) Socio-political influences on acculturation and enculturation processes;
(b) Ecological influences on acculturation and enculturation processes.

Chapter Summary

Based on the theoretical foundations as well as empirical studies explicated in Chapters 2 and 3, this chapter has presented the aims, hypotheses, and research questions for the three studies which encompass the present investigation.

In sum the overarching aims of the current study are to:

1. Develop psychometrically sound domain-specific measures of acculturation and enculturation as well as utilise robust instruments to measure psychosocial constructs of interest.

2. Examine the psychosocial correlates of domain-specific acculturation and enculturation for ethnocultural students attending ethnic day schools.

3. To capture and evaluate emic accounts of the domain-specific and context-specific features acculturative and enculturative phenomena, in turn informing and validating the utility of the domain-specific measures.

The following chapter presents the research methodology employed to test the research questions and hypotheses posed in the current chapter.
CHAPTER 5: METHODOLOGY

“Embracing mixed methods provides researchers the chance to explore subtlety and uniqueness in culture” (Bartholomew & Brown, 2012, p. 188).

Introduction

The three inter-related studies of this investigation adopted a concurrent triangulation mixed methods design to methodically address the aims, research questions, and hypotheses outlined in Chapter 4. Study 1 adopted a quantitative approach and developed acculturation and enculturation measures. The psychometric properties of these measures were tested to devise new theoretically and psychometrically sound instrumentation targeted at Australian ethnocultural groups (i.e., DSAEM). The associations of acculturation and enculturation domains with psychosocial constructs were quantitatively measured in Study 2. Finally, Study 3 employed a qualitative approach to data collection and analysis and explored domain and context specific nature of these processes. The study also examined the internal domains of acculturation/enculturation which have been largely overlooked by current quantitative measures. Following this, interview data from Study 3 was integrated with the findings from the quantitative studies, which not only validated
the factor structure of the DSAEM, but also enhanced the investigation by exploring additional, complimentary as well as incongruous findings.

This chapter explores the methods employed to examine these three inter-related studies. Firstly, the chapter provides justification for the mixed methods approach and the underpinning framework on which the design is based upon. Secondly, the selection process of the appropriate methods utilized in this investigation are described, followed by an explanation of the methodological processes implemented and the ways in which the three inter-related studies are complimented by utilising the various research methods. Finally, the development of a revised psychometrically sound scale, selection of instruments, the recruitment of participants and a description of the data analysis are presented for each of the three studies.

**Mixed Methods Research**

Mixed methods research has been used within the social and behavioural sciences since the beginning of the 20\textsuperscript{th} Century (Tashakkori & Teddlie, 2003, 2010; Teddlie & Tashakkori, 2009). The practice was not formalised until the release of the Campbell and Fiske (1959) article which used multiple research methodologies (quantitative and qualitative approaches) and introduced the concept of triangulation through the union of two or more methods as a construct validation technique (Johnson, Onwuegbuzie, & Turner, 2007). Throughout its history, methodological pluralism has steadily gained recognition for the ways in which both qualitative and quantitative methodological paradigms complement each another at the levels of the research design, data collection, and data analysis (Bryman, 1988, 2012; Creswell 2009; Johnson et al., 2007; Tashakkori & Teddlie, 2003, 2010; Teddlie &
Tashakkori, 2009). For instance, at the research design phase qualitative data can facilitate the quantitative element of a study in the development of scales. Next at the data collection phase, quantitative data may play a role in preventing qualitative interviews of outliers, which are not representative of the mean sample. At the data analysis phase, quantitative data may assist the evaluation of the generalizability of qualitative results through the examination of trends and relationships (Bryman, 1998; Johnson, et al., 2007). With each methodological paradigm (qualitative and quantitative) presenting its own strengths and weaknesses, the amalgamation of these two paradigms may counteract the limitations of the other while offering additional findings and insights which may otherwise be overlooked (Axinn & Pearce, 2006; Johnson et al., 2007; Tashakkori & Teddlie, 2003, 2010; Teddlie & Tashakkori, 2009).

For the purpose of the present investigation, a mixed methods design is defined as the third paradigm of inquiry which uses the combination of qualitative and quantitative research designs, data collection, analytical techniques and methods (Bryman, 1988, 2012; Creswell, 2009; Johnson et al., 2007; Tashakkori & Teddlie, 2003, 2010; Teddlie & Tashakkori, 2009). Johnson and Onwuegbuzie (2004) expand on this, describing mixed methods research as “the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study” (p. 17). This method of inquiry aims to improve the general vigour of a study by either incorporating both qualitative and quantitative research, or by using one approach of inquiry to build a greater understanding on the results of the other (Creswell, 2009; Tashakkori & Teddlie, 2003, 2010; Teddlie & Tashakkori, 2009).
Leading authors in the field anticipate that with the introduction of mixed methods as a third methodology, some of the dichotomy which lies between qualitative and quantitative methods may be alleviated (Axinn & Pearce, 2006; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2010). Mixed methods research is based on the pragmatic system of philosophy as it brings together the insights provided by both qualitative and quantitative methodologies, providing a practical alternative for researchers and steering clear of the existing paradigm clashes (i.e. quantitative vs. qualitative; Axinn & Pearce, 2006; Johnson & Onwuegbuzie, 2004). Pragmatism can be explained as a worldview which “arises out of actions, situations, and consequences rather than antecedent conditions” it focuses on the problem, uses all available methods to comprehend the problem and practically find its solution (Creswell, 2009, p. 10). Pragmatism is not dedicated to any one classification of reality, instead it will adopt any means to achieve a solution to a problem. Reflective of this philosophy, mixed methods research focuses on the research question and can draw on inductive (i.e., observation, hypothesis to theory), deductive (i.e., theory, hypothesis to observation), and abductive (i.e., providing the most rational explanations for results) methods to address the relevant problem.

Models and Typologies of Mixed Methods Research

Mixed methods research designs have been divided into a number of typologies and strategies. The mixed model design simply mixes both qualitative and quantitative approaches within stages of the investigation. In contrast, the mixed method design contains qualitative and quantitative stages in the investigation (Johnson & Onwuegbuzie, 2004). Further to this, Creswell (2009) reports six
strategies that researchers may adopt in a mixed methods design, which can be divided into two categories: sequential and concurrent strategies.

The Sequential Strategies

Sequential strategies adopt a research design where the results of one research paradigm inform the results of the other. Creswell (2009) describes three sequential approaches to a mixed methods design: the sequential explanatory strategy, sequential exploratory strategy, and the sequential transformative strategy. The *sequential explanatory strategy* is characterised by the initial data collection and analysis of quantitative data at the first stage of a design followed by the qualitative data collection and analysis at the second stage, with the qualitative data collection and analysis building on the results of the quantitative data. Here, the dominant paradigm is quantitative in nature as the qualitative data is supporting the findings of the quantitative study. The *sequential exploratory strategy* is characterised by the data collection and analysis of qualitative data at Stage 1 followed by the data collection and analysis of quantitative data and builds on the findings of qualitative data. Accordingly the dominant paradigm is qualitative in nature as the quantitative data supports the findings of the qualitative study. The *sequential transformative strategy* is also a two stage data collection and analysis process where the second stage informs the first. This can be explanatory (quantitative at stage one and qualitative at stage two, where the findings in stage two inform the findings in stage one) or exploratory (qualitative at stage one and quantitative at stage two, where the findings in stage two inform the findings in stage one) in nature. Both the qualitative and quantitative data are integrated during analysis with precedence allocated to either or both data forms. Despite these similarities in the strategies, the sequential
transformative strategy is theoretical in nature, as the entire study from its conception to the findings are all informed by theory which guides the study (rather than the data) and concludes with a request for change or intervention.

The Concurrent Strategies

In the concurrent strategies, data collection and analysis of both qualitative and quantitative studies takes place at the same time. Creswell (2009) describes three concurrent approaches to a mixed methods design: the concurrent triangulation strategy, the concurrent embedded strategy, and the concurrent transformative strategy. In the concurrent triangulation strategy, the researcher collects and analyses the qualitative and quantitative data simultaneously, and then compares and contrasts the findings of both paradigms to identify converging and diverging data for the purpose of cross validation. Here, the strength of one paradigm adds to the strength of the findings of the other paradigm and counteracts the weaknesses across the two methods. While equal weight should be given to both methods, this rarely occurs in practice. The concurrent embedded strategy, like the concurrent triangulation strategy, collects both quantitative and qualitative data simultaneously. However, unlike the concurrent triangulation strategy, the concurrent embedded strategy gives weight to one paradigm or method, with the second paradigm playing a supporting role. For instance, a researcher may choose to have a qualitative interview approach as the primary method of study and use secondary surveys to either support or compliment the qualitative method by assessing the generalizability of the findings from the interviews. Here, the role of the secondary methods is given less precedence and is nested within the primary method. Finally, the concurrent transformative strategy is like the sequential transformative strategy as the research
design is embedded in theory; however, it entails the simultaneous collection of quantitative and qualitative data. The theoretical perspective is reflected throughout the design as is the basis on which methodological decisions are made, that is from the purpose of the study to the reporting of findings. This design can employ either a triangulation or embedded design and driven by the theoretical stance adopted.

Despite these typologies recommended by Creswell (2009), Johnson and Onwuegbuzie (2004) contend that researchers should not be restricted to these methodological models. In fact, the authors promote the creation and application of new and creative designs if they effectively address the research problem. Researchers have and will continue to mix designs such as incorporating a mixed model with mixed methods or adding more stages to their strategies (e.g., quantitative to qualitative to quantitative) if this is the best way to address the research problem. Different from the research design, the research framework adopted across mixed method researchers is generally consistent.

Many mixed methods research frameworks have been developed in recent years (Bryman, 1988, 2012; Creswell, 2009; Johnson et al., 2007; Tashakkori & Teddlie, 2003, 2010; Teddlie & Tashakkori, 2009). However, all comprise seven common linear steps: (1) determining the purpose of the study and developing the research questions accordingly; (2) establishing the appropriateness of a mixed methods design and selecting the appropriate typology and/or strategy which will best address the research questions; (3) data collection; (4) data analysis; (5) determining the ways in which the data will be interpreted and the ways in which inferences will be developed; (6) justifying the inferences using the data; and (7) the reporting and application of inferences to inform theory, practice and policy. The
following section of this chapter will describe the application of the mixed methods framework to the current investigation.

**Formulating Research Questions**

The principle purpose of the present enquiry was to develop a psychometrically sound measure of acculturation and enculturation as well as explore possible relationships between acculturation, enculturation and psychosocial outcomes (i.e., academic self-concept, and academic motivation) amongst secondary students attending ethnic day schools. A series of research questions and hypotheses were formulated (see Chapter 4) to test for a number of outcome variables which include skills and behaviours of the participant themselves and others which describe their perceptions of the individuals around them (i.e. attitudes and behaviours). The following section deconstructs the principle purpose of the current investigations, providing a clear rationale for the methodological approaches.

**Study 1**. In order to address the overall purpose of Study 1, acculturation and enculturation measures were developed, as the existing measures were either: a) psychometrically unsound; b) culturally and developmentally inappropriate for the purposes of the present investigation; and c) not embedded in current conceptual and theoretical frameworks. Consequently, the overarching purpose of Study 1 comprised one central and implicit research question: Is the newly developed DSAEM psychometrically sound? Study 1 was quantitative in nature as it utilised existing theoretical frameworks (i.e., A, B, C + D) to further enhance existing acculturation and enculturation models and measures. Furthermore, Study 1 tested the prior assumptions of existing standardised and psychometrically sound instruments which
were used to test for academic motivation, academic self-concept, school belongingness, and multiculturation.

**Study 2.** The second study quantitatively investigated whether there were relations between acculturation, enculturation, and student psychosocial factors. More specifically, the study investigated whether there were any probable relationships between acculturation, enculturation and academic self-concept, academic motivation, multiculturation, and school belongingness.

**Study 3.** Unlike Studies 1 and 2, Study 3 was qualitative in nature and aimed to enrich and extend upon the finding of Study 1. The study administered a series of semi-structured interviews to gain the perspectives of students and their experiences of acculturation and enculturation, specifically focusing on the context and domain-specific nature of these phenomena. Additionally, during the data integration process emic accounts from semi-structured interviews were utilised for the purposes of validating the factor structure of the DSAEM. Each of the succeeding research designs and methods adopted in this investigation were reverential to the research questions, whilst also providing the solutions fundamental to the investigation (Hornery, 2011).

**Mixed Methods Research Design in the Present Investigation**

**Overview**

The present investigation utilised a concurrent triangulation research design which is characterised by the simultaneous collection and analysis of quantitative and qualitative data. While the investigation is dominated by two quantitative studies (with one qualitative study), findings across all three studies were compared and
contrasted across both paradigms to identify converging and diverging data for the purpose of cross validation. Thus, this meant that the strength of one paradigm added to the strength of the findings of the other paradigm and counteracted the weaknesses across the two methods, essentially addressing the overall research questions with well-corroborated findings (Creswell, 2009). This study design is summarised Figure 5.1 below. The boxes represent the quantitative data collection and analyses, while the circle represents the qualitative data collection and analyses. The straight arrows indicate the sequence of the research design.

Figure 5.1. Concurrent triangulation research design.

Phase 1a comprised the development and implementation of a survey to evaluate the internal consistency and factor structure of the revised acculturation and enculturation measure, as well as a battery of standardised measures used within the survey. A series of sophisticated statistical analyses were conducted on the
quantitative data, which will be explained in more detail in the Study 1 portion of this chapter. Thus, Phase 1a took an etic (i.e., studies of culture from a scientific or from a more cultural neutral stance; Alegria et al., 2004; Berry et al., 2011) approach to examine and acculturative and enculturative phenomena, using culturally neutral constructs to capture underlying similarities of these processes across individuals.

Phase 1b consisted of a series of semi-structured interviews. Participants for the semi-structured interviews were a convenience sample of students who completed the survey and provided consent for the qualitative portion of the data collection. One male and one female were selected from each school, with the aim of attaining one participant within the Years 7 to 8 grade bracket and another between Years 9 to 10 to ensure that each ethnoculture, gender and age group was represented. While a larger sample size would have enabled analyses at the level of the ethnoculture, this was not possible given the low number of interview consent forms returned from each of the schools. Each participant was interviewed individually at a time and at a place of their convenience. Like Phase 1a, Phase 1b of the research design also carried out independent examination of the data set, utilising the thematic analysis (see Study 2 subsection in this chapter for more details). Different from Phase 1a, Phase 1b took an emic (i.e., studies culture from within the system, therefore the characteristics or perspectives captured are relative to a specific culture; Alegria et al., 2004; Berry et al., 2011) approach to examine acculturative and enculturative phenomena, using the culture specific perspectives of individuals to capture characteristics of these processes relative to their own culture and experiences.

Phase 2 of the research design entailed the merging of the quantitative and qualitative data sets and mixed methods analysis. The results from the qualitative
semi-structured interviews were used to explain and interpret the quantitative results from the survey, whilst also highlighting nuances between the findings of the two types of data.

**Rationale for the Research Design**

The concurrent triangulation research design (Creswell, 2009) allows the researcher to move back and forth from a more structured to a less structured research approach, which assists in addressing the key research questions further than one research method can provide on its own. In particular, this investigation had five rationales for utilising mixed methods analysis, these include: (1) **triangulation** - comparing the findings of qualitative (Study 3) and quantitative research (Studies 1) methods; (2) **complementarity** – seeking to contextually and substantively enhance and clarify the findings of the quantitative studies (Studies 1 and 2) with the qualitative studies (Study 3 – when possible); (3) **development** – use the qualitative study (Study 3) to inform the future quantitative studies; (4) **initiation** – explore paradoxes and contrasts that emerge from both the quantitative (Studies 1 and 2) and qualitative (Study 3) strands; and (5) **expansion** – increase the breadth and range of the investigation by incorporating both a qualitative and quantitative methods throughout the different phases of the research study (Collins, Onwuegbuzie, & Sutton, 2006; Creswell, 2009).

**Mixed methods design in cross-cultural psychology.** A mixed methods design provides distinct contributions in studying the relations between culture and psychology (Bartholomew & Brown, 2012). Ethno-Psychology, cross-cultural and cultural Psychology researchers have argued that mixed methods provides the means to attain a deeper understanding of psychological phenomena within cultural contexts.
(Diaz-Loving, 2005; Kim & Berry, 1993). The mixed methods approach allows for context to be central to the research rather than secondary which allows researchers to discover the uniqueness of psychological phenomena across cultural contexts. This is achieved through the complementary nature of mixed methods research when quantitative data is made more “... intelligible in its context and by making qualitative data more justifiable” (Bartholomew & Brown, 2012, p. 177). The methodology allows for researchers to connect with the realm from which the research was derived with empiricism, whilst also being informed by existing frameworks and theory. The method avoids cross-cultural research from being dictated solely by existing empirical and theoretical findings and endorses a substantive-methodological synergy.

A review conducted by Bartholomew and Brown (2012) showed a preference for mixed methods designs because they allow for both qualitative and quantitative methods to complement each other, providing researchers with the possibility of exploring the context of the psychological or cultural phenomena within a particular empirical study. Furthermore, by collecting various types of data sources (both qualitative and quantitative in nature) researchers counteract the flaws and errors associated with the data collection and analysis associated with any one method, strengthening the overall validity and reliability of the study. This study will employ the concurrent triangulation research design to strengthen psychological research and employ qualitative semi-structured interviews to contextualise, validated as well as extend upon the results of the quantitative findings. Utilizing this approach will provide the contextual breadth and depth currently absent in acculturation and enculturation inquiry.
Section Summary

A mixed methods concurrent triangulation research design was established in the present investigation through the collective findings of two interrelated sources of qualitative and quantitative data. Here, both qualitative and quantitative data sets work together to facilitate a profound understanding of acculturation and enculturation and their impacts on the psychosocial outcomes of ethnic day school students. This methodological synergy not only counteracted the limitations associated with one methodology or the other, but also strengthened the overall construct validity of the investigation.

Research Methods

Overview

The purpose of the following section is to outline the: recruitment process of participants, materials utilised in the study, procedures followed, and the analysis which took place at each of the research phases. As there is considerable overlap in the sample and sampling procedures over all three studies, ethical considerations, school recruitment procedures, participant recruitment and training processes are initially outlined for all three studies at the beginning of this section. Thereafter, the materials, procedures, and data analysis specific to each study are described.

Research Sample and Sampling Procedures

Ethical considerations. Prior to approaching potential participants, ethics approval was sought from the University of Western Sydney’s (UWS; Recently renamed Western Sydney University [WSU]) Ethics Committee. Once the research
design and instruments were determined, ethics approval was obtained through the completion of the National Ethics Application Form (NEAF). As the schools in this study were affiliated with the Association of Independent Schools of New South Wales, no formal ethics approval was required. Participation of schools in the current investigation were determined by the school principal.

**School recruitment.** The investigation explored the perceptions of students concerning acculturation and enculturation processes attending ethnic day schools. These schools are run Monday to Friday during normal school hours, with English being the language of instruction. The majority of the school cohort is made up of students of a particular ethnic background, thus allowing students to socialise with peers with similar ethnocultures to themselves. Thus, ethnic day schools were targeted, as students from these schools tend to have greater awareness of their ethnoculture and are more likely to be engaged with their ethnic culture both within the home and school environments. To ascertain this information, students attending ethnic day schools affiliated with Association of Independent Schools of New South Wales were invited to take part. Schools were initially contacted individually by the investigator and were informed of the nature of the study and the implications of their participation. Once the initial contact was made, the investigator organised a formal meeting with the school principal and described the research process in more depth. The school principal determined whether their school would participate. A total of twelve were contacted of which four agreed to participate. Schools were clearly informed that their participation in the study was voluntary and that refraining from the study would not disadvantage them in any way.

**Participant recruitment.** Once the principals provided consent for their school’s participation, each were sent a package containing information sheets and
consent forms either in hardcopy or in electronic form, complying with ethics requirements. Informed consent was required from all participants, their guardians (when applicable) and school authorities, these included the: (a) School Principals (see Appendix A); (b) Parents (see Appendix B); and (c) Students (see Appendix C).

As students were between the ages of 11 and 16, only those with parental consent were permitted to partake.

**Students.** Students between Years (otherwise known as Grade) 7 to 10 were targeted in the current investigation as it is at this developmental stage of adolescence in which individuals solidify their sense of ethnic identity (Phinney, 1989, 1990). Student numbers for Studies 1 and 2 were largely influenced by parental consent. The total number of student participants for the survey administration were 207 students, with the final sample of 200 students ranging from the ages of 11 to 16 years \( (M = 13.48 \text{ years}, SD = 1.31) \). The large majority of students who sat the survey (i.e., 93%) spoke a language other than English at home, despite 95% of them being Australian born. Interestingly, only 8.5% of the students identified themselves as ‘Australian’, with the majority either identifying themselves with hyphenated cultural identities (e.g., Armenian-Australian) or their parents’ culture of origin (e.g., Lebanese). Student interviews were conducted in Study 3. Participating students were chosen at random with three conditions: 1) they had provided their consent as well as parental consent to participate; 2) one male and one female interviewee were chosen from each school; and 3) where possible one Years 7/8 and one Years 9/10 student was invited to partake in the interview process. These conditions were placed on the participant pool to ensure that student and parental consent was provided as well as to avoid gender and grade biases within the
sampling procedures. A total of eight students participated in the semi-structured interviews across four participating schools.

**Research assistant training.** Two employees from the University of Western Sydney’s (Currently named Western Sydney University [WSU]), Centre for Positive Psychology and Education were recruited to administer student surveys. These research assistants all had prior training in administering student surveys and were briefed on the procedures for the day in a meeting one week prior to the data collection days. Further to this, each research assistant was also provided with a pack, providing instructions for survey administration, maps and addresses of the schools as well as a list of school names, their corresponding contact details as well as the contact details of the researcher. Research assistants were advised that the researcher would be at the schools on the day of data collection to provide further assistance.

**Study 1: The Development and Psychometric Testing of the New Domain-Specific Acculturation and Enculturation Measure (DSAEM) and Testing for the Validity of Existing Instruments**

**Overview**

This section outlines the design and development of the DSAEM, followed by a description of the first stage of data analyses which included data screening and tests of reliability. To test the psychometric properties of the DSAEM and other measures used to test for psychosocial factors, a number of statistical tests including Confirmatory Factor Analysis (CFA) are used and described in the following section.
Finally, group differences in the measurement model were explored with invariance testing.

**Materials**

An extensive battery of tests was purposely used and developed for this research study. The battery included a number of multidimensional measures designed to assess cultural and psychosocial constructs of interest and were appropriate in addressing the research hypotheses and questions as well as catering for the demographic composition of the student sample. The following section briefly discusses the purpose and structure of each measure and provides example items. The psychometric properties are discussed in further detail in Chapter 6.

**Development of the DSAEM**

As existing measures of acculturation and enculturation were outdated and culturally biased (see Chapter 3), it was deemed necessary to develop more valid and reliable measures based on strong theoretical basis which could be tested across multiple cultures. As discussed in Chapters 2 and 3, items within the measures were developed based on numerous theoretical and methodological recommendations made by existing research from multiple disciplines.

**Item development and refinement.** In developing the DSAEM, a database of items from eleven multidimensional acculturation measures were considered: (Cortés et al., 1994; Cuéllar et al., 1995; Kim, et al., 1999; Leon & Mendez, 1996; Marin & Gamba, 1996; Mendoza, 1989; Ryder et al., 2000; Stephenson, 2000; Suinn et al., 1987; Tsai et al., 2000; Zea et al., 2003) with the aim of understanding the factor structure of these models. As acculturation and enculturation are both domain-
specific constructs, the measures consisted of a number of factors representative of either a minority (ethnic) or majority (host) culture. Consistent with the finding of Yoon et al. (2011) of the 11 existing measures considered, many of the domains within and across these measures were found to be overlapping in either their meanings and/or operationalization. To ensure good discriminant validity between each of the factors of the developed measure (DSAEM), current acculturation and enculturation theory was examined, alongside the analysis of the collated database of measures.

Consistent with this theory and the findings and recommendations of Yoon et al. (2011), Zea et al. (2003), and Miller (2010), this investigation identified the following three dimensions: language, behaviour, and knowledge for both acculturation and enculturation measures. The Acculturation Language subscale consisted of five items, some of which were adapted from the Stephenson Multi-group Acculturation Scale (Stephenson, 2000; See Appendix D). Items reflected participant competence and preference in utilising the national language (English). Similarly, the five items of the Enculturation Language scale were adapted and utilised from the Acculturation rating scale for Mexican Americans (ARSMA II; Cuéllar et al., 1995) and the Stephenson Multi-group Acculturation Scale (Stephenson, 2000) to measure participant competence and preference in utilising the ethnic language. The Acculturation and Enculturation Behaviour subscales each comprised five items, some of which were adapted from the Vancouver Index of Acculturation (Ryder et al., 2000) and the Stephenson Multi-group Acculturation Scale (Stephenson, 2000). Each of the subscales measured participant engagement and willingness to engage in cultural traditions and customs of either the host culture or ethnoculture. Finally, the Acculturation and Enculturation Knowledge subscales
comprised five items each. Each subscale measured participants’ understandings of
the general knowledge (i.e., history, news and pop culture) relating to either their
ethnoculture (Enculturation Knowledge) or their national culture (Acculturation
Knowledge), with some items adapted from The Abbreviated Multidimensional
Acculturation Scale (Zea et al., 2003) and Stephenson Multi-group Acculturation
Scales (Stephenson, 2000). Thus, an initial pool of 30 items was selected to generate
a bilinear domain-specific measure of acculturation and enculturation (see Appendix
D). The model in Figure 5.2 is representative of the factor structure of domain-
specific scales which constitute the a priori model of the DSAEM. Based on the
recommendation of the Kang (2006) study, participant responses were measured
using an endorsement 6-point Likert response scale, from 1 (strongly disagree) to 6
(strongly agree). The psychometric properties of the final measures are discussed in
Chapter 6.
Figure 5.2. Factor structure of the a priori Domain-Specific Acculturation and Enculturation Scales (DSAEM).
Survey Composition

Academic self-concept. Domain specific academic self-concept was measured using the Academic Self-Description Questionnaire II (ASDQII; Marsh, 1990). The ASDQII is made up of 136 items which comprise 17 factors and is measured on an 8-point scale ranging from 1 \((\text{definitely false})\) to 8 \((\text{definitely true})\). As not all these factors are required for testing the hypotheses within the current study, the instrument was not used in its entirety; instead a selected number of scales were used: English Language (e.g., I get good marks in English Language classes); Mathematics (e.g., I am hopeless when it comes to mathematics classes); General Self-concept (e.g., Overall, I have a lot to be proud of) and School Subjects (e.g., I have always done well in school subjects). The ASDQII is a reliable measure of academic self-concept, with overall reliabilities reported between \(r = .885\) to \(.949\) across scales (Marsh, 1990).

Academic motivation. The School Motivation Questionnaire (SMQ; Marsh et al., 2003) comprising 44 items was used to determine the academic motivation of students and was measured on a 5-point Likert scale. The instrument was designed to measure eight motivation orientations, these include: Mastery Orientation (e.g., I feel most successful in school when I reach personal goals); Intrinsic Orientation (e.g., I do my school work because I like learning new things); Cooperative Orientation (e.g. I like to work with other students); Individual Orientation (e.g., I like to work on my own); Ego Orientation (e.g., I feel most successful in school when I am the best) Competition Orientation (e.g., I like trying to do better than other students). Not all factors were included in the current study to ensure students did not fatigue when completing the survey. Instead, Competition Orientation was chosen to represent a performance factor and Intrinsic Orientation as a learning
factor of academic motivation to avoid overloading students (see Marsh et al., 2003). The SMQ has been reported to be an internally consistent measure of academic motivation with overall reliability estimates (Omega) reported across all scales to be greater than .80 (Marsh et al., 2003).

**School Belongingness.** The School Belonging Scale (SBS; Parada & Richards, 2002) was developed to test three dimensions of school connectedness, these include: Attachment (e.g., I feel good about being in my school); Rule Acceptance (e.g., I accept the rules and procedures set by my school); and Support (e.g., I can get good support from my school). Each factor comprised 4 items, with the measure totalling 12 items, all of which were measured on a 6-point endorsement scale (1 = *strongly disagree* to 6 = *strongly agree*). However, due to a lack of discriminant validity between these three factors, the current study only utilised the School Attachment factor as this has been posited as the strongest of all three factors with an estimated Cronbach’s Alpha of $\alpha = .87$ (Parada, 2006; Parada & Richards, 2002).

**Multiculturation.** Developed by Bodkin-Andrews, O'Rourke, Grant, Denson, and Craven (2010), the Multiculturation scale assesses the perceived acceptance and values of one’s culture and its norms within a host society. The scale comprises six items (e.g., People I meet accept my cultural identity) on a 6-point endorsement scale ranging from 1 (strongly disagree) to 6 (strongly agree). The reliability estimate of the unidimensional measure has been reported to $\alpha = .75$, demonstrating good internal consistency (Bodkin-Andrews et al., 2010; Bodkin-Andrews et al., 2013).

**Demographics.** Further to the measures described above, the section at the beginning of the survey collected demographic information. The demographic
questions probed for information regarding participants’ age, gender, country of birth and that of their parents, cultural background and languages spoken at home.

**Procedures**

Strict protocols were followed for the administration of the student surveys. At each of the participating schools, students (Years 7 to 10) were tested simultaneously during an assembly session. A paper version of the survey was developed and administered by trained research assistants in students’ classrooms over a period of one hour. To ensure that only those students who had parental consent participated, a student roll call was administered and those students without parental permission were sent to the school library. At the beginning of the survey, students were asked to sign the consent form if they were interested in participating in the survey. Students were informed that their participation was voluntary and that all the information they were providing would remain private and that only the researcher would have access to any identifying information. After example questions were provided, each of the survey questions was read aloud by a research assistant to alleviate any problems that may be encountered by children with reading difficulties and encouraged students to finish the survey within the designated period of time. The completion of the survey was conducted under similar conditions as an exam. Research assistants and the researcher were systematically present in classrooms to ensure that students did not experience any confusion or difficulties with the administration of the survey. Once the surveys were completed by students, they were compiled and sealed in an envelope by a trained administrator and were later collected by the researcher.
Data Analysis

This section provides an overview of the statistical procedures used in the present investigation. While it is beyond the scope of this chapter to provide a detailed review of the statistical methods employed, this section provides a brief overview of each. Further details relating to the statistical analysis are outlined in Chapter 6 and 7.

Statistical software. The present investigation used a number of statistical packages to conduct analyses. These included SPSS version 22.0 for the purposes of coding, data screening and general analyses (reliabilities, frequencies, etc.), R version 3.1.2 for additional reliability analysis and Mplus 5 which was utilised to conduct more advanced statistical techniques (i.e., One Factor Congeneric [OFC], Confirmatory Factor Analyses [CFA], Structural Equation Modelling [SEM] and Hierarchical Multiple Regression Analyses [HMRA]).

Data screening. Prior to coding, each survey booklet was examined for spurious activity (evident through the inconsistent responses across reversed and non-reversed items), systematically missing data or patterned response bias. Of the 207 respondents, three were removed from the sample by means of listwise deletion, leaving a sample size of 204 participants. Utilising SPSS version 22.0 the data from the survey was coded. The accuracy of the data entry, assumptions of normality, linearity and homoscedasticity were tested. No violations of these assumptions were detected. The data was then screened for missing data.

Missing data is commonplace within paper based survey data collection methods. SPSS version 22.0 was employed to screen the data for missing values. After careful consideration of various treatments for dealing with missing values, the
Expectation Maximization (EM) algorithm approach was employed for randomly missing values. EM estimates provided replacement values for missing data by estimating the means, the covariance matrix and the correlations of the available cases to impute missing values (Tabachnick & Fidell, 2007, 2013; Schafer & Graham, 2002). EM is thought to be the most effective technique of data imputation, overcoming many of the shortfalls and assumptions of the more traditional methods, such as listwise and pairwise estimations – which assume that the values absent are ‘missing completely at random’ (MCAR), an assumption very rarely met, resulting in a bias data set. Furthermore, the listwise deletion approach would result in the loss of participants, while the mean substitution approach (which replaces the missing values with the mean of the corresponding responses), may result in the loss of variance within the data. The EM algorithm overcomes these issues, as it assumes that the pattern of the missing values ‘is’ related to the observed data (MAR – Missing at Random), thus the imputed values are based on the remaining observed data of interest. Consequently, the EM approach also retains the sample size of the data set (as opposed to listwise deletion), whilst also avoiding further loss in variance (Tabachnick & Fidell, 2007, 2013). Under 5% of responses were MAR across the remaining 204 cases and were replaced utilising the EM algorithm in SPSS 22.0.

Outliers may negatively influence the interpretation of statistical analyses. Accordingly, univariate outliers within a data set are either modified or deleted. Univariate outliers are identified through the analysis of histograms and stem and leaf plots in SPSS as those cases with extreme values for one variable. As per the recommendations of Tabachnick and Fidell (2007, 2013) raw scores were then converted to standardised z scores. Cases with z scores in exceeding the 3.29 ($p < .001$) criteria were considered to be potential univariate outliers. Less than 3% of the
raw scores were identified as univariate outliers. Raw scores for the outliers were modified one unit more than the next most extreme score.

Multivariate outliers are cases with an unusual pattern of scores across multiple variables (Tabachnick & Fidell, 2007). Multivariate outliers were identified by generating the Mahalanobis distance scores using the covariance matrix. These scores were then compared to the critical scores of the Chi Square statistic at \( p < .001 \). Cases with Mahalanobis distance scores higher than the critical values are considered to be outliers and deleted from the dataset. Four cases of multivariate outliers were detected via this process and were removed through listwise deletion. Hence the final dataset comprised of 200 participants.

Reliability analyses. The internal consistencies of the measures were examined utilising both Cronbach’s Alpha and Coefficient Omega estimates. Considered to be the traditional estimate of reliability, the Cronbach’s Alpha was generated on SPSS 22.0 and presented for all scales across both a priori and revised models of the measures used. Expressed as a number ranging from zero to one, the Cronbach’s Alpha is an estimate which describes the extent to which all the items in a scale measure the same concept and is essentially related to the inter-connectedness of the items within a scale. The higher the Cronbach’s Alpha the more reliable a scale is considered to be. Despite being the most popularly reported reliability estimate, the Cronbach’s Alpha is based on the tau-equivalent measurement model which infers that items measure the same latent variable on the same scale, with the same amount of accuracy, however with differing amounts of error (Graham, 2006). Violations of the assumptions of the tau-equivalent model as well as the lower bound measure of the reliability have been known to cause the underestimation of the internal consistency of scales (Dunn, Baguley, & Brunsden, 2014; Graham, 2006).
Even the presence of one item which violates the assumptions of the tau-equivalence has been known to have a considerable effect on the accuracy of Alpha estimate. Furthermore, the Alpha coefficient is particularly sensitive to the number of items in the scale, with scales with fewer items reporting lower estimates.

Whilst not widely known or used, Coefficient Omega is a new and cutting-edge estimate of reliability which overcomes the shortfalls of alternate measures of reliability. Contrary to the Alpha, the Omega estimate was generated on R version 3.1.2 and is based on a congeneric model of reliability. The congeneric model implies that items measure latent factors, with differing scales, varying amounts of accuracy and error. This less restrictive model is congruent with the nature of the statistical analyses implemented in the current study (i.e., One Factor Congenerics [OFC] and Confirmatory Factor Analysis [CFA]) and produces more accurate estimates for scales with fewer items and was therefore deemed to be a more accurate estimate of the internal consistency. A more detailed discussion on both reliability estimates is presented in Chapter 6.

While there are no universal standards of reliability estimates, for the purposes of the current study estimates above .60 will be considered to be acceptable (given the exploratory nature of the current investigation; Nunnelly, 1978) however findings should be interpreted with caution. Estimates above .70 are considered to be satisfactory; above .80 good, and above .90 excellent.

**Confirmatory Factor Analysis (CFA).** CFA is a sophisticated technique used to assess the extent to which a set of indicators reflect the proposed a priori factor structure of a theoretically derived model (Byrne, 2001; Kline, 2005). For example, Figure 5.2 provided an illustration of the factor structure of the DSAEM model. This a priori model of acculturation and enculturation displays 30 observed
indicators (items) represented by the rectangles and six latent constructs (i.e. Acculturation Language, Acculturation Knowledge, etc.). This CFA model constrained each indicator to load onto the factor it is intended to measure. Different from Exploratory Factor Analysis (EFA) the a priori hypothesised model postulated by the researcher is theoretically grounded and not derived from the data. The hypothesised model was tested to check if it fit the data by: generating acceptable fit indices; checking that the parameter estimates are consistent with existing research findings and theory; ensuring that the findings and conclusions drawn from them are clear and feasible (McDonald & Marsh, 1990).

Model fitting is the examination of how well the data represents the postulated model. To assess how well the data fits the proposed model, a series of indices known as the Goodness-of-Fit-Indices (GFI) were generated by Mplus 5. The GFI utilised in the current investigation are based on the recommendations of current research applications (Byrne, 2001; Hu & Bentler, 1999; Marsh, Balla, & Hau, 1996) and a culmination of absolute fit indices (i.e., Chi-Square statistic), relative fit indices (i.e., Tucker Lewis Index), noncentrality-based indices (i.e., Root-Mean Square Error of Approximation [RMSEA] and Comparative Fit Index [CFI]). The absolute fit indices are generated from the fit of the implied covariance matrices and iterative methods such as maximum likelihood estimation (ML; i.e., the processes of repetitively estimating the parameters until the implied covariance matrices is as close as possible to the observed data; see Kaplan, 2000). The Chi-Square statistic is a routinely used absolute fit index, however it is not the most reliable GFI as it can be influenced by sample size, model size and the distribution of the variables (Hu & Bentler, 1999; McDonald & Marsh, 1990). Consequently the Chi Square statistic is reported alongside the Tucker Lewis Index (TLI), which is a relative fit index and is
estimated by ratios of the model Chi Square and the null-hypothesis Chi Square. The study also reports on two non-centrality based indices known as the Root-Mean Square Error of Approximation (RMSEA) and the Comparitive Fit Index (CFI) which are estimated by subtracting the degrees of freedom \((df)\) of the model from the Chi Square statistic then divided by the sample size \((N)\) minus 1. As each of the fit indices are calculated differently, the four various GFIs were selected during analyses to maintain an unbiased approach to the model fitting process (Jackson, Gillaspy, & Purc-Stephenson, 2009). Hu and Bentler (1999) also suggested that by utilising a combination of fit indices reduces the chances of Type I and Type II errors from occurring during analyses.

Both the CFI and TLI are measured on a scale of 0 to 1, with values greater than .90 indicating a good model fit, while a value greater than .95 considered to be an excellent fit of the model (Hu & Bentler, 1999). The criteria for the RMSEA are dissimilar, with values of .05 indicating a good model fit, values up to .08 considered acceptable, values above .08 considered unacceptable as they signify larger errors of approximation. Marsh (2007) and Fan and Sivo (2005) advise that such cut-off values should only be used to guide a researcher’s judgement of the model fit, as they are effected by an element of subjectivity.

**One Factor Congenerics (OFC).** A priori models which exhibited a poor fit were revised one factor at a time by a process known as OFC. The OFC is based on the same principles of the CFA, however aims to maximise the overall fit of the measurement model by making modifications to the indicators of individual latent constructs. Modifications were informed and implemented when: theoretical explanations were available for poorly fitting items; items exhibited high modification indices (modification indices specify correlations between uniquenesses
and items, and identifies parameters [when freed] which improve the Chi Square value); displayed low factor loadings; and high uniqueness. All these factors were taken into consideration prior to the deletion of any items. Improvements to the fit of the scale were indicated by superior GFI (i.e., CFI, TLI, RMSEA, and the Chi Square statistic). As per the recommendations of Marsh, Byrne, and Yeung (1999) each scale retained a minimum of three indicator items per latent factor. Detailed procedures implemented for the CFA and OFC for individual measures are outlined in Chapter 6.

**Invariance testing across gender and grade.** An extension of the CFA is invariance testing which is also known as factorial invariance. The CFA examined whether the a priori hypothesised models fit the data, the invariance testing goes one step further by testing whether the factor structure is sustained across various subgroups of interest (i.e., across gender and grade groups; Byrne, 1998; Marsh, 1994). When a measurement model holds its structure across subgroups of interest, it is said to be invariant across those groups. Measurement invariance is particularly pertinent when comparing findings across groups (Cheung & Rensvold, 2002; Hair, Black, Babin, & Anderson, 2010; Schoot, Lugtig, & Hox, 2012). Within Study 2, gender and grade differences across the measurement model were of particular interest. While establishing invariance across the measurement model for culture type would have also been desirable, this was unfeasible due to the small and disproportionate sample sizes across the various cultural groups.

Invariance testing comprises a series of sequential nested models which are increasingly restrictive with each test. The tests constrain parameters across groups, with each model compared to the baseline model. Invariance can be tested across five measurement models, however there is some consonance that the achievement
of invariance across all five models is overly restrictive. Despite this, there is also contention among researchers (i.e., Byrne, 1998; Cheung & Rensvold, 2002; Milfont & Fischer, 2010) relating to the minimal requirement for factorial invariance. Byrne (1998) and Cheung and Rensvold (2002) argue for invariance at the level of the metric model as the minimum condition. Whilst according to Milfont and Fischer (2010) the scalar model is the final model test necessary for comparing groups, with additional tests considered to be optional. Following the more conservative approach of Milfont and Fischer (2010), the current study tested for measurement invariance across three models (i.e., configural, metric and scalar measurement models).

The first test is the configural model, the least restrictive test of all the models (M1; also known as the baseline model) as it simply tests for consistencies across the factor structure. The second model (M2) is the metric model which constrains the factor coefficients so that they are the same across the subgroups of interest, essentially testing for consistencies in the way groups respond to the items. The third and final model of invariance is the scalar test which constrains the intercepts of items so that they are the same across groups. Achievement of scalar invariance indicates that the latent construct and the observed variable would achieve the same score irrespective of their group membership (Milfont & Fischer, 2010). The invariance analyses were conducted on Mplus 5 package across gender and grade for both newly developed and established instrumentation. Due to the small sample size, full CFA invariance tests were not conducted for the DSAEM. Instead six one-factor congeneric invariance tests were utilised under strict invariance conditions (Bodkin-Andrews, Ha, Craven, & Yeung, 2010) where increasingly constrained parameters were nested in the baseline (free) model (Milfont & Fischer, 2010), primarily
focusing on strict nature of the Chi-Square difference test across the minimal (metric) invariance assumptions (Byrne, 2012).

For all other established measures (psychosocial outcome measures), once configural invariance (M1 - baseline model) was established, each of the successive models’ GFIs were closely analysed and compared with the GFIs of the baseline model. The GFI of most interest is the CFI statistic. Cheung and Rensvold (2002) propose that the CFI statistic should not differ greater than .01 when compared to the CFI statistic of the baseline model in order to achieve measurement invariance across the various subgroups it is testing. In instances that the CFI does not meet the .01 criteria in the scalar model, minimal invariance is still achieved should the GFI indicate an acceptable fitting model and there is a clear overlap in the 90% confidence intervals for the RMSEA (Bodkin-Andrews et al., 2013).

**Section Summary**

This section has demonstrated the methodology utilised to address the hypotheses and research questions of Study 1. Descriptions of the development of the new DSAEM instrument and item refinement were delineated alongside the survey composition. In addition, the section outlined the statistical procedures utilised to test the psychometric properties of both the newly developed and established measures. More explicitly, the current section outlined the processes of analysing internal consistency, CFA, OFC, and measurement invariance. Results of the psychometric study (Study 1) are provided in Chapter 6. An extension of Study 1, the following section of the chapter outlines the statistical procedures implemented to explore possible relations between the DSAEM and a series of outcome measures.
Study 2: The Impact of Acculturation and Enculturation on Psychosocial Outcomes.

Overview

The focus of the previous study was testing the psychometric properties of both new and established instruments utilised in the student survey. Specifically, it focused on measurement models, which examined the relations between indicator variables and their corresponding latent variables. Study 2 extends upon the findings of Study 1, by testing for possible relationships between the DSAEM factors and outcome measures, these include academic self-concept, academic motivation, school belongingness and multiculturation. Two forms of analyses were utilised in the current investigation, these include Structural Equation Modelling (SEM) and Hierarchical Multiple Regression Analyses (HMRA). The following section will elucidate these two statistical procedures and explain how they were utilised to explore the relations between latent variables.

Structural Equation Modelling (SEM)

SEM has been described as a set of statistical techniques which allow for relationships between one or more independent and dependent variables to be explored (Tabachnick & Fidell, 2007, 2013). The SEM is essentially a more advanced confirmatory technique (when compared to CFA), which evaluates the fit between the theoretical model proposed by either the researcher or existing theory within the literature and the empirical data generated during data collection. The schematic representation of a structural model has been demonstrated in Figure 5.3. In structural modelling the possible relationships between exogenous (E1 and E2)
and endogenous (N1 and N2) latent variables are hypothesised. Path coefficients $y_3$, $y_4$, $y_5$ and $y_6$ represent the effects of exogenous latent factors on endogenous variables, while $b_7$ specifies the effect of N2 on N1.

Figure 5.3. Schematic representation of structural equation modelling adapted from Wang and Wang (2012).

The first step in the SEM analysis was conducted in Study 1, which encompassed the specification of the measurement models using CFA. This was followed by a concurrent analysis which examined all the interactive effects and relations among factors of interest. Like the measurement model, the structural model was also tested in Mplus version 5, addressing the hypotheses and research questions posed in Study 2 (see Chapter 4). Of particular interest in SEM analysis were the path coefficients (represented $y_3$, $y_4$, $y_5$, $y_6$ in Figure 5.3) and the beta coefficients (represented by $b_7$ in Figure 5.3) to explicate the relations among the latent variables.
Hierarchical Multiple Regression Analyses (HMRA)

In addition to exploring the hypothesised predictive nature of acculturation and enculturation on outcomes (SEM), the current study utilised HMRA to examine the relationships between these factors whilst also controlling for the influences of a set of background predictor variables. The background predictor variables of interest within the current study were grade (i.e., Years 7/8 vs. Years 9/10 participants), gender (i.e., male or female participants), and cultural background (i.e., those students identifying with more than one cultural background vs. students identifying with one cultural background). In HMRA, these background predictor variables were entered into the analyses in a series of stages, with each stage comprising of one or more of these background predictor variables. The researcher can design the analysis to have as many stages as there are background predictors and select the order in which these are analysed (Osborne & Waters, 2002; Petrocelli, 2003; Wampold & Freund, 1987).

The current HMRA was designed across two stages. The first stage contained all three background demographic predictor variables of grade, gender and cultural background. The influences of grade, gender and cultural background on academic self-concept, academic motivation, school belongingness and multiculturation (i.e., outcome variables) have been well documented. Therefore, the study first examined the culmination of these background characteristics and their relations to the outcome variables. The second stage examined whether acculturation and enculturation continued to influence the outcome variables, whilst controlling for and taking into account the influence of these background predictors on the outcome variables.

To evaluate the possible influence of these demographic predictors on the outcome variables the $R^2$ statistic was examined. If the $R^2$ was found to be
significant, it was established that the demographic variables reliably predicted the values of the outcome variables. Also of interest was whether these background predictors significantly contributed to the variance accounted for in the outcomes. The contribution to the variance was examined by referring to the values of the standardised regression coefficients.

**Section Summary**

This section has elucidated the statistical analyses utilised to address the hypotheses and the research questions of Study 2. A description of statistical procedures for SEM and HMRA were provided which were used to examine the relations between acculturation, enculturation and outcome measures. Chapter 7 presents the findings of the SEMs and the HMRA testing. An extension from the previous two studies, the procedures and analyses undertaken in the qualitative portion of the current investigation are delineated in the subsequent section.

**Study 3: Acculturation and Enculturation – Students’ Perspectives**

**Overview**

In contrast to the quantitative research, the focus of the research is to gain an understanding of the social world or context from which participants perceive and engage in thoughts and behaviours. Qualitative research can be associated with various research methods, including ethnography, interviews, focus groups, discourse analysis, and observations (Bryman, 2012; Johnson & Onweugbuzie, 2004; Tashakkori & Teddlie, 2010). The current study utilised the interview method which involves verbal dialogue between an interviewer and one or more participants, with
the aim of extracting rich and detailed data. To increase the overall reliability and validity, key concepts shaped what was asked within the semi-structured approach. Further to this, continual reference was made to Berry’s ecocultural framework, as well as the affective, behavioural and cognitive theoretical frameworks to inform the items generated in the interview protocol. Here the role of the qualitative data was to triangulate and help explain the quantitative survey results as well as extend understandings gained beyond quantitative measures, by explicating the context and domain-specificity of these phenomena. The following section discusses the qualitative features of the current investigation by outlining: the formulation of the interview protocol, qualitative analysis procedures, the qualitative framework adopted, and measures to enhance the reliability and validity of quantitative data.

Materials

The current investigation utilised semi-structured interviews to investigate context and domain specificity and maximise the reliability and validity of the key concepts under investigation in Studies 1 and 2. The semi-structured approach also allowed for standardisation with the same questions being asked across interviews whilst also providing a level of flexibility to allow for new and unforeseen ideas to be investigated. The interview protocol was developed to explore perceptions of acculturative and enculturative processes within the school and home contexts (see Appendix E for interview protocol). The interview questions were formulated and guided by the general research area and the research questions. Core interview questions addressing the research questions were developed accompanied by a number of prompts which included follow-up questions (to prompt the interviewee to elaborate) and probing questions (to prompt explanations) to remind the interviewer
to tease out and extract greater detail in the responses provided by participants (see Appendix E). The interviewer was also able to deviate from the interview protocol if the participants introduced any new or unforeseen ideas (Gray, 2014). The interviewer then returned to the prescribed interview protocol and addressed each progressive research question, essentially using the interview protocol as a guide for the areas of investigation.

**Procedures**

**Interviews.** Individual semi-structured interviews were conducted at each school with eight selected students. Each interview was conducted within the school grounds at a time of the participant’s convenience. All interviews were recorded on digital voice recorders. In case the voice recorder malfunctioned during the interview process, a second voice recorder was utilised concurrently as a backup. Participants were informed that the interview was being recorded for research purposes only. All interviewees were ensured that only the research team would have access to the recorded interview, their participation was voluntary, and they could choose to leave the interview should they not wish to continue without prejudice. Moreover, all participants were informed of the measures taken to ensure their anonymity (i.e., use of pseudonyms) and confidentiality throughout the interview and research processes.

An insightful journal was updated at the conclusion of each interview. The purpose of this journal was to reflect and record on: the researcher’s involvement in the interview, record participants’ emotions, encounters, and behaviours observed during the interview process which may have otherwise be overlooked during the transcript’s analysis (specific contributions of journal to the analysis are delineated in progressive sections).
Data analysis. Thematic analysis is a widely used qualitative analytical strategy. Despite this, thematic analysis is not considered a method on its own. Nevertheless, Braun and Clarke (2006) have argued that thematic analysis should be considered “as a method in its own right” (p. 78). This analytical technique which detects, examines, and reports patterns within qualitative data is a poorly acknowledged method as there has been no clear agreement on its application and procedures within qualitative research due to the amount of flexibility it provides researchers (Braun & Clarke, 2006). While some may view this as a flaw of this analytical procedure, arguing that the analysis needs to be conducted in a more rigorous manner, others view this flexibility as an advantage. This flexibility within the strategy comes in the form of a number of decisions which need to be made by the researcher (Braun & Clarke, 2006). These relate to the: theoretical positioning of the researcher, framing of themes, and descriptions of the interview data. To increase the transparency and to exercise solid qualitative research practice, the following section explicitly discusses: what counts as a theme; how the data set was described; and the deductive thematic analysis approach utilised. Following is a step-by-step guide through the thematic analysis procedures which were applied in the current investigation.

Defining a theme. For the purpose of the current investigation, a theme has been defined as a patterned response within a data set that provides the researcher with important information which addresses a research focus (Braun & Clarke, 2006; Bryman, 2012). Many strategies have been used to identify themes. The most popular strategy is the identification of repeated patterns or codes. However, this strategy alone is an insufficient criterion to label a theme. For example, while one code may take up considerable space within the data set and others take up very
little, those that are more prevalent are not necessarily more important to the purpose of the study. Instead, the value of a pattern must be indicated by “whether it captures something important in relation to the overall research question”, that is, whether it captures the domain or context specificity of acculturation and enculturation processes, in order for it to be considered a theme (Braun & Clarke, 2006, p.82). As such, the significance of a pattern or even a theme should not be based solely on quantifiable measures.

This study considered a number of strategies to identify themes throughout interview transcripts, which included: repetitions – identified topics which recur a number of times throughout the data set; Indigenous typologies or categories – noted local terms that may sound unfamiliar; metaphors and analogies – examined the ways in which interviewees described or represented their thoughts and experiences; transitions – examined shifts in a topic, either through speech, tone, the use of particular phrases or a pause; similarities and differences – investigated how interviewees discussed topics in various ways; linguistic connectors – explored words indicative of cause and effect such as ‘reason’ and ‘because’; missing data – searched for missing data which was either intentionally or unintentionally avoided by the participant; and theory-related material – used existing theoretical concepts and literature as a basis to establish themes (Bryman, 2012; Ryan & Bernard, 2003). These eight analytical strategies were employed systematically throughout the thematic analysis of individual interviews.

**Description of the data set.** The types of claims made from the analysis were carefully considered prior to thematic analysis and were revisited post analysis. Generally, researchers provide two kinds of descriptions for their analysis, these are either a thematic description of the entire data set or a detailed account of particular
aspects of the data set (Braun & Clarke, 2006). This study employed a thematic description of the entire data set and provided a rich description reflective of the predominant themes which had emerged throughout the data. While word restrictions impede the depth and intricacy necessary in this type of description (Braun & Clarke, 2006), every effort was made to encapsulate an accurate reflection of all the content. In contrast, accounts of particular aspects of the data set were descriptions restricted to specific accounts of a theme usually addressing a specific research question (Braun & Clarke, 2006). While such descriptions may provide nuanced descriptions of particular themes, they do not encapsulate the complexities provided by the entire data.

**Deductive thematic analysis.** While thematic analysis is generally associated with an inductive qualitative methodology, the analytical process can be inductive or deductive in nature. Deductive thematic analysis is driven by the researcher’s theoretical foci and as a result more analytically focused. This approach was adopted in the current investigation, with the data analysis being driven by a number of pre-existing research questions, as well as acculturation and enculturation theory. The thematic analysis of the data involved six phases. Each phase was guided by recommendations made by Braun and Clarke (2006) and Ryan and Bernard (2003), leading authors in qualitative thematic analysis. The following section presents the analytical phases recommended by these authors and applications to Study 3.

**Phase 1: Data authentication.** All interview recordings were transcribed verbatim by a professional transcription service. To ensure accuracy of the transcripts the interviewer listened to the audio recordings and followed the interview transcript, correcting any misinterpreted words. Once this authentication process had been completed, the researcher listened to the interview recording again, noting
changes in the tone of the interviewees as well as any intonations and pauses throughout the transcripts and recording these to the right of the transcript documents. In addition to this, the researcher read the transcripts alongside the reflective journal, which contained notes on the participants’ emotions and behaviours during the interview process, any significant observations were also recorded to the right of the transcript document assisting the researcher to recall the context in which the interviews were conducted. Following this, the researcher read the transcript several times to familiarise herself with the content and context of the transcripts in preparation for thematic analysis. An initial list of ideas and interesting points were listed to the right of the transcript upon further reading.

**Phase 2: Coding.** This phase of the data analysis aimed to separate and organise the transcripts with relation to five a priori codes which related back to the research interest (i.e., domain and context-specificity of acculturative and enculturative phenomena). Pre-specified codes included: 1) Contextualising cultural identity; 2) Contextualising cultural values; 3) Contextualising cultural language; 4) Contextualising cultural behaviours; and 5) Contextualising cultural knowledge. Several new and unanticipated empirical codes were encapsulated within sub-codes; these were derivatives of the pre-specified codes (see Chapter 9 for sub-codes; Gibson & Brown, 2009). Each transcript was worked through methodically providing “full and equal attention” to each data item identifying interesting characteristics of the data which may form patterns (themes) across the data set (Braun & Clarke, 2006, p.89). Each of the codes was collated into separate data files and a list of codes was developed.

**Phase 3: Searching for themes.** This phase involved looking at the broader level of patterns (i.e., themes), by examining all the codes and collating them into
broader headings. Ryan and Bernards (2003) list of eight thematic analysis strategies (repetitions, Indigenous typologies or categories, metaphors and analogies, transitions, similarities and differences, linguistic connectors, missing data and theory-based material) were used to identify potential themes. A thematic map was used to visually represent themes and sub-themes and their relationships. Codes that did not seem to belong anywhere were placed into a miscellaneous theme temporarily, until the extracts were reviewed in detail in phase 4.

**Phase 4: Reviewing themes.** During this phase of the data analysis, themes were revisited, each theme was first reviewed and then later refined. In reviewing the themes formed in phase 3, each of the collated extracts from the transcripts for a particular theme were read and examined to check for an identifiable coherent pattern. If the theme exhibited a coherent pattern, the researcher moved to the refining stage. In the cases where the theme was problematic and the extracts did not fit well into a coherent pattern, a new theme was considered or the extract was discarded from the analysis altogether. Once the researcher was satisfied that all the themes contained a coherent pattern, the mind map of themes was revised and the researcher moved to the refinement stage. At this stage, the researcher considered the validity of individual themes in relation to the entire interview data set and thought about how well the mind map reflected the meanings of the data as a whole. If the map of themes did not fit or represent the interview data as a whole or did not address the research questions, the researcher returned to further reviewing and refining the coding until the thematic map satisfactorily represented the interview data set as well as the research questions of interest.

**Phase 5: Defining themes.** At this phase the collated extracts from each theme were revisited and organised into an internally consistent account of the
theme, supplemented by a narrative. Each theme was then analysed, the story of the theme was explained and the way each theme fitted with the overall research focus was explained. The analytical processes implemented between phases 1 and 5 were informed by theory. The analysis was guided by the researcher’s theoretical knowledge and was analyst-driven, that is, the research was guided by the A, B, C, + D perspectives of acculturation theory as well as Berry’s ecocultural framework. The thematic analyses generated a number of converging and diverging themes (see Chapter 8 for themes).

**Phase 6: Reporting results.** The aim of the analytical report was to tell the story of each theme and their relationships (where significant) by providing sufficient evidence of the themes with extracts from the data, complete with the contextual information about the source addressing the research foci.

**The point of interface: Integrating the qualitative and quantitative analysis.** Phases 1a, 1b, and 2 (see Figure 5.1) of the current investigation were interrelated. However, while there was some degree of overlap with the participants and research questions in both the qualitative and quantitative phases of the study to enable triangulation across phases, there was also some degree of variability across these phases. The variability in the research questions and participants enabled the qualitative component of the research to enhance the contextual aspects of the study. Thus, the findings provided across methodological strategies were found to be, not only complimentary in nature but also explicated contradictions, provided greater contextual breadth and allowed for more multi-faceted and meaningful findings to surface, sometimes beyond the realm of the theoretical literature.

At the conclusion of the qualitative and quantitative analyses of all three studies, diverging and converging findings were examined from both methodological
strands. The examination of findings across methodological strands is known as the data integration stage of mixed method research. Complimentary findings were examined for the enhancement and clarification across studies. If paradoxes and contradictory findings emerged, these provided a prompt to the researcher to examine the findings further, providing theoretical explanations for these inconsistencies. Due to concurrent triangulation research design of this study, multiple analytical strands were used through the investigation’s phases to increase the contextual depth and establish greater credibility and legitimation in the inferences that were drawn from the findings. As recommended by Tashakkori and Teddlie (2010), the quality of the analysis and interpretations on which inferences are made were enhanced in the current study by addressing the: a) analytic adequacy – ensuring the data analysis techniques were appropriately used in addressing the research questions; b) rigor of analytic integration – data integration was robust; c) interpretive transparency – clarifying the methods from which the findings emerged; d) interpretive consistency – inferences are consistent with the findings on which they were based; e) theoretical consistency – inferences made are consistent with current theory; f) interpretive agreement – there is agreement on the conclusions drawn from the presented findings; g) interpretive distinctiveness – ensuring that the conclusions drawn are the most credible conclusions; h) interpretive efficacy – meta-inferences are drawn from inferences derived from both qualitative and quantitative findings; i) interpretive bias reduction – adductive explanations were provided to explain paradoxes and contradictions; and j) interpretive correspondence – suppositions corresponded to the purpose of the study and the research questions.
Chapter Summary

This chapter has illustrated the theoretical rationale and basis on which the mixed methods approach was employed to address the aims, research questions, and hypotheses of the current investigation. The methods employed for each study were systematically outlined, describing the instrumentation, samples, data collection, and analysis procedures for each phase of the mixed methods – concurrent triangulation research design. The following chapter presents the quantitative results from Study 1.
CHAPTER 6: STUDY 1 - THE EXAMINATION OF THE PSYCHOMETRIC PROPERTIES OF THE DSAEM AND VALIDATION OF EXISTING PSCHOSOCIAL MEASURES

Introduction

Acculturation and enculturation research has for many years been accustomed to the development of unidimensional measures (see Chapter 3). Felix-Oritiz et al. (1994) have suggested that the area would benefit from multidimensional models of acculturation and enculturation. However, Miller and Lim (2010) went one step further, claiming that these processes are domain-specific, as they would better represent the complexities of these concepts allowing investigators to draw conclusions across various domains. Current research in the measurement of acculturation and enculturation rarely includes information on the development of the measures and their associated psychometric properties. This lack of transparency makes it difficult to determine the accuracy at which the observed items reflect the theoretical constructs the researcher intended to measure and therefore the validity of their findings. The current study attempts to tackle these issues by testing the psychometric properties of a newly developed domain-specific (i.e. language, knowledge and behaviour) measure of acculturation and enculturation.
The chapter is divided into three sections. Section one examined the reliabilities and the factor structure of the measurement scales of the DSAEM with increasingly rigorous and advanced psychometric testing methods. Group differences by gender and grade across all factors measured by the DSAEM are also examined. The second section focuses on the reliabilities and psychometric properties of the academic self-concept, academic motivation, school belongingness and multiculturation measurement scales utilised within the survey. The final section of the chapter presents the psychometric properties of the battery of instruments.

The chapter will present the findings in order of the hypotheses and research questions outlined in Chapter 4, reporting construct validity of the instruments’ factor structure through One Factor Congeneric (OFC) analysis, Confirmatory Factor Analysis (CFA), factor correlations between factors, internal consistency, and invariance tests across both gender and grade. The final items resulting from the various modifications have been noted with an asterisk in Appendix C to facilitate the reading of the results. The first constructs examined are domain-specific acculturation and enculturation as measures by the DSAEM (see Figure 5.2).

Section One: The Psychometric Properties of the Australian Multi-group Acculturation and Enculturation Measures

The DSAEM was developed for the purposes of the current investigation and was designed to measure the multiple domains of acculturation and enculturation. Each domain (i.e. scale) namely Acculturation Language, Acculturation Knowledge, Acculturation Behaviours, Enculturation Language, Enculturation Knowledge, and Enculturation Behaviours comprised 5 items. The mean scores and reliabilities for the total sample, gender and grade followed by the a priori factor structure, as well as
invariance across gender and grade in line with the hypothesis and research questions of the DSAEM are stipulated below.

To test the internal consistency of the scales, Cronbach’s Alpha is reported for both the a priori hypothesised and revised models of acculturation and enculturation. However, due to recent advances in reliability measures, in addition to reporting Cronbach’s Alpha the Omega coefficients will also be reported for the finalised models. The justification for reporting this measure is delineated further in this chapter. Given the exploratory nature of the current investigation the current study estimates above .60 will be considered to be acceptable (Nunnelly, 1978) however findings should be interpreted with caution. Estimates above .70 are considered to be satisfactory; above .80 good, and above .90 excellent.

When conducting factor analysis, Maximum Likelihood (ML) estimation was utilised as it is suitable for small sample sizes. The chi-square statistic is an absolute fit index and is derived from both the ML minimization function and the covariance matrices. A Chi-Square statistic was utilized to evaluate the fit of the models, however as the statistic is influenced by sample size, model size and the distribution of variables, the fit of the model and scale modification were also informed by a series of other fit indices such as the RMSEA (Root Mean Square Error of Approximation), CFI (Comparative Fit Index) both noncentrality-based indices; and TLI (Tucker-Lewis Index) a relative fit index. The subsequent section will present the findings of the psychometric analyses conducted on the acculturation and enculturation scales.
Acculturation Factor Means for the Total Sample, Gender, and Year Groups

Table 6.1 demonstrates similar mean scores for Acculturation Knowledge and Acculturation Behaviour across the total sample, gender and year levels (range 4.14 - 4.64). Females consistently reported higher levels across all the acculturative domains than did males. Years 9/10 students also scored consistently higher across all domains when compared to students in Years 7/8.

Table 6.1

Mean Scores for the Newly Developed Acculturation Scales Factors for Gender, Grade and the Total Sample

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Acculturation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>5.62 (.57)</td>
<td>5.58 (.58)</td>
<td>5.67 (.56)</td>
<td>5.57 (.58)</td>
<td>5.67 (0.56)</td>
</tr>
<tr>
<td>Knowledge</td>
<td>4.42 (1.10)</td>
<td>4.23 (1.11)</td>
<td>4.64 (1.04)</td>
<td>4.29 (1.15)</td>
<td>4.54 (1.03)</td>
</tr>
<tr>
<td>Behaviour</td>
<td>4.26 (1.11)</td>
<td>4.14 (1.07)</td>
<td>4.41 (1.14)</td>
<td>4.15 (1.25)</td>
<td>4.37 (.94)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviation values shown in parenthesis. The response scale ranged from 1-6, where 1 = strongly disagree and 6 = strongly agree, N = total number of participants in sample.

Internal Consistency Results of the Acculturation Factors

The internal consistency of the a priori, three factor model (Acculturation Language, Acculturation Knowledge, and Acculturation Behaviours; see Table 6.2 and Appendix D section 1) of acculturation was estimated using Cronbach’s Alpha. Estimates demonstrated acceptable reliabilities for all the factors across the total sample, as well as across gender and grade groups, keeping to the Hills (2008) criteria of .70. Thus, the newly developed acculturation measure demonstrated acceptable reliability estimates for the total sample as well as across subgroups of the sample.
Table 6.2

Reliability Estimates Cronbach’s Alpha (α) for the Newly Developed Acculturation Scales: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. Of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>.791</td>
<td>.735</td>
<td>.849</td>
<td>.776</td>
<td>.804</td>
<td>5</td>
</tr>
<tr>
<td>Knowledge</td>
<td>.768</td>
<td>.727</td>
<td>.822</td>
<td>.711</td>
<td>.829</td>
<td>5</td>
</tr>
<tr>
<td>Behaviours</td>
<td>.785</td>
<td>.757</td>
<td>.821</td>
<td>.804</td>
<td>.766</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

The Factorial Structure of the Acculturation Measure

A CFA was conducted whereby each of the 15 items was assigned to load only onto their a priori theoretical domains of acculturation (see Table 6.3). The initial CFA resulted in a poor fitting model based on the overall goodness of fit indices. However, all except for one of the factor loadings were greater than .40 and were positive and significant keeping to the criteria recommended by Hills (2008). The factor correlations ranged from .277 to .560.
Table 6.3

Confirmatory Factor Analysis Including Item Factor Loadings, Latent Factor Correlations, and Model Fit for A Priori Acculturation Model

<table>
<thead>
<tr>
<th>Item</th>
<th>Acculturation Language</th>
<th>Acculturation Knowledge</th>
<th>Acculturation Behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.643</td>
<td>.715</td>
<td>.893</td>
</tr>
<tr>
<td>2</td>
<td>.530</td>
<td>.681</td>
<td>.461</td>
</tr>
<tr>
<td>3</td>
<td>.496</td>
<td>.522</td>
<td>.397</td>
</tr>
<tr>
<td>4</td>
<td>.742</td>
<td>.680</td>
<td>.587</td>
</tr>
<tr>
<td>5</td>
<td>.878</td>
<td>.582</td>
<td>.852</td>
</tr>
</tbody>
</table>

Factor Correlations

<table>
<thead>
<tr>
<th>Acculturation Language</th>
<th>Acculturation Knowledge</th>
<th>Acculturation Behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>.349</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>.277</td>
<td>.560</td>
<td>--</td>
</tr>
</tbody>
</table>

Model Fit

<table>
<thead>
<tr>
<th>N</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>194.191</td>
<td>87</td>
<td>.858</td>
<td>.828</td>
<td>.078</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, \( \chi^2 \) = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index; RMSEA = root mean square error of approximation.

The less than optimal fit of the overall model indicated that the instrument required further refining utilising OFC. The OFC analysis, tests the model fit of individual factors (one at a time). The findings of the OFC analysis for all three acculturative domains are presented below in Table 6.4.

The OFC was utilised to identify how well each of the 5 items loaded onto its designated domain, and consequently identified those items which could have been the cause behind the less than ideal goodness of fit of the a priori hypothesised model of acculturation. Table 6.4 presents the parameter estimates and fit statistics for the original 5 item scales for each of the acculturation domains and the two modifications (4 and 3 item scales). As seen in Table 6.4, the five item for all three
factors failed on several grounds. Firstly, the overall goodness of fit indices for each of the three factors was poor. Secondly, conceptual overlap was also noted among items; specifically, one item [in the Acculturation Language construct] “I like to speak English” was conceptually similar to another item that related to the acculturation of language “I enjoy speaking English” and therefore was removed due to being redundant. Thirdly, each of the three factors contained items with low factor loadings accompanied by high modification indices (specifies the correlations between uniquenesses and items, and identifies parameters (when freed) which improve the Chi Square value). Hence, the first modification for each of the factors entailed the deletion of one item with conceptual redundancy, low factor loadings and high modification indices. The revised 4 item scales were assessed for improvements in overall fit and factor loadings. Each of the scales showed improvement in the overall fit of the models, however low factor loadings below the recommended 0.4 criteria were still evident within each of the scales. A second modification was conducted in which one more item was removed, resulting in 3–item factors. Each of the three scales showed considerably improved estimations of each of the three constructs with excellent fit indices and strong factor loadings (see Table 6.5).
Table 6.4

One Factor Congeneric Measurement Models for the Acculturation Domains of the DSAEM: The Two Modifications for Each of the Three Constructs Including the Chi-Square Test of Model Fit, Goodness of Fit Measures, Factor Loadings and Modification Indices are Outlined

<table>
<thead>
<tr>
<th>No. of items</th>
<th>$X^2$</th>
<th>df</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
<th>Item removed</th>
<th>Factor Loading of Item Removed</th>
<th>MI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acculturation Language</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>14.918</td>
<td>5</td>
<td>.100</td>
<td>.920</td>
<td>.839</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>.113</td>
<td>2</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 4</td>
<td>.081</td>
<td>7.449</td>
</tr>
<tr>
<td>3</td>
<td>.000</td>
<td>0</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 5</td>
<td>.121</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Acculturation Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>73.654</td>
<td>5</td>
<td>.262</td>
<td>.683</td>
<td>.367</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>8.495</td>
<td>2</td>
<td>.127</td>
<td>.959</td>
<td>.876</td>
<td>Item 4</td>
<td>.204</td>
<td>54.858</td>
</tr>
<tr>
<td>3</td>
<td>.000</td>
<td>0</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 5</td>
<td>.251</td>
<td>7.221</td>
</tr>
<tr>
<td><strong>Acculturation Behaviour</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>26.645</td>
<td>5</td>
<td>.147</td>
<td>.830</td>
<td>.661</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>4.317</td>
<td>2</td>
<td>.076</td>
<td>.976</td>
<td>.929</td>
<td>Item 4</td>
<td>.159</td>
<td>17.896</td>
</tr>
<tr>
<td>3</td>
<td>.000</td>
<td>0</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 5</td>
<td>.346</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, $X^2$ = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index; RMSEA = root mean square error of approximation, MI = modification indices.*
In sum, the structure of the newly developed acculturation measure presented a poorly fitting model indicating that the scale required further refinement. The revised scale was devised utilising OFC methods. The factor structure of the revised measure as informed by the OFC results will be tested and presented in Research Question (1.1.4).

The Revised Factorial Structure of the Acculturation Measure

Factor Means for the Total Sample, Gender, and Year Groups

Table 6.6 presents the factor mean scores for the revised acculturation measure (see also Appendix D section 2). Results demonstrate that Acculturation Language was consistently rated higher than Acculturation Knowledge and behaviour domains across the total sample and critical groups. Females on average rated highest in both Acculturation Language and Knowledge domain across all the total sample and critical groups, while males rated the highest for the Acculturation Behaviour domain.
Table 6.6

Mean Scores for the Revised Acculturation Scales for Gender, Grade and the Total Sample

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Acculturation Language</td>
<td>5.62 (.57)</td>
<td>5.58 (.58)</td>
<td>5.67 (.56)</td>
<td>5.57 (.58)</td>
<td>5.67 (.56)</td>
</tr>
<tr>
<td>Acculturation Knowledge</td>
<td>4.42 (1.10)</td>
<td>4.23 (1.11)</td>
<td>4.64 (1.04)</td>
<td>4.29 (1.15)</td>
<td>4.54 (1.03)</td>
</tr>
<tr>
<td>Acculturation Behaviour</td>
<td>4.43 (1.15)</td>
<td>4.45 (1.15)</td>
<td>4.41 (1.16)</td>
<td>4.44 (1.16)</td>
<td>4.42 (1.14)</td>
</tr>
</tbody>
</table>

Note. Standard deviation values shown in parenthesis. The response scale ranged from 1-6, where 1 represented strongly disagree and 6 represented strongly agree, N = total number of participants in sample.

Internal Consistency Results of the Revised Acculturation Factors

Table 6.7 presents the internal consistency of the revised three factor model (Acculturation Language, Acculturation Knowledge, and Acculturation Behaviours) of acculturation was estimated using Cronbach’s Alpha. Most estimates demonstrated acceptable reliabilities for factors across the total sample as well as across gender and grade groups. The Acculturation Behaviour domain demonstrated the strongest reliabilities with estimates consistently above the .70 criteria. However, when compared to the reliability estimates of the a priori model there is a noticeable drop in Alpha values across all three factors and is likely due to the reduction in the number of items in each scale.
Table 6.7

Reliability Estimates Cronbach’s Alpha (α) for the Revised 3 Items Acculturation Scales: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. Of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acculturation Language</td>
<td>.582</td>
<td>.530</td>
<td>.663</td>
<td>.554</td>
<td>.609</td>
<td>3</td>
</tr>
<tr>
<td>Acculturation Knowledge</td>
<td>.663</td>
<td>.590</td>
<td>.747</td>
<td>.589</td>
<td>.754</td>
<td>3</td>
</tr>
<tr>
<td>Acculturation Behaviours</td>
<td>.751</td>
<td>.735</td>
<td>.774</td>
<td>.732</td>
<td>.777</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

Domains such as Acculturation language and Acculturation Knowledge demonstrated acceptable reliability estimates in the a priori model. However, these estimates dropped substantially in the revised measure. These estimates were not ideal but acceptable considering the exploratory nature of the measure and should be interpreted with caution. Lower reliabilities may be attributable to the reduced number of items in the revised measure. Future refinements to the DSAEM may include increasing the pool of items within each subscale, to enhance reliability estimates. The decrease in the number of items makes violations of Alpha’s assumptions (based on the tau equivalent model) more apparent, thus reducing the reliability estimates of the scales, no longer making Cronbach’s Alpha a useful measure of reliability (see Dunn et al., 2014; Graham, 2006; Peters, 2014). The assumptions of Cronbach’s Alpha are based on the Tau-equivalent model, which infers that items measure the same latent variable on the same scale, with the same amount of accuracy, however with differing amounts of error (Graham, 2006). Contrary to this model, the congeneric model is a less restrictive model and was the model utilised (OFC and CFA procedures are congeneric) in the development of the
DSAEM. This model implies that items measure latent factors, with differing scales, varying amounts of accuracy and error. Both Graham (2006) and Raykov (1997) have revealed that even the presence of a single item which is not Tau-equivalent to the other items, can have a considerable influence on the accuracy of the Coefficient Alpha and is especially apparent within scales consisting of fewer items. Consequently, an alternative measure of reliability which adheres to the congeneric model will also be presented. The Omega has recently been shown to be a ‘sensible index of internal consistency’ (Dunn et al., 2014, p.405), when compared to other estimates (i.e. Cronbach’s Alpha). According to Zinbarg, Yovel, Revelle and McDonald (2006), the Omega performs well for both the Tau-equivalent (whether the assumptions have been met or not) and Congeneric models, it also less likely to overestimate or underestimate reliability. Also noteworthy is that the current study utilised confirmatory factor analytic procedures to determine item compositions, a procedure embedded in the congeneric model. However, the Alpha estimate assumes that the resulting groups of items for which it is generating the estimates is constructed around the tau-equivalence model (Graham, 2006). The use of the Cronbach’s Alpha would therefore create incongruence between the factor and measurement models. As the Omega overcomes many of the fundamental setbacks inherent in the Cronbach’s Alpha estimate as it has fewer and more realistic assumptions; and is line with the congeneric model (the model from which the DSAEM was developed), it will be presented as a more accurate and alternate estimate of reliability for the purposes of the current investigation. Nonetheless, as the reporting of the Cronbach’s Alpha is still commonplace within psychological literature, both (Cronbach’s Alpha and Coefficient Omega) estimates will be offered when presenting the findings of the finalised measures.
As seen in Table 6.8 the Coefficient Omega resulted in higher estimates than the Cronbach’s Alpha. The Coefficient Omega estimates are indicative of acceptable reliability due to the exploratory nature of the current study (see Nunnally, 1978), as the measure is administered for the first time with a rather homogenous sample of students attending ethnic day schools.

Table 6.8

Reliability Estimates Coefficient Omega for the Revised Three Items Acculturation Scales: For the Total Sample and Across Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Total Sample (N=200) 95% CI</th>
<th>Male (n=110) 95% CI</th>
<th>Female (n=90) 95% CI</th>
<th>Years 7/8 95% CI</th>
<th>Years 9/10 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acculturation Language</td>
<td>.601 (.417-.715)</td>
<td>.546 (.273-.703)</td>
<td>.700 (.409-.824)</td>
<td>.598 (.334-.749)</td>
<td>.646 (.381-.795)</td>
</tr>
<tr>
<td>Acculturation Knowledge</td>
<td>.678 (.568-.754)</td>
<td>.614 (.455-.722)</td>
<td>.760 (.633-.846)</td>
<td>.625 (.482-.723)</td>
<td>.758 (.598-.848)</td>
</tr>
<tr>
<td>Acculturation Behaviours</td>
<td>.808 (.749-.847)</td>
<td>.784 (.683-.825)</td>
<td>.819 (.735-.875)</td>
<td>.785 (.705-.841)</td>
<td>.838 (.771-.882)</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

In sum, the revised domain-specific acculturation measure demonstrated internal consistency with mostly acceptable reliability estimates for the acculturation measure of the DSAEM, however these must be interpreted with caution.

The Factorial Structure of the Revised Acculturation Measure

Another CFA of the acculturation factors was conducted to assess whether the deletion of these items improved the overall fit of the acculturation model. Upon further analysis, the revised CFA resulted in a much better fitting model (see Table 6.9). Of the 9 remaining items representing the three factors, all factor loadings were greater than .461 and were found to be positive and significant.
Despite this improvement in the fit of the model, the factor correlations increased across Acculturative Behaviour and Acculturative Knowledge domains (see Table 6.9). The covariation between these constructs may be indicative of a more generalised theoretical construct. Alternatively, this covariation may be conveying that these domains of acculturation are not exclusive, rather that they are reciprocally reinforced factors, whereby students behave in line with their cultural knowledge or cultural knowledge are imparted on students through cultural behaviours/activities (i.e. going to an ethnic day school; engaging in cultural activities such as folkloric dancing).

Finally, a reduction in the Chi-square statistic from the original a priori model (15 item scale) to the revised model (9-item scale) was notable, indicating that the implemented modifications improved the overall fit of the revised model.
Table 6.9

Confirmatory Factor Analysis for the Revised Acculturation Model (Based on the Findings of the OFC Analysis) Including Item Factor Loadings, Latent Factor Correlations, and Model Fit for Acculturation

<table>
<thead>
<tr>
<th></th>
<th>Acculturation Language</th>
<th>Acculturation Knowledge</th>
<th>Acculturation Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor Loadings</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.666</td>
<td>.532</td>
<td>.552</td>
</tr>
<tr>
<td>Item 2</td>
<td>.461</td>
<td>.823</td>
<td>.601</td>
</tr>
<tr>
<td>Item 3</td>
<td>.574</td>
<td>.560</td>
<td>.657</td>
</tr>
<tr>
<td><strong>Factor Correlations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation Language</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Acculturation Knowledge</td>
<td>.315</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Acculturation Behaviour</td>
<td>.432</td>
<td>.863</td>
<td>--</td>
</tr>
<tr>
<td><strong>Model Fit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>36.273</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFI</td>
<td>.950</td>
<td>.925</td>
<td>.051</td>
</tr>
<tr>
<td>TLI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMSEA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, $\chi^2 = $ Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index; RMSEA = root mean square error of approximation.*

In short, the Confirmatory Factor Analysis has supported the 3-factor domain-specific structure of the acculturation scale, consistent with the findings of current acculturation studies. The poor Goodness of fit of the a priori model of acculturation warranted further analysis at the level of the individual factors utilising the OFC analysis. Results indicated that 6 of the items across the three factors required deletion due to theoretically redundant items, low factor loadings, and/or high modification indices. Modifications to the factors were implemented and the overall three factor model was revised. The revised (9-item) scale of acculturation demonstrated excellent Goodness of fit indices and indicated an excellent model fit and all factor loadings were sufficient and factor correlations acceptable, however the high correlation between Acculturation Behaviours and Acculturation
Knowledge is noteworthy and suggestive of possible mutually supportive domains of acculturation.

Enculturation Factor Means for the Total Sample, Gender, and Year Groups

Table 6.10 presents the mean scores for Enculturation Behaviour across the total sample, gender and year levels, and were consistently higher (range 4.86 – 5.22) when compared to the Enculturation Language and Enculturation Knowledge factors. Similar to the means in the acculturation factors, females consistently reported higher levels across all the enculturative factors as compared to the males. Also consistent with the findings within the acculturation factors, Years 9/10 students scored consistently higher across all enculturative factors when compared to the Years 7/8 school students.
Table 6.10

*Mean Scores for the Enculturation Scale Factors for Gender, Grade and the Total Sample*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Enculturation Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.50 (1.20)</td>
<td>4.32 (1.26)</td>
<td>4.71 (1.09)</td>
<td>4.45 (1.21)</td>
<td>4.55 (1.19)</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.65 (1.03)</td>
<td>4.63 (1.11)</td>
<td>4.69 (.92)</td>
<td>4.51 (1.07)</td>
<td>4.80 (.96)</td>
</tr>
<tr>
<td>Enculturation Behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.02 (1.00)</td>
<td>4.86 (1.11)</td>
<td>5.22 (.82)</td>
<td>4.86 (1.13)</td>
<td>5.19 (.82)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviation values shown in parenthesis.

**Internal Consistency Results of the Enculturation Factors**

Table 6.11 presents the internal consistency of the a priori, three factor model (Enculturation Language, Enculturation Knowledge, and Enculturation Behaviours) of enculturation. Alpha estimates demonstrated acceptable reliabilities above .731 for all the factors across the total sample, as well as across gender and grade groups.

Table 6.11

*Reliability Estimates Cronbach’s Alpha (α) for the Enculturation Scales: For the Total Sample, Gender and Grade Level*

<table>
<thead>
<tr>
<th>Cronbach’s Alpha α</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. Of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enculturation Language</td>
<td>.834</td>
<td>.839</td>
<td>.814</td>
<td>.828</td>
<td>.847</td>
<td>5</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
<td>.811</td>
<td>.836</td>
<td>.765</td>
<td>.798</td>
<td>.818</td>
<td>5</td>
</tr>
<tr>
<td>Enculturation Behaviours</td>
<td>.760</td>
<td>.768</td>
<td>.731</td>
<td>.755</td>
<td>.748</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note.* N = total number of participants in sample, n = total number of participants in subsample.
In sum, the newly developed enculturation measure demonstrated internal consistency with acceptable reliability estimates for the total sample as well as across subgroups of the sample.

**The Factorial Structure of the Acculturation Measure**

Table 6.12 presents the results of a CFA which was conducted to evaluate the fit of the a priori 15 item model of enculturation (see Appendix D section 1). The initial CFA indicated a poor fitting model with an RMSEA of .081, just above the recommended value of .08 for an acceptable fit, a CFI of .888 and TLI of .864, well below the recommended value of .90. Further to this, upon a complete assessment of the factorial structure, factor loadings showed that of the 15 items assigned to the three factors, 2 items were loading below the recommended .40 criteria, while the remaining items were found to be positive and significant and keeping to the Hills (2008) criteria.
Table 6.12

Confirmatory Factor Analysis for the A Priori Enculturation Model, Including Item Factor Loadings, Latent Factor Correlations, and Model Fit

<table>
<thead>
<tr>
<th></th>
<th>Enculturation Language</th>
<th>Enculturation Knowledge</th>
<th>Enculturation Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor Loadings</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.920</td>
<td>.637</td>
<td>.351</td>
</tr>
<tr>
<td>Item 2</td>
<td>.648</td>
<td>.783</td>
<td>.821</td>
</tr>
<tr>
<td>Item 3</td>
<td>.562</td>
<td>.537</td>
<td>.791</td>
</tr>
<tr>
<td>Item 4</td>
<td>.878</td>
<td>.834</td>
<td>.538</td>
</tr>
<tr>
<td>Item 5</td>
<td>.639</td>
<td>.599</td>
<td>.388</td>
</tr>
</tbody>
</table>

|                      |                        |                         |                         |
| **Factor Correlations** |                      |                         |                         |
| Enculturation Language | --                     | --                      | --                      |
| Enculturation Knowledge | .721               | --                      | --                      |
| Enculturation Behaviour | .559               | .815                    | --                      |

| **Model Fit**        |                        |                         |                         |
| N                    | 200                    |                          |                         |
| $\chi^2$             | 201.149                | 87                      | .888                    |
| df                   |                         |                         | .864                    |
| CFI                  |                         |                         | .081                    |
| TLI                  |                         |                         |                         |

*Note.* $N =$ total number of participants in sample, $\chi^2 =$ Chi-Square, $df =$ degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index; RMSEA = root mean square error of approximation.

Due to the poor fit of the model, further refining of the enculturation measure was deemed necessary. OFC analysis was utilised to further improve the overall fit of the enculturation model, ensuring that items are loading onto their designated constructs. The findings of the OFCs for the three enculturative domains are presented in Table 6.13.
Table 6.13

One Factor Congeneric Measurement Models for the Enculturation Domains of the DSAEM: The two Modifications for Each of the Three constructs Including the Chi-Square Test of Model Fit, Goodness of Fit Measures, Factor Loadings and Modification Indices are Outlined

<table>
<thead>
<tr>
<th>No. of items</th>
<th>X²</th>
<th>df</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
<th>Item removed</th>
<th>Factor Loading of Item Removed</th>
<th>MI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enculturation Language Domains</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>35.866</td>
<td>5</td>
<td>.176</td>
<td>.078</td>
<td>.539</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>2.136</td>
<td>2</td>
<td>.018</td>
<td>.996</td>
<td>.989</td>
<td>Item 4</td>
<td>.058</td>
<td>16.926</td>
</tr>
<tr>
<td>3</td>
<td>.000</td>
<td>0</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 5</td>
<td>.166</td>
<td>--</td>
</tr>
<tr>
<td><strong>Enculturation Knowledge Domains</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30.937</td>
<td>5</td>
<td>.161</td>
<td>.788</td>
<td>.576</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>1.566</td>
<td>2</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 4</td>
<td>.347</td>
<td>25.455</td>
</tr>
<tr>
<td>3</td>
<td>.000</td>
<td>0</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 5</td>
<td>.302</td>
<td>--</td>
</tr>
<tr>
<td><strong>Enculturation Behaviour Domains</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>24.019</td>
<td>5</td>
<td>.138</td>
<td>.851</td>
<td>.702</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>.234</td>
<td>2</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 4</td>
<td>.169</td>
<td>19.517</td>
</tr>
<tr>
<td>3</td>
<td>.000</td>
<td>0</td>
<td>.000</td>
<td>1.000</td>
<td>1.000</td>
<td>Item 5</td>
<td>.267</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, $\chi^2$ = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index; RMSEA = root mean square error of approximation, MI = modification indices.*

Table 6.13 reveals that the a priori 5 item factors demonstrated poor goodness of fit indices with CFI’s and TLI’s below the 0.9 criteria. In addition to this, a detailed examination of factor parameter estimates revealed low values (below the 0.4 criteria) whilst also presenting high modification indices. The first modification entailed the deletion of those items which did not load well onto their assigned
constructs and also exhibited high modification indices. The resulting 4 item factors indicated excellent fits with CFI and TLI above .90, as well as RMSEA well below the .05 criteria’s. However, further analysis of the 4-item factors all revealed factor loadings well below the .40 criteria, suggesting the need for an additional modification. The revised 3-item factors exhibited excellent goodness of fit indices across all three constructs and strong factor loadings (see Table 6.14) across all nine of the remaining items.

Table 6.14

Factor Loadings for each of the Three Enculturation Domains

<table>
<thead>
<tr>
<th>Item</th>
<th>Enculturation Language</th>
<th>Enculturation Knowledge</th>
<th>Enculturation Behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>.708</td>
<td>.543</td>
<td>.587</td>
</tr>
<tr>
<td>Item 2</td>
<td>.550</td>
<td>.802</td>
<td>.830</td>
</tr>
<tr>
<td>Item 3</td>
<td>.573</td>
<td>.687</td>
<td>.688</td>
</tr>
</tbody>
</table>

In sum, the structure of the newly developed domain-specific enculturation measure presented a poorly fitting model indicating that the scale required further refinement. The revised scale was devised utilising OFC methods. The factor structure of the revised measure as informed by the OFC results will be tested and presented in Research Question (1.1.9).

The Revised Factorial Structure of the Enculturation Measure

Factor Means for the Total Sample, Gender, and Year Groups

Table 6.15 presents the mean scores for all the enculturation domains across the total sample and critical groups of interest. Results indicate that, on average, Enculturation Behaviour rated the highest across the total sample and all subgroups.
of interest. Female participants consistently had higher self-ratings than their male counterparts across all domains of enculturation. While Year 9 and 10 students self-rated themselves higher in all three domains when compared to their Year 7 and 8 counterparts.

Table 6.15

*Mean Scores for the Revised Enculturation Scale Factors for Gender, Grade and the Total Sample*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enculturation Language</td>
<td>4.50 (1.20)</td>
<td>4.32 (1.26)</td>
<td>4.71 (1.08)</td>
<td>4.45 (1.21)</td>
<td>4.55 (1.19)</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
<td>4.66 (1.03)</td>
<td>4.63 (1.12)</td>
<td>4.69 (.92)</td>
<td>4.51 (1.07)</td>
<td>4.80 (.96)</td>
</tr>
<tr>
<td>Enculturation Behaviour</td>
<td>5.02 (1.00)</td>
<td>4.86 (1.11)</td>
<td>5.22 (.81)</td>
<td>4.86 (1.13)</td>
<td>5.19 (.83)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviation values shown in parenthesis. The response scale ranged from 1-6, where 1 represented strongly disagree and 6 represented strongly agree, *N* = total number of participants in sample.

**Internal Consistency Results of the Revised Enculturation Factors**

Both Table 6.16 and Table 6.17 present the reliability estimates of the revised measures. All the factors reached acceptable to good levels of internal consistency with the total sample. Alpha coefficients ranged between .670 and .767, while attaining slightly higher Omega coefficients ranging from .677 to .782. Reliability estimates ranged from reasonable to acceptable for all the subgroups, with female students having the lowest reliability estimate of .610 for the Enculturation Knowledge factor.
Table 6.16

Reliability Estimates Cronbach’s Alpha (α) for the Revised Three Item Enculturation Scales: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Cronbach’s Alpha α</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. Of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enculturation Language</td>
<td>.736</td>
<td>.719</td>
<td>.750</td>
<td>.718</td>
<td>.769</td>
<td>3</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
<td>.670</td>
<td>.713</td>
<td>.610</td>
<td>.672</td>
<td>.654</td>
<td>3</td>
</tr>
<tr>
<td>Enculturation Behaviours</td>
<td>.767</td>
<td>.780</td>
<td>.713</td>
<td>.749</td>
<td>.788</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

Table 6.17

Reliability Estimates Coefficient Omega for the Revised Three Items Enculturation Scales: For the Total Sample and Across Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Coefficient Omega</th>
<th>Total Sample (N=200)</th>
<th>95% CI</th>
<th>Male (n=110)</th>
<th>95% CI</th>
<th>Female (n=90)</th>
<th>95% CI</th>
<th>Years 7/8</th>
<th>95% CI</th>
<th>Years 9/10</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enculturation Language</td>
<td>.741</td>
<td>.654 -</td>
<td>.725</td>
<td>.607 -</td>
<td>.756</td>
<td>.630 -</td>
<td>.727</td>
<td>.605 -</td>
<td>.771</td>
<td>.649 -</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
<td>.677</td>
<td>.579 -</td>
<td>.724</td>
<td>.600 -</td>
<td>.613</td>
<td>.437 -</td>
<td>.673</td>
<td>.558 -</td>
<td>.687</td>
<td>.545 -</td>
</tr>
<tr>
<td>Enculturation Behaviours</td>
<td>.782</td>
<td>.695 -</td>
<td>.803</td>
<td>.680 -</td>
<td>.717</td>
<td>.583 -</td>
<td>.769</td>
<td>.665 -</td>
<td>.800</td>
<td>.671 -</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

All in all, the internal consistency estimates for the total sample as well as subgroups of interest was acceptable for the enculturation measure.

The Factorial Structure of the Revised Enculturation Measure

Once all of the aforementioned modifications were implemented to the enculturation model, another CFA was conducted to check if the revised measure
would yield an improved goodness of fit. The CFA generated improved fit indices, with an RMSEA of .031, a CFI of .991 and a TLI of .986 (Chi Square = 28.669, df = 24, \( p = 0.233 \)), an excellent fitting model across all fit indices. Despite the CFA producing an excellent fit, it is imperative to examine the parameter estimates. The factor loadings (see Table 6.18) for the individual parameters indicate that all nine items are well defined with acceptable values ranging from .558 to .943. Following this, Table 6.18 also presents the factor correlations among all nine items of the enculturation measure. The correlations among the factors were all positive and significant (\( p < 0.01 \)) and ranged from .691 to .874.
Table 6.18

**Confirmatory Factor Analysis for the Revised Enculturation Model (Based on the Findings of the OFC Analysis) Including Item Factor Loadings, Latent Factor Correlations, and Model Fit**

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>Enculturation Language</th>
<th>Enculturation Knowledge</th>
<th>Enculturation Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>.943</td>
<td>.604</td>
<td>.838</td>
</tr>
<tr>
<td>Item 2</td>
<td>.609</td>
<td>.767</td>
<td>.819</td>
</tr>
<tr>
<td>Item 3</td>
<td>.565</td>
<td>.572</td>
<td>.558</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enculturation Language --</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
</tr>
<tr>
<td>Enculturation Behaviour</td>
</tr>
<tr>
<td>Enculturation Behaviour</td>
</tr>
<tr>
<td>Enculturation Behaviour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>200</td>
</tr>
</tbody>
</table>

*Note. $\chi^2=$chi-square, df = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index, N = total number of participants in sample.*

Overall, the confirmatory Factor Analysis (CFA) has supported the domain-specific structure of the enculturation scales. The less than ideal Goodness of fit of the a priori model of enculturation necessitated further analysis at the level of the individual factors utilising the OFC analysis. The resulting model indicated that 6 of the items across three factors required deletion due to low factor loadings and high modification indices. Modifications to the factors were implemented and the overall three factor model was revised. The resulting 9-item scale was analysed utilising a CFA with the same constraints as the initial test. That is, the remaining items loading only on their designated factors, without any cross loadings. The revised enculturation model demonstrated excellent Goodness of fit indices and indicated excellent model fit with all factor correlations and factor loadings acceptable for the focus sample (see Appendix D section 2). Despite these findings, Table 6.18
demonstrated high intercorrelations between the Acculturation Knowledge and Acculturation Behaviour domains, possible explanations for these findings and their implications have been explicated in Chapter 9.

Invariance Testing across Gender and Grade for the DSAEM

Referred to as a statistical precondition after conducting a CFA, invariance testing is used to validate whether the DSAEM structure is stable across groups (Hair et al., 2010). Establishing invariance of a scale allows researchers to make valid comparisons across subgroups. When reporting differences across subgroups such as gender or grade, studies (see Cheung & Rensvold, 2002) report higher or lower mean differences across various factors of acculturation and enculturation. Rarely have researchers reported the types of differences, by investigating the factor structure to establish whether scales or subscales of an instrument measure the same latent constructs of acculturation and enculturation with equivalent validity across subgroups. Differences in the means of subgroups are meaningless without establishing invariance across these groups first. It is for these fundamental reasons that the following section will determine whether the DSAEM measures acculturation and enculturation uniformly and accurately across both gender and grade subgroups.

The findings of the invariance testing for each of the two grouping variables (gender and grade) are presented in Tables 6.19 and 6.20. As described in Chapter 5, due to the small sample size, full CFA invariance tests were not conducted, but rather six one-factor congeneric invariance tests were utilised under strict invariance conditions (Bodkin-Andrews et al., 2010) where increasingly constrained parameters were nested in the baseline (free) model (Milfont & Fischer, 2010). Model 1 (M1)
tests for configural invariance (baseline model) which tests whether the factorial structure is acceptable in a multi-group format with no invariance restraints (Milfont & Fischer, 2010). Model 2 (M2) tests for metric invariance, which tests for consistencies of the factor coefficients across groups, thus holding these parameters invariant across groups (Milfont & Fischer, 2010). The final model, Model 3 (M3) tests for scalar invariance, which examined whether the pattern of the item intercepts of the regressions were equivalent across the groups (Milfont & Fischer, 2010). Due to the relatively small sample size, evaluation of invariance was conducted using the likelihood-ratio (LR) test or the chi-square difference test (Byrne, 2012), with cursory consideration also given to the overall model fit and variation in the confidence intervals of the RMSEA (Bodkin-Andrews et al., 2010) and change in the CFI index (Cheung & Rensvold, 2002).

Table 6.19 presents the findings for invariance across gender for the DSAEM. Baseline (i.e. M1; configural) models were not reported as all goodness-of-fit indices presented a perfect fit of the data to the measurement model. Primarily focusing on the strict nature of the Chi-Square difference test across the minimal (metric) invariance assumptions (Byrne, 2012), all of the DSAEM achieved minimal invariance across gender with the exception of the Enculturation Behaviour factor. For the gender invariance test on Enculturation Behaviour, under the advice of Byrne (2012), a partial invariance test was conducted based on freeing the invariance assumption of item 16 (“I enjoy participating in the traditions of my native culture”; modification index [MI] of 7.91). The revised model produced a chi-square value of 4.66 with a df of 2. This model resulted in a non-significant variation in the Chi-Square when compared to the baseline model, therefore partial metric invariance was assumed.
Table 6.19

*Invariance Tests Across Gender for the DSAEM*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Model 2: Minimal Invariance</th>
<th>Model 3: Desirable Invariance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
<td>$df$</td>
</tr>
<tr>
<td>Acc Language</td>
<td>2.85</td>
<td>3</td>
</tr>
<tr>
<td>Acc Knowledge</td>
<td>4.38</td>
<td>3</td>
</tr>
<tr>
<td>Acc Behaviour</td>
<td>6.31</td>
<td>3</td>
</tr>
<tr>
<td>Enc Language</td>
<td>1.00</td>
<td>3</td>
</tr>
<tr>
<td>Enc Knowledge</td>
<td>5.91</td>
<td>3</td>
</tr>
<tr>
<td>Enc Behaviour</td>
<td>13.54*</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. $\chi^2$ = chi-square; $df$ = degrees of freedom; CFI = comparative fit index; TLI = Tucker Lewis index; RMSEA = root mean square error of approximation; Enc = Enculturation; Acc = Acculturation, * = $p < .05$

Table 6.20 demonstrates invariance across grade for the sample of interest. Similarly, minimal invariance was also achieved across most of the DSAEM factors across year levels, with the Acculturation Behaviour and Enculturation Behaviour being the exceptions. For Acculturation Behaviour, a partial invariance test was also run based on freeing the invariance assumption of item 7 (“I enjoy participating in Australian traditions”; MI = 10.29). The revised model produced a Chi-Square value of .01 with a $df$ of 2, therefore partial metric invariance may be assumed. Similarly, a partial invariance test was run for the Enculturation Behaviour factor by freeing the invariance assumption of item 16 (“I enjoy participating in the traditions of my native culture”; MI = 6.81). The revised model produced a Chi-Square value of 1.92 with a $df$ of 2, therefore partial metric invariance may also be assumed.
Table 6.20

*Invariance Tests Across Grade for the DSAEM*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Model 2: Minimal Invariance</th>
<th>Model 3: Desirable Invariance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
<td>df</td>
</tr>
<tr>
<td>Acc Language</td>
<td>4.95</td>
<td>3</td>
</tr>
<tr>
<td>Acc Knowledge</td>
<td>3.67</td>
<td>3</td>
</tr>
<tr>
<td>Acc Behaviour</td>
<td>10.61*</td>
<td>3</td>
</tr>
<tr>
<td>Enc Language</td>
<td>1.91</td>
<td>3</td>
</tr>
<tr>
<td>Enc Knowledge</td>
<td>1.81</td>
<td>3</td>
</tr>
<tr>
<td>Enc Behaviour</td>
<td>8.72*</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. $\chi^2$ = chi-square; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker Lewis index; RMSEA = root mean square error of approximation; Enc = Enculturation; Acc = Acculturation; * = $p < .05$

All in all, the DSAEM is generally suited for both male and female students and across Years 7/8 and Years 9/10 students. However, as partial invariance was met for both the Enculturation and Acculturation Behaviour factors across both gender and grade, these results should be interpreted with some caution. Despite this, these results have created a much stronger basis for the examination of latent mean differences across gender and year level subgroups for the DSAEM in the future.

**Section Summary**

The DSAEM was found to have some redundant items in its a priori six factor, 30 item model for Years 7 to 10 students attending ethnic day schools. The a priori model was later refined by detecting these redundant items and removing them from the model. The revised measures of acculturation and enculturation had robust structural validity with all factor-to-item loadings positive and significant, meeting
the levels of acceptable loadings as measured by confirmatory factor analysis. The revised DSAEM demonstrated acceptable reliabilities and was found to be invariant across both grade and gender subgroups, suggesting that the instrument is comparable across sub-groups of interest. Accordingly, the results support the appropriateness and usefulness of the DSAEM across gender and varying year levels of secondary school students.

Section Two: Examining the Psychometric Properties of Existing Psychosocial Measures

Introduction

The previous section examined the psychometric properties of the newly developed DSAEM. The objective of the proceeding section is to examine the psychometric properties of the other tools utilised within this investigation addressing the noteworthy matter of measurement validity and reliability. Measures of interest include the Academic Self-Description Questionnaire II (ASDQII; Marsh, 1990); the School Motivation Questionnaire (SMQ; Marsh et al., 2003); the School Belongingness Scale (SBS; Parada & Richards, 2002); and the Multiculturation Scale (Bodkin-Andrews et al., 2010). While it is not common practice to test the psychometric properties of already established instruments, this was necessary for the current study (discussed in further detail in Chapter 9). Of most concern was the fact that the aforementioned tests have not been tested across the ethnic day schooling context in Australia. The sample from the current study was recruited from four Independent ethnic day schools, comprising mostly of second and third generation migrants. The results are presented in the succession of the research
questions described in Chapter 4 and outline the construct validity and factor structure through confirmatory factor analysis procedures. Correlations among factors and internal constancy estimates as well as tests of invariance are also reported across gender and grade sub-groups.

**Academic Self-Description Questionnaire II (ASDQII)**

The ASDQII is a well-established instrument and has generally demonstrated good psychometric properties; however, the majority of these studies have been conducted with larger student samples, attending mainstream and comprehensive schools only and the measure is yet to be tested across ethnic day school setting. As the current study comprised of a limited sample of 200 students and given their unique characteristics (attending ethnic day schools), there existed the possibility that the instrument’s psychometrics would not hold. The internal consistency of the measure was initially tested, followed by a CFA which was conducted on the four factors of interest (i.e., General Self-concept, English Self-concept, Maths Self-concept, and School Subject Self-concept) factors.

**ASDQII Factor Means for the Total Sample, Gender, and Year Groups**

Table 6.21, presented the mean scores for the total sample and across the subgroups of gender and grade (range 4.25 – 5.00). The results demonstrated that students across both the total sample and subgroups have, on average, rated General Self-concept consistently higher than domain specific academic self-concepts, such as English and Maths. Further to this, Years 7/8 students rated higher on all domains of self-concept when compared to their counterparts in Years 9/10. On average,
females reported having a stronger self-concept in English than Maths. In contrast, males on average reported stronger self-concepts in Maths than in English.

Table 6.21

*Mean Scores of the ASDQII for General, English, Maths and School Subjects Self-concepts Factors for the Total Sample, Gender and Grade Subgroups*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-concept</td>
<td>4.98 (.69)</td>
<td>5.00 (.67)</td>
<td>4.96 (.72)</td>
<td>5.00 (.75)</td>
<td>4.96 (.64)</td>
</tr>
<tr>
<td>English Self-concept</td>
<td>4.66 (.82)</td>
<td>4.62 (.85)</td>
<td>4.72 (.76)</td>
<td>4.85 (.83)</td>
<td>4.47 (.76)</td>
</tr>
<tr>
<td>Maths Self-concept</td>
<td>4.50 (1.02)</td>
<td>4.70 (.95)</td>
<td>4.25 (1.06)</td>
<td>4.56 (1.13)</td>
<td>4.44 (.90)</td>
</tr>
<tr>
<td>School Subjects Self-concept</td>
<td>4.79 (.766)</td>
<td>4.75 (.78)</td>
<td>4.83 (.75)</td>
<td>4.90 (.81)</td>
<td>4.68 (.71)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviation values shown in parenthesis, *N* = total number of participants in sample.

**Internal Consistency Results of the ASDQII Factors**

Reliability estimates of the four factor model were generated (see Table 6.22). Factors achieved acceptable levels of internal consistency across both the total sample and subgroups of gender and grade (ranging .785 to .925), with Years 7/8 students consistently presenting higher estimated than Years 9/10 students across the four factors.
Table 6.22

Reliability Estimates Cronbach’s Alpha (α) for the Standardised ASDQ II Scales: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s Alpha α</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-concept</td>
<td>.815</td>
<td>.785</td>
<td>.848</td>
<td>.824</td>
<td>.807</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Maths Self-concept</td>
<td>.909</td>
<td>.898</td>
<td>.914</td>
<td>.925</td>
<td>.886</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>English Self-concept</td>
<td>.892</td>
<td>.889</td>
<td>.897</td>
<td>.894</td>
<td>.879</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>School Subjects Self-concept</td>
<td>.885</td>
<td>.890</td>
<td>.881</td>
<td>.894</td>
<td>.870</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

Overall, hypothesis 1.2.1 was supported with the internal consistency for the both the total sample and the subgroups of gender and grade. Results indicate that the four factors of General Self-concept, Maths Self-concept, English Self-concept and School Subjects Self-concept of the ASDQ II are reliable measures for use with adolescent students attending ethnic day schools.

The Factorial Structure of the Academic Self-concept Measure

Hypothesis 1.2.2 tested for both construct and convergent validity of the ASDQ II instrument utilising CFA. The initial CFA resulted in a poor fitting model based on the overall goodness of fit indices. With the exception of the item ‘Work in English classes is easy for me’ which had a poor loading on General Self-concept, factor loadings were positive, significant and above the .40 Hills (2008) criteria. Convergent validity was statistically measured with the examination of the correlation matrices (factor correlation below). The correlation among the academic self-concept scales ranged from .215 to .879. The results (see Table 6.23) are
indicative of appropriate convergent validity with correlations, yet distinct enough to
be maintained as individual factors.

Table 6.23

Confirmatory Factor Analysis for the A Priori Model of the ASDQII Including Item
Factor Loadings, Latent Factor Correlations, and Model Fit

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>General Self-concept</th>
<th>Maths Self-concept</th>
<th>English Self-concept</th>
<th>School Subjects Self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>.515</td>
<td>.668</td>
<td>.831</td>
<td>.773</td>
</tr>
<tr>
<td>Item 2</td>
<td>.731</td>
<td>.802</td>
<td>.759</td>
<td>.798</td>
</tr>
<tr>
<td>Item 3</td>
<td>.764</td>
<td>.823</td>
<td>.658</td>
<td>.818</td>
</tr>
<tr>
<td>Item 4</td>
<td>.465</td>
<td>.815</td>
<td>.805</td>
<td>.717</td>
</tr>
<tr>
<td>Item 5</td>
<td>.686</td>
<td>.806</td>
<td>.764</td>
<td>.773</td>
</tr>
<tr>
<td>Item 6</td>
<td>.452</td>
<td>.869</td>
<td>.828</td>
<td>.525</td>
</tr>
<tr>
<td>Item 7</td>
<td>.374</td>
<td>.403</td>
<td>.470</td>
<td>.437</td>
</tr>
<tr>
<td>Item 8</td>
<td>.510</td>
<td>.784</td>
<td>.622</td>
<td>.741</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor Correlations</th>
<th>General Self-concept</th>
<th>Maths Self-concept</th>
<th>English Self-concept</th>
<th>School Subjects Self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-concept</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Maths Self-concept</td>
<td>.571</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>English Self-concept</td>
<td>.539</td>
<td>.215</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>School Subjects Self-concept</td>
<td>.879</td>
<td>.592</td>
<td>.711</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Fit</th>
<th>N</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>200</td>
<td>1009.617</td>
<td>458</td>
<td>.820</td>
<td>.805</td>
<td>.078</td>
</tr>
</tbody>
</table>

Note. $N$ = total number of participants in sample, $\chi^2$ = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation.

The less than optimal fit of the overall model suggested that the model required
further refining. OFC analysis was adopted to test the model fit of individual factors.

The findings of the OFC for all four factors are presented in Table 6.24.

The OFC was adopted to identify how well each of the 8 items loaded onto
their designated construct. The parameter estimates and fit indices for the original
eight item scales for the academic self-concept factors as well as their modifications
are presented below. As seen in Table 6.24 the original scales for General and School
Subjects Self-concepts presented poor fit indices and high modification indices. Hence, both these factors required further modifications to improve the overall fit of the model. These modifications entailed the deletion of items presenting high modification indices. Items were deleted one at a time until the fit of the model was deemed acceptable. The General Self-concept factor required four modifications before reaching acceptable fit indices resulting in a 4 item factor. While the School Subjects Self-Concept factor required only two modifications to reach acceptable fit indices, resulting in a six item factor. Each of the two modified factors presented considerably improved estimations with not only excellent fit in indices but stronger factor loadings (see Table 6.25). Neither of the subject specific self-concept (Maths Self-concept and English Self-concept) factors required any modifications, as they both demonstrated acceptable fit indices, thus maintaining their original a priori eight item models.
Table 6.24

One Factor Congeneric Measurement Models for the ASDQ II Factors of the DSAEM: The Modifications for each of the four Constructs Including the Chi-Square Test of Model Fit, Goodness of Fit Measures, Modification Indices are Outlined

<table>
<thead>
<tr>
<th>No. of items</th>
<th>$\chi^2$</th>
<th>df</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
<th>MI</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-concept</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>116.324</td>
<td>20</td>
<td>.155</td>
<td>.732</td>
<td>.624</td>
<td>--</td>
</tr>
<tr>
<td>7</td>
<td>61.368</td>
<td>14</td>
<td>.130</td>
<td>.826</td>
<td>.739</td>
<td>35.148</td>
</tr>
<tr>
<td>6</td>
<td>22.324</td>
<td>9</td>
<td>.086</td>
<td>.934</td>
<td>.890</td>
<td>24.331</td>
</tr>
<tr>
<td>5</td>
<td>14.875</td>
<td>5</td>
<td>.099</td>
<td>.936</td>
<td>.873</td>
<td>7.810</td>
</tr>
<tr>
<td>4</td>
<td>1.196</td>
<td>2</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>7.285</td>
</tr>
</tbody>
</table>

Maths Self-concept

| Item 8   | 16.744  | 20 | .000  | 1.000| 1.000|       |

English Self-concept

| Item 8   | 21.448  | 20 | .019  | .997 | .996 |       |

School Subjects Self-concept

| Item 8   | 69.803  | 20 | .112  | .918 | .885 | --    |
| Item 7   | 32.984  | 14 | .082  | .963 | .945 | 26.443|
| Item 6   | 10.142  | 9  | 0.025 | .997 | .966 | 19.438|

Note. $\chi^2$ = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation, MI = modification indices.

Table 6.25

Factor Loadings post One Factor Congenerics Modifications of the ASDQ II

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>General Self-concept</th>
<th>Maths Self-concept</th>
<th>English Self-concept</th>
<th>School Subjects Self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>.426</td>
<td>.672</td>
<td>.835</td>
<td>.818</td>
</tr>
<tr>
<td>Item 2</td>
<td>.570</td>
<td>.803</td>
<td>.776</td>
<td>.790</td>
</tr>
<tr>
<td>Item 3</td>
<td>.828</td>
<td>.822</td>
<td>.657</td>
<td>.903</td>
</tr>
<tr>
<td>Item 4</td>
<td>.692</td>
<td>.808</td>
<td>.811</td>
<td>.532</td>
</tr>
<tr>
<td>Item 5</td>
<td>--</td>
<td>.807</td>
<td>.748</td>
<td>.409</td>
</tr>
<tr>
<td>Item 6</td>
<td>--</td>
<td>.874</td>
<td>.820</td>
<td>.666</td>
</tr>
<tr>
<td>Item 7</td>
<td>--</td>
<td>.400</td>
<td>.463</td>
<td>--</td>
</tr>
<tr>
<td>Item 8</td>
<td>--</td>
<td>.783</td>
<td>.623</td>
<td>--</td>
</tr>
</tbody>
</table>
Following the removal of poorer items, a CFA was conducted on the 26 remaining items across the four subscale model. All the latent constructs comprised of at least four items. The resulting model was tested with the same constraints as the previous ASDQ II CFA, namely, that the remaining items loaded only onto their designated factors without any cross loadings. The results of the CFA are presented in Table 6.26, however, despite slight improvement in the overall fit of the model, the fit indices still did not reach their acceptable criterion value indicating that the model does not represent the data well and requires further refinement.

Table 6.26

Confirmatory Factor Analysis for the Revised Model of the ASDQII Including Item Factor Loadings, Latent Factor Correlations, and Model Fit

<table>
<thead>
<tr>
<th>General Self-concept</th>
<th>Maths Self-concept</th>
<th>English Self-concept</th>
<th>School Subjects Self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor Loadings</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.470</td>
<td>.669</td>
<td>.837</td>
</tr>
<tr>
<td>Item 2</td>
<td>.599</td>
<td>.801</td>
<td>.758</td>
</tr>
<tr>
<td>Item 3</td>
<td>.787</td>
<td>.824</td>
<td>.659</td>
</tr>
<tr>
<td>Item 4</td>
<td>.686</td>
<td>.814</td>
<td>.801</td>
</tr>
<tr>
<td>Item 5</td>
<td>--</td>
<td>.803</td>
<td>.761</td>
</tr>
<tr>
<td>Item 6</td>
<td>--</td>
<td>.871</td>
<td>.824</td>
</tr>
<tr>
<td>Item 7</td>
<td>--</td>
<td>.403</td>
<td>.474</td>
</tr>
<tr>
<td>Item 8</td>
<td>--</td>
<td>.784</td>
<td>.625</td>
</tr>
<tr>
<td><strong>Factor Correlations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Self-concept</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Maths Self-concept</td>
<td>.266</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>English Self-concept</td>
<td>.291</td>
<td>.215</td>
<td>--</td>
</tr>
<tr>
<td>School Subjects Self-concept</td>
<td>.450</td>
<td>.577</td>
<td>.675</td>
</tr>
<tr>
<td><strong>Model Fit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>577.939</td>
<td>293</td>
<td>.876</td>
</tr>
</tbody>
</table>

Note. $N$ = total number of participants in sample, $\chi^2$ = Chi-Square, $df$ = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation, MI = modification indices.
Like the OFC, the CFA presented a series of Modification Indices (MI) that specified the correlations between uniquenesses and items and identified parameters (when freed) that would improve the overall fit of the model. Hence, the first CFA conducted on the revised ASDQ II indicated a number of high MI.

The General Self-concept subscale comprised of four revised items. Following the first order CFA, one item was removed. The high modification index (MI = 16.565) and a comparably low factor loading of .470 were the basis for the removal of the item “Overall I have a lot to be proud of”. The Maths Self-concept subscale comprised of eight items and required two necessary modifications. The first item “It is important to me to do well in Mathematics classes”, comprised of high modification index (MI = 21.914) and a low factor loading of .403. The second item from this factor “I am satisfied with how well I do in Mathematics classes” also presented a high modification index (MI = 15.743) and was also suppressed from the model. The English Self-concept subscale also required further refining. High modification indices were reported for five items. These included “I get good marks in English classes”, MI = 12.948; “I am hopeless when it comes to English classes”, MI = 26.403; “I learn things quickly in English classes”, MI = 10.497; “Compared to others my age I am good at English classes”, MI = 13.605; and “It is important to me to do well in English classes”, MI = 13.519, this item also exhibited a comparatively low factor loading of .470. As the modification indices are indicative of relationships between uniqueness’s and relationships between items, such high modification indices within these constructs are suggestive of conceptual overlap of items within the scale (Jöreskog & Sörbom, 1989). Last of all, the revised School Subjects Self-concept subscale comprised of six items. Modification indices indicated that three items required suppression to enhance the goodness of fit of the ASDQII model.
These items included “I get good marks in school subjects”, MI = 9.095 which also presented a comparatively low factor loading of .415; “It is important to me to do well in school subjects”, MI = 30.231; and “I am hopeless when it comes to school subjects”, MI = 20.175. This second revision of the model resulted in 15 item ASDQII scale with all the subscales comprising of at least three items.

In sum, the CFA did not support the four a priori factors of General Self-concept, Maths Self-concept, English Self-concept and School Subjects Self-concept of the ASDQ II on this ethnocultural student sample. As the ASDQ II presented a poorly fitting model, indicating that the scale did not represent the data well on this particular sample and further refinement was required, Hypothesis 1.2.2 was not supported. Possible causes behind this poor fit will be explained in more detail in the Discussion chapter.

The Revised Factorial Structure of the ASDQII

Factor Means for the Total Sample, Gender, and Year Groups

Table 6.27, presented the mean scores for the total sample and across the subgroups of gender and grade (range 4.12 – 5.01). Consistent with the results demonstrated by the a priori model of the ASDQII, students across both the total sample and subgroups have on average rated General Self-concept consistently higher than domain specific academic self-concepts, such as English and Maths. Interestingly, on average females reported having a stronger self-concept in English than Maths. In contrast, males on average reported stronger self-concepts in Maths than in English. Years 9/10 students, when compared to their Years 7/8 counterparts on average rated lower in their subject specific domains.
Table 6.27

Mean Scores of the Revised ASDQII for General, English, Maths and School Subjects Self-concepts Factors for the Total Sample, Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>General Self-concept</td>
<td>4.97 (.95)</td>
<td>5.00 (1.02)</td>
<td>4.97 (.86)</td>
<td>4.92 (1.05)</td>
<td>5.01 (.84)</td>
</tr>
<tr>
<td>English Self-concept</td>
<td>4.52 (.93)</td>
<td>4.48 (.97)</td>
<td>4.58 (.87)</td>
<td>4.74 (.97)</td>
<td>4.31 (.83)</td>
</tr>
<tr>
<td>Maths Self-concept</td>
<td>4.41 (1.11)</td>
<td>4.65 (1.02)</td>
<td>4.12 (1.15)</td>
<td>4.45 (1.23)</td>
<td>4.37 (.97)</td>
</tr>
<tr>
<td>School Subjects Self-concept</td>
<td>4.71 (.90)</td>
<td>4.63 (.93)</td>
<td>4.81 (.85)</td>
<td>4.84 (.92)</td>
<td>4.58 (.87)</td>
</tr>
</tbody>
</table>

Note: Standard deviation values shown in parenthesis, N = total number of participants in sample.

Internal Consistency Results of the Revised ASDQII

The internal consistency of the revised, four factor model (General Self-concept, Maths Self-concept, English Self-concept and School Subjects Self-concept) of the ASDQII was estimated using both the Cronbach’s Alpha and the Omega Coefficient. Estimates demonstrated acceptable reliability estimates across the total sample as well as across all subgroups (see Table 6.28).
Table 6.28

Reliability Estimates Cronbach’s Alpha (α) for the Revised ASDQ II Scales: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-concept</td>
<td>.733</td>
<td>.787</td>
<td>.644</td>
<td>.757</td>
<td>.703</td>
<td>3</td>
</tr>
<tr>
<td>Maths Self-concept</td>
<td>.910</td>
<td>.893</td>
<td>.917</td>
<td>.921</td>
<td>.895</td>
<td>6</td>
</tr>
<tr>
<td>English Self-concept</td>
<td>.780</td>
<td>.781</td>
<td>.779</td>
<td>.799</td>
<td>.727</td>
<td>3</td>
</tr>
<tr>
<td>School Subjects Self-concept</td>
<td>.809</td>
<td>.824</td>
<td>.790</td>
<td>.792</td>
<td>.821</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

As seen in Table 6.29, the Coefficient Omega resulted in higher estimates than the Cronbach’s Alpha. The Omega estimates are indicative of acceptable reliability due to the exploratory nature of the current study (see Nunnelly, 1978), as the measure is administered for the first time with a sample of students attending ethnic day schools.

Table 6.29

Reliability Estimates Coefficient Omega for the Revised 15 Items ASDQII Subscales: For the Total Sample and Across Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>General SC</td>
<td>.735</td>
<td>.806</td>
<td>.788</td>
<td>.859</td>
<td>.778</td>
<td>.640 - .806</td>
</tr>
<tr>
<td>Maths SC</td>
<td>.911</td>
<td>.932</td>
<td>.894</td>
<td>.931</td>
<td>.944</td>
<td>.873 - .932</td>
</tr>
<tr>
<td>English SC</td>
<td>.786</td>
<td>.837</td>
<td>.798</td>
<td>.919</td>
<td>.866</td>
<td>.714 - .837</td>
</tr>
<tr>
<td>School Subjects SC</td>
<td>.812</td>
<td>.852</td>
<td>.829</td>
<td>.849</td>
<td>.848</td>
<td>.745 - .852</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample, SC = Self-concept.
Overall, the revised ASDQII measure demonstrated internal consistency with acceptable Cronbach’s Alpha and Coefficient Omega estimates. As the Alpha and Omega estimates were acceptable across the total sample and across gender and grade subgroups, this hypothesis was supported.

The Factorial Structure of the Revised ASDQII

After the removal of the weaker items, a CFA was performed on the remaining 15 item revised ASDQII scale. The results from the first order CFA examining the revised factor structure of the ASDQII are presented in Table 6.30. The revised model comprised of the original four factors with at least three items loading onto each latent factor. This hypothesised model demonstrated an excellent fit of the data with a CFI of .990 and a TLI of .988 and an RMSEA of .025. Moreover, the parameter estimates of the revised ASDQII demonstrated that each of the items was well defined with acceptable factor loadings ranging from .612 to .912. In addition, factor correlations among the four factors were significant and ranged between .100 and .717. All in all, the revised model of the ASDQII appears to be a better representation of the data when compared to the original model as indicated by the fit indices referenced earlier.
Table 6.30

Confirmatory Factor Analysis for the A Priori Model of the Revised ASDQII Including Item Factor Loadings, Latent Factor Correlations, and Model Fit

<table>
<thead>
<tr>
<th>Item</th>
<th>General Self-concept</th>
<th>Maths Self-concept</th>
<th>English Self-concept</th>
<th>School Subjects Self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factor Loadings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.616</td>
<td>.665</td>
<td>.689</td>
<td>.783</td>
</tr>
<tr>
<td>Item 2</td>
<td>.782</td>
<td>.807</td>
<td>.912</td>
<td>.818</td>
</tr>
<tr>
<td>Item 3</td>
<td>.703</td>
<td>.833</td>
<td>.612</td>
<td>.696</td>
</tr>
<tr>
<td>Item 4</td>
<td>--</td>
<td>.825</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Item 5</td>
<td>--</td>
<td>.803</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Item 6</td>
<td>--</td>
<td>.857</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factor Correlations</th>
<th>General Self-concept</th>
<th>Maths Self-concept</th>
<th>English Self-concept</th>
<th>School Subjects Self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self-concept</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Maths Self-concept</td>
<td>.229</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>English Self-concept</td>
<td>.100</td>
<td>.177</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>School Subjects Self-concept</td>
<td>.346</td>
<td>.570</td>
<td>.717</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Fit</th>
<th>$N$</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>200</td>
<td>94.396</td>
<td>84</td>
<td>.990</td>
<td>.988</td>
<td>.025</td>
</tr>
</tbody>
</table>

Note. $N$ = total number of participants in sample, $\chi^2$ = Chi-Square, $df$ = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation.

In sum, upon examination of the results, the revised ASDQII model demonstrated excellent goodness of fit indices, indicating that the revised multidimensional model fits the data much better than the originally proposed scales. Factor loadings of the revised subscales were deemed sufficient providing evidence of well-defined factors and the correlations among the latent factors indicated four distinct factors, supporting Hypothesis 1.2.4.

Invariance Testing Across Gender and Grade for the Revised ASDQII

Due to the revisions made to the original ASDQII model it was necessary to validate the revised scales by testing for invariance across multiple subgroups presented within the data. Establishing invariance allows researchers to make valid
comparisons across subgroups of interest. The following section presents the findings of the invariance testing for the revised ASDQII across grade and gender subgroups.

Table 6.31 displays the results of the invariance models for the gender subgroups. Model One (M1) which tested for configural invariance otherwise known as the baseline model, met the criteria of an acceptable fitting model which indicated that the factor structure across both genders were similar. Model Two (M2) tested for metric invariance, which constrained the factor loadings, displayed no changes in the CFI, however, it showed a marginal improvement in the RMSEA. As the difference between the CFI values between M1 and M2 did not exceed the .01 criteria, the M2 was deemed to be invariant across the gender subgroups. In Model Three (M3), the intercepts of the regressions of the corresponding groups were constrained. This time the CFI index did not change at all, however the RMSEA displayed a slight improvement. As the present study is utilising changes less than .01 in the CFI as an indication of invariance, the ASDQII is considered to meet the requirements of minimal invariance across both male and female subgroups.
Table 6.31

_Invariance Tests Across Gender for the Revised ASDQII Measure_

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1.</td>
<td>Configural</td>
<td>279.431</td>
<td>168</td>
<td>.928</td>
<td>.910</td>
<td>.080</td>
<td>.064 - .098</td>
</tr>
<tr>
<td>M2.</td>
<td>Metric</td>
<td>295.764</td>
<td>183</td>
<td>.927</td>
<td>.916</td>
<td>.078</td>
<td>.062 - .095</td>
</tr>
<tr>
<td>M3.</td>
<td>Scalar</td>
<td>151.204</td>
<td>116</td>
<td>.927</td>
<td>.915</td>
<td>.075</td>
<td>.061 - .094</td>
</tr>
</tbody>
</table>

*Note.* $\chi^2$=chi-square, df = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.

Table 6.32 presents the findings of the invariance tests across grade. M1 demonstrated that the factor structure of the ASDQII was consistent across both Years 7/8 and Years 9/10 subgroups. M2 constrained the factor loadings. The model demonstrated a drop in the CFI index, and a slight increase in the RMSEA value when compared to M1. As the difference in the CFI between M1 and M2 did not exceed .01, the ASDQII achieved metric invariance. M3 tested for scalar invariance, which constrained the intercepts of regressions across both year groups. Once again M3 was compared to the configural model (M1) and displayed no change in the CFI and RMSEA values. Consequently, the ASDQII also achieved minimal invariance across both Years 7/8 and Years 9/10 subgroups.
Table 6.32

*Invariance Tests Across Grade for the Revised ASDQII Measure*

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1.</td>
<td>Configural</td>
<td>251.371</td>
<td>168</td>
<td>.944</td>
<td>.930</td>
<td>.070</td>
<td>.052 -.088</td>
</tr>
<tr>
<td>M2.</td>
<td>Metric</td>
<td>281.648</td>
<td>183</td>
<td>.934</td>
<td>.924</td>
<td>.073</td>
<td>.056 -.090</td>
</tr>
<tr>
<td>M3.</td>
<td>Scalar</td>
<td>151.204</td>
<td>116</td>
<td>.934</td>
<td>.923</td>
<td>.073</td>
<td>.053 -.089</td>
</tr>
</tbody>
</table>

*Note.* $\chi^2$=chi-square, df = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.

Thus, in support of the predictions, the revised 15 item model of the ASDQII achieved minimal invariance across both gender and grade subgroups. It is on these grounds that Hypothesis 1.2.5 was accepted.

**School Motivation Questionnaire (SMQ)**

The Competition Orientation (CO) and the Intrinsic Orientation (IO) scales from the present investigation were adapted from the larger School Motivation Questionnaire (SMQ) (Marsh et al., 2003). The two latent factors each comprise six items and are measured on a six point scale. While the SMQ was not used in its entirety, the two factors of CO and IO were collectively referred to as the SMQ for the purposes of the current study. The following section will initially report the descriptive statistics of the SMQ. This will be followed by a CFA, OFC and an analysis of the internal consistency of the scales. Finally, invariance tests will be conducted on the instrument, reporting findings for not only the total sample but also the subgroups of interest (i.e., gender and grade).
Factor Means for the Total Sample, Gender, and Year Groups

Table 6.33 demonstrates that CO on average rates higher than IO across the total sample and all the subgroups with the exception of the female group. Females on average rated higher in IO than CO. Furthermore, Years 7/8 students rated higher in both motivation orientations when compared to their Years 9/10 counterparts.

Table 6.33

Mean Scores of the SMQ for Intrinsic (IO) and Competition Orientation (CO) Factors for the Total Sample, Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Intrinsic Orientation</td>
<td>4.24 (1.15)</td>
<td>4.11 (1.18)</td>
<td>4.40 (1.09)</td>
<td>4.46 (1.20)</td>
<td>4.03 (1.06)</td>
</tr>
<tr>
<td>Competition Orientation</td>
<td>4.43 (1.08)</td>
<td>4.52 (1.10)</td>
<td>4.32 (1.05)</td>
<td>4.53 (1.06)</td>
<td>4.32 (1.10)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviation values shown in parenthesis, N = total number of participants in sample.

Internal Consistency Results of the SMQ

The internal consistency of the a priori two factor model of the SMQ was estimated using Cronbach’s Alpha. As seen in Table 6.34, the reliability estimates ranged from .885 to .934. Estimates demonstrated excellent reliabilities for both the IO and CO factors across the total sample and subgroups.
Table 6.34

Reliability Estimates Cronbach’s Alpha (α) for the A Priori SMQ Scales: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Orientation</td>
<td>.921</td>
<td>.911</td>
<td>.934</td>
<td>.926</td>
<td>.908</td>
<td>6</td>
</tr>
<tr>
<td>Competition Orientation</td>
<td>.901</td>
<td>.903</td>
<td>.900</td>
<td>.885</td>
<td>.914</td>
<td>6</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, n = total number of participants in subsample.

In sum, the SMQ as measured by the two factors of IO and CO, supported the Hypothesis 1.2.6 with excellent reliability estimates, across the total sample as well as the subgroups of interest.

The Factorial Structure of the SMQ

A CFA was conducted to assess the factor structure of the SMQ. Table 6.35 presents the results of the CFA which demonstrated an excellent fitting model with a CFI of .980, TLI of .975 and an RMSEA of .045. The factors loadings for each of the twelve items ranged from .654 to .877 demonstrating that the factors are well defined. The correlations between the two latent factors was .355 providing support that each of the factors are somewhat related but distinct.
Table 6.35

Confirmatory Factor Analysis for the A Priori Model of the SMQ Including Item Factor Loadings, Latent Factor Correlations, and Model Fit

<table>
<thead>
<tr>
<th></th>
<th>Intrinsic Orientation</th>
<th>Competition Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor Loadings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.805</td>
<td>.698</td>
</tr>
<tr>
<td>Item 2</td>
<td>.877</td>
<td>.841</td>
</tr>
<tr>
<td>Item 3</td>
<td>.872</td>
<td>.858</td>
</tr>
<tr>
<td>Item 4</td>
<td>.744</td>
<td>.847</td>
</tr>
<tr>
<td>Item 5</td>
<td>.827</td>
<td>.759</td>
</tr>
<tr>
<td>Item 6</td>
<td>.759</td>
<td>.654</td>
</tr>
<tr>
<td><strong>Factor Correlations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic Orientation</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Competition Orientation</td>
<td>.335</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Model Fit</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>74.602</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>CFI</td>
<td>.980</td>
<td></td>
</tr>
<tr>
<td>TLI</td>
<td>.975</td>
<td></td>
</tr>
<tr>
<td>RMSEA</td>
<td>.045</td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, $\chi^2$ = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation.*

In conclusion, the CFA results verified strong support for the validity of the SMQ model. Fit indices and factor loadings were acceptable, with factor correlations indicating two related but distinguishable factors, all supporting the a priori factor structure of the SMQ and it is on these grounds that Hypothesis 1.2.7 was accepted.

The Revised Factorial Structure of the SMQ

Despite the excellent factor structure demonstrated by the SMQ in the CFA presented in Table 6.35, a single CFA was then conducted to ascertain whether this structure would be retained when the measure was combined with all the other measures in the survey. Upon examination of the CFA with the full battery of instruments, a number of modifications were implemented to the SMQ. While this analysis is beyond the scope of this section, these changes will be presented in brief
in the following section with the purpose of presenting the finalised/revised model of the SMQ. A more detailed explanation of the findings from CFA with the battery of instruments will be presented in Research Question 1.3.1.

Factor Means for the Total Sample, Gender, and Year Groups

Consistent with the a priori model of the SMQ, Table 6.36 demonstrates that CO on average rate higher than IO across the total sample and all the subgroups with the exception of the female and Years 7/8 groups. Females on average rated higher in IO than CO. However, different to the findings in the a priori model, Years 7/8 students in the revised model of the SMQ on average rated just as high in Intrinsic Orientation as they did in Competition Orientation.

Table 6.36

*Mean Scores of the SMQ for Intrinsic (IO) and Competition Orientation (CO) Factors for the Total Sample, Gender and Grade Subgroups*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Intrinsic Orientation</td>
<td>4.26 (1.17)</td>
<td>4.15 (1.20)</td>
<td>4.41 (1.14)</td>
<td>4.49 (1.21)</td>
<td>4.04 (1.10)</td>
</tr>
<tr>
<td>Competition Orientation</td>
<td>4.39 (1.13)</td>
<td>4.52 (1.11)</td>
<td>4.23 (1.14)</td>
<td>4.49 (1.12)</td>
<td>4.29 (1.13)</td>
</tr>
</tbody>
</table>

*Note: Standard deviation values shown in parenthesis, N = total number of participants in sample.*

Internal Consistency Results of the Revised SMQ

Tables 6.37 and 6.38 present the reliability estimates of the revised SMQ measure. Factors reached excellent levels of internal consistency with the total sample and across the subgroups. Alpha coefficients ranged from .869 to .912, while Omega coefficients were slightly higher, ranging from .913 to .879. The female
subgroup reported the highest reliability estimates, while male students reported the lowest reliability estimated across the subgroups.

Table 6.37

Reliability Estimates Cronbach’s Alpha (α) for the Revised SMQ Scales: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Orientation</td>
<td>.892</td>
<td>.877</td>
<td>.912</td>
<td>.895</td>
<td>.880</td>
<td>4</td>
</tr>
<tr>
<td>Competition Orientation</td>
<td>.887</td>
<td>.869</td>
<td>.905</td>
<td>.878</td>
<td>.894</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, n = total number of participants in subsample.*

Table 6.38

Reliability Estimates Coefficient Omega for the Revised Eight Item SMQ Subscales: For the Total Sample and Across Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition Orientation</td>
<td>.895</td>
<td>.865 - .918</td>
<td>.826 - .915</td>
<td>.874 - .935</td>
<td>.836 - .924</td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, n = total number of participants in subsample.*

All in all, hypothesis 1.2.8 was supported with excellent internal consistency estimates across the total sample and subgroups of interest. Results demonstrate that the SMQ is a reliable measure of Intrinsic and Competition Motivations with adolescent students.
The Factorial Structure of the Revised SMQ

Despite the CFA showing excellent goodness of fit for the SMQ alone, the CFA for the full battery of instruments presented less than optimal fit. The RMSEA was .044, exceeding the acceptable levels, the CFI only just reached the acceptable level with .900, however the TLI fell below the recommended criteria (of .900), with an index of .889. Close analysis of the output indicated a number of problematic items from the SMQ once they were included in the full CFA with all the instruments. Of the twelve SMQ items assigned to the two factors, four were found to have high modification indices ranging from 10.343 to 14.001 with item redundancy among these items another apparent issue. The explanations relating to the item deletion process are presented in greater detail in Research Question 1.3.1. The deletion of these four items resulted in a four item Intrinsic Orientation factor and a four item Competition Orientation factor. Following the aforementioned modifications, another CFA was conducted to test the overall fit of the revised SMQ measure. Table 6.39 below presents the findings of the CFA for the revised SMQ. Results generated an improved excellent fitting model. The parameter estimates indicate that all eight items are well defined with acceptable values ranging from .698 to .872. The correlation among the two latent factors are positive and significant ($p < 0.01$) and sitting at .297.
Table 6.39

**Confirmatory Factor Analysis for the Revised Model of the SMQ Including Item Factor Loadings, Latent Factor Correlations, and Model Fit**

<table>
<thead>
<tr>
<th></th>
<th>Intrinsic Orientation</th>
<th>Competition Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor Loadings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.804</td>
<td>.698</td>
</tr>
<tr>
<td>Item 2</td>
<td>.872</td>
<td>.860</td>
</tr>
<tr>
<td>Item 3</td>
<td>.864</td>
<td>.857</td>
</tr>
<tr>
<td>Item 4</td>
<td>.748</td>
<td>.842</td>
</tr>
<tr>
<td><strong>Factor Correlations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic Orientation</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Competition Orientation</td>
<td>.297</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Model Fit</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N$</td>
<td>$\chi^2$</td>
<td>$df$</td>
<td>CFI</td>
</tr>
<tr>
<td>200</td>
<td>16.886</td>
<td>19</td>
<td>1.000</td>
<td>1.004</td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, $\chi^2$ = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation.*

Overall, despite presenting excellent goodness of fit in the a priori model, the SMQ required some modifications when the factor structure was tested in a CFA combining all the survey measures. Changes to the subscales were informed by high modification indices and apparent conceptual item redundancies. Modifications to the measures required the deletion of four items, two from each subscale.

In summary, the results evaluating the revised eight item SMQ model based on the findings of the CFA indicated strong evidence for the two factor structure of IO and COs. Fit indices demonstrated an excellent fit of the model, factor loadings for all eight items were acceptable and factor correlations indicated two related yet distinct factors. It is on these grounds that Hypothesis 1.2.9 was accepted.
Invariance Testing Across Gender and Grade for the Revised SMQ

Table 6.40 presents the results of the invariance models for the gender subgroup. M1 tested for configural invariance and met the criteria of an acceptable fitting model, which indicated that the factor structure across both genders were similar. M2 tested for metric invariance, this constrained the factor loadings and displayed a slight improvement in the CFI and the RMSEA. As the margin between M1 and M2 did not exceed the .01 criteria, M2 was considered to be invariant across gender groups. M3, constrained the intercepts of the regressions of the corresponding groups. Here the CFI did lower somewhat, however as the margin did not exceed the .01 criteria, the SMQ was considered to meet the requirements of minimal invariance for both males and female subgroups.

Table 6.40

Invariance Tests Across Gender for the Revised SMQ Measure

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2.</td>
<td>Metric</td>
<td>68.020</td>
<td>46</td>
<td>.977</td>
<td>.972</td>
<td>.069</td>
<td>.029 – .102</td>
</tr>
<tr>
<td>M3.</td>
<td>Scalar</td>
<td>84.911</td>
<td>53</td>
<td>.967</td>
<td>.965</td>
<td>.078</td>
<td>.045 – .107</td>
</tr>
</tbody>
</table>

Note. $\chi^2$=chi-square, df = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.

Table 6.41 presents the findings for the invariance tests on grade. M1 demonstrated that the factor structure is consistent across both grade subgroups. M2 constrained the factor loadings and demonstrated a slight increase in the CFI, however as the increase in the CFI did not exceed the .01 criteria when compared to the baseline
model, the SMQ achieved metric invariance. M3 tested for scalar invariance by constraining the intercepts of regression across the year groups. Once again, when the CFI value of M3 was compared to that of the baseline models, the change in the CFI did not exceed the .01 criteria. This demonstrated that the SMQ achieved scalar invariance across year level groups, subsequently suggesting that the model achieved minimal invariance.

Table 6.41

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1.</td>
<td>Configural</td>
<td>51.245</td>
<td>38</td>
<td>.986</td>
<td>.979</td>
<td>.059</td>
<td>.000 - .097</td>
</tr>
<tr>
<td>M2.</td>
<td>Metric</td>
<td>55.725</td>
<td>46</td>
<td>.990</td>
<td>.987</td>
<td>.046</td>
<td>.000 - .084</td>
</tr>
<tr>
<td>M3.</td>
<td>Scalar</td>
<td>65.520</td>
<td>53</td>
<td>.987</td>
<td>.986</td>
<td>.049</td>
<td>.000 - .084</td>
</tr>
</tbody>
</table>

Note. $\chi^2$=chi-square, $df$ = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.

Thus, in support of the prediction, the revised eight item SMQ achieved minimal invariance across both gender and grade subgroups. It was on these grounds that Hypothesis 1.2.10 was accepted.

**School Belongingness Scale (SBS)**

The Attachment factor in the present investigation was adapted from the School Belongingness (SBS) scale. The SBS scale is made up three factors the Attachment, Acceptance of Rules, and School Support (Parada & Richards, 2002). The SBS scale was modified for a two reasons. Firstly, Parada (2006) reports a lack
of discriminant validity within the factor structure of the instrument. Secondly, student attachment to school was of particular interest, due to the lack of culturally diversity within participating school cohorts. The SBS scale was subjected to psychometric testing on two grounds. The SBS scale is relatively new and would benefit from psychometric testing to further validate its use. Secondly, the scale had not been tested across students attending ethnic day schools. The following section will report the descriptive statistics and the internal consistency of the scale. This will be followed by a CFA and invariance testing for subgroups of interest.

**Factor Means for the Total Sample, Gender, and Year Groups**

Table 6.42 demonstrates the mean factor scores for Attachment. Results indicate that the means were fairly consistent across the total sample and subgroups. Females rated with slightly higher means than their male counterparts. While the Years 7/8 group presented slightly higher mean scores in attachment than their Years 9/10 peers.

Table 6.42

*Mean Scores of the SBS Attachment Factor for the Total Sample, Gender and Grade Subgroups*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Attachment</td>
<td>4.77(1.06)</td>
<td>4.60 (1.15)</td>
<td>4.99 (.890)</td>
<td>4.85 (1.06)</td>
<td>4.70 (1.06)</td>
</tr>
</tbody>
</table>

*Note: Standard deviation values shown in parenthesis, N = total number of participants in sample.*
Internal Consistency Results of SBS

The internal consistency of the four item Attachment factor was estimated using both Cronbach’s Alpha (see Table 6.43) and Omega Coefficients (see Table 6.44). Estimates demonstrated acceptable Alpha estimates ranging from .817 to .898 and Omega Coefficients ranging from .900 to .817 across the total sample and subgroups of interest keeping to the Hills (2008) criteria.

Table 6.43

Reliability Estimates Cronbach’s Alpha (α) for the SBS Attachment Factor: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Cronbach’s Alpha α</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment</td>
<td>.857</td>
<td>.863</td>
<td>.833</td>
<td>.817</td>
<td>.898</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: N = total number of participants in sample, n = total number of participants in subsample.

Table 6.44

Reliability Estimates Coefficient Omega for the SBS Attachment Factor: For the Total Sample, Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Coefficient Omega</th>
<th>Total Sample (N=200)</th>
<th>95% CI</th>
<th>Male (N=110)</th>
<th>95% CI</th>
<th>Female (N=90)</th>
<th>95% CI</th>
<th>Years 7/8</th>
<th>95% CI</th>
<th>Years 9/10</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment</td>
<td>.858</td>
<td>.804 - .901</td>
<td>.864</td>
<td>.795 - .909</td>
<td>.833</td>
<td>.713 - .904</td>
<td>.817</td>
<td>.724 - .887</td>
<td>.900</td>
<td>.830 - .940</td>
</tr>
</tbody>
</table>

Note: N = total number of participants in sample, n = total number of participants in subsample.

In sum, hypothesis 1.2.11 was supported as the internal consistency of the SBS scale demonstrated acceptable reliability estimates for the total sample and the subgroups of interest.
The Factorial Structure of SBS

Table 6.45 presents the findings of the CFA for all four items of the factor Attachment. The CFA constrained all four items to load onto the latent factor Attachment to evaluate the fit of the model. Results indicate excellent fit to the data which was demonstrated by a small insignificant Chi Square value of 1.363 ($p > .05$), CFI of 1.000, TLI of 1.013 and an RMSEA of .000. The factor loadings for each of the Attachment items also indicate that the items are well defined.

Table 6.45

*Confirmatory Factor Analysis for the SBS Attachment Factor Model of the Including Item Factor Loadings, and Model Fit*

<table>
<thead>
<tr>
<th>Attachment</th>
<th>Factor Loadings</th>
<th>Model Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>.888</td>
<td></td>
</tr>
<tr>
<td>Item 2</td>
<td>.425</td>
<td></td>
</tr>
<tr>
<td>Item 3</td>
<td>.716</td>
<td></td>
</tr>
<tr>
<td>Item 4</td>
<td>.796</td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>$\chi^2$</td>
<td>$df$</td>
</tr>
<tr>
<td>200</td>
<td>1.363</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note. $N =$ total number of participants in sample, $\chi^2 =$ Chi-Square, $df =$ degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation.*

Overall, the CFA provided strong support for a unidimensional measure of School Attachment in high school students. The modified unidimensional model of school belongingness as measured by the Attachment factor demonstrated excellent goodness of fit indices with sufficient factor loadings, thus supporting Hypothesis 1.2.12.
**Invariance Testing Across Gender and Grade for SBS**

Table 6.46 presents the findings of the invariance test conducted across the gender subgroups. M1 which tested for the configural/baseline model, met the criteria of an acceptable fitting model, which specified that the factor structure across both genders were consistent. Further analysis of M2 indicates that metric invariance was also achieved as the discrepancy in the CFI between M2 and M1 did not exceed .01, thereby achieving base level invariance. However, upon further analysis of the M3, the change in the CFI when compared to M1 is greater than .01, indicating that minimal desirable level of invariance was not achieved. Despite this, upon close analysis of the 90% confidence intervals there seems to be a considerable overlap between the values in M1 and M3, in addition the CFI and TLI values are still evident of an excellent fitting model providing evidence of invariance beyond the base level (Bodkin-Andrews et al., 2010; Byrne, 1998). Consequently the invariance across gender for the SBS scale is considered to be sufficient for the purposes of the current investigation.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1.</td>
<td>Configural</td>
<td>3.263</td>
<td>4</td>
<td>1.000</td>
<td>1.006</td>
<td>.000</td>
<td>.000 – .138</td>
</tr>
<tr>
<td>M2.</td>
<td>Metric</td>
<td>10.885</td>
<td>8</td>
<td>.992</td>
<td>.988</td>
<td>.060</td>
<td>.000 - .140</td>
</tr>
</tbody>
</table>

*Note. $\chi^2$=chi-square, $df$ = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.*
Table 6.47 presents the findings of the invariance tests across grade. M1 demonstrated that the factor structure of the SBS was consistent across both year levels. M2 which constrained the factor loadings demonstrated a slight drop in the CFI value, however when compared to the CFI of the M1 the difference in the value did not exceed .01, thus achieving metric invariance. Scalar invariance as represented by M3, was also achieved as the CFI for this model did not deviate from the baseline’s CFI more than the .01 criteria. As a result, the SBS scale achieved minimal invariance across both year groups.

Table 6.47

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1.</td>
<td>Configural</td>
<td>17.318</td>
<td>4</td>
<td>.967</td>
<td>.901</td>
<td>.182</td>
<td>.100 - .275</td>
</tr>
<tr>
<td>M2.</td>
<td>Metric</td>
<td>22.724</td>
<td>8</td>
<td>.963</td>
<td>.945</td>
<td>.136</td>
<td>.072 - .203</td>
</tr>
</tbody>
</table>

Note. $\chi^2$=chi-square, $df$ = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.

Overall, in support of the hypothesis, the four item SBS scale achieved above base level invariance across gender groups and minimal invariance across grade subgroups. It was on these grounds that Hypothesis 1.2.13 was accepted.

Multiculturation

Multiculturation has been designed to measure a minority group member’s perceived acceptance and value of their culture by members of the mainstream
culture (Bodkin-Andrews et al., 2006). The subsequent section will test the psychometric properties of the six item measure utilising CFA, OFC techniques followed by invariance testing, for the total sample and subgroups of interest.

Factor Means for the Total Sample, Gender, and Year Groups

Table 6.48 demonstrates similar mean scores across the total sample and subgroups of interest. There were marginal differences in the means within the gender subgroups, with females on average scoring slightly higher in Multiculturation than their male counterparts.

Table 6.48

Mean Scores of the Multiculturation Scale for the Total Sample, Gender and Grade Subgroups

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Years 7/8</th>
<th>Years 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>110</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Multiculturation</td>
<td>4.95 (.81)</td>
<td>4.84 (.89)</td>
<td>5.08 (.68)</td>
<td>4.93 (.88)</td>
<td>4.96 (.74)</td>
</tr>
</tbody>
</table>

*Note:* Standard deviation values shown in parenthesis, N = total number of participants in sample.

Internal Consistency Results of Multiculturation

Table 6.49 demonstrates the internal consistency of the a priori model unidimensional model of Multiculturation which was estimated using Cronbach’s Alpha. Estimates demonstrate acceptable reliability estimates across the total sample and the subgroups of interest.

Table 6.49

Reliability Estimates Cronbach’s Alpha (α) for the Multiculturation scale: For the Total Sample, Gender and Grade Level

| Cronbach's Alpha | 226 |
In summary, the a priori model of Multiculturation demonstrated excellent reliability estimates for the total sample as well as gender and grade subgroups.

The Factorial Structure of Multiculturation

A CFA was conducted whereby each of the six items was assigned to load onto its a priori theoretical construct of Multiculturation (see Table 6.50). The initial CFA resulted in a poor fitting model based on the TLI value of .885 and an RMSEA value of .117. This less than optimal fit of the model indicated that the instrument required further refinement. Upon further examination of the CFA (which can also be referred to as an OFC due to Multiculturation’s unidimensional nature) high modification indices were identified for two items, these included ‘I am hopeless when it comes to mathematics classes’ and ‘I learn things quickly in mathematics classes’. These items also demonstrated the lowest parameter estimates when compared to the other items within the scale. While there were two poorly fitting items from the Multiculturation scale, only the item with the highest modification index (MI = 18.081) and lowest parameter estimate (item six) was removed. Another CFA was conducted to test the overall fit of the revised five item model (see Table 6.54).

Table 6.50

<table>
<thead>
<tr>
<th></th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturation</td>
<td>.847</td>
<td>.839</td>
<td>.861</td>
<td>.874</td>
<td>.810</td>
<td>6</td>
</tr>
</tbody>
</table>

*Note: Standard deviation values shown in parenthesis, N = total number of participants in sample.*
In sum, the CFA did not support the six item a priori model of Multiculturation. As the Multiculturation scale presented a poorly fitting model indicating that the scale did not represent the data and further refinement was required, Hypothesis 1.2.15 was not supported. A revised model of the scale is proposed and its structure will be tested in Hypothesis 1.2.17.

The Revised Factorial Structure of the Multiculturation Scale

Factor Means for the Total Sample, Gender, and Year Groups

According to the findings specified in Table 6.51, on average females rated the highest in Multiculturation when compared to their male counterparts. Whilst the grade subgroups produced identical means to the total sample.

Table 6.51
Mean Scores of the Revised Multiculturation Scale for the Total Sample, Gender and Grade Subgroups
Internal Consistency Results of the Revised Multiculturation Scale

Table 6.52 and Table 6.53 present the reliability estimates of the revised Multiculturation scale. Alpha coefficients ranged .796 to .858, whilst also attaining slightly higher Coefficient Omega ranging from .861 to .798. All reliability estimates were deemed to be acceptable for the total sample and the subgroups, with Year 9/10 students having the lowest reliability estimates of Multiculturation at .796 for the Alpha and a slightly higher value of .798 for the Omega.
Table 6.52

Reliability Estimates Cronbach’s Alpha (α) for the Revised Multiculturation Scale: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Total Sample (N=200)</th>
<th>Males (n=110)</th>
<th>Females (n=90)</th>
<th>Years 7/8 (n=100)</th>
<th>Years 9/10 (n=100)</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturation</td>
<td>.829</td>
<td>.814</td>
<td>.858</td>
<td>.854</td>
<td>.796</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note. N = total number of participants in sample, n = total number of participants in subsample.*

Table 6.53

Reliability Estimates Coefficient Omega for the Revised Multiculturation Scale: For the Total Sample, Gender and Grade Level

<table>
<thead>
<tr>
<th>Coefficient Omega</th>
<th>Total Sample (N=200) 95% CI</th>
<th>Males (n=110) 95% CI</th>
<th>Females (n=90) 95% CI</th>
<th>Years 7/8 (n=100) 95% CI</th>
<th>Years 9/10 (n=100) 95% CI</th>
</tr>
</thead>
</table>

*Note: N = total number of participants in sample, n = total number of participants in subsample.*

All in all, the internal consistency estimates supported Hypothesis 1.2.16 as the Cronbach’s Alpha and Coefficient Omega estimates for the total sample as well as the grade and gender subgroups were acceptable for the revised Multiculturation scale.

The Factorial Structure of the Revised Multiculturation Scale

Upon removing the inferior item, another CFA was conducted on the revised 5 item Multiculturation scale to check if the revised scale would yield an improved goodness of fit. As seen in Table 6.54 the CFA generated improved fit indices, with
an RMSEA of .048, a CFA of .992 and a TLI of .985, indicating an excellent fitting model. The parameter estimates indicated that all five items are well defined with acceptable values ranging from .507 to .819.

Table 6.54

Confirmatory Factor Analysis for the A Priori Model of the Multiculturation Scale Including Item Factor Loadings, Latent Factor Correlations, and Model Fit

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>.819</td>
</tr>
<tr>
<td>Item 2</td>
<td>.750</td>
</tr>
<tr>
<td>Item 3</td>
<td>.798</td>
</tr>
<tr>
<td>Item 4</td>
<td>.776</td>
</tr>
<tr>
<td>Item 5</td>
<td>.507</td>
</tr>
</tbody>
</table>

Table 6.54 Model Fit

<table>
<thead>
<tr>
<th>N</th>
<th>χ²</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>7.344</td>
<td>5</td>
<td>.992</td>
<td>.985</td>
<td>.048</td>
</tr>
</tbody>
</table>

Note. N = total number of participants in sample, χ² = Chi-Square, df = degrees of freedom, CFI = comparative fit index, TLI = Tucker Lewis index, RMSEA = root mean square error of approximation.

Thus, the final CFA has supported the revised five item unidimensional structure of Multiculturation. The less than ideal goodness of fit of the a priori model of Multiculturation required further refining as indicated by the high modification indices. Upon the revisions, the Multiculturation measure demonstrated excellent goodness of fit and factor loadings, thus supporting Hypothesis 1.2.17.
Invariance Testing Across Gender and Grade for the Revised Multiculturation Scale

The findings of the invariance testing for each of the two groupings of variables (gender and grade) are presented in Table 6.55 and 6.56. For the invariance testing conducted across gender subgroups M1 which tested for configural invariance, showed that the factorial structure of the Multiculturation measures was consistent across both males and females. This was also the case for M1 across the grade subgroups. M2 tested for metric invariance, which specifically tested for consistencies in the factor coefficients across the subgroups of interest. Across gender M2 demonstrated no change in the CFI index when compared to M1. M2 across grade subgroups saw a slight increase in the CFI index when compared to M1. However, as this change did not exceed the .01 criteria, both gender and grade achieved metric invariance, meaning that participants, regardless of gender and grade type conceptualised the Multiculturation scale in the same manner, furthermore indicating that they also agreed on the type and number of underlying constructs as well as their items. M3, otherwise known as scalar invariance, constrained the intercepts of the regressions of corresponding groups. Interestingly, both gender and grade subgroups saw a slight increase in the CFI values, both attaining a CFI value of .967, this meant a .004 increase in the CFI value for gender and a .003 increase for grade when compared to M1. Despite these changes, as the CFI change was below the .01 criteria, both gender and grade subgroups met the criteria of scalar invariance, with all subgroups of interest achieving minimal invariance.
Table 6.55

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1.</td>
<td>Configural</td>
<td>26.914</td>
<td>11</td>
<td>.963</td>
<td>.932</td>
<td>.120</td>
<td>.063 -.179</td>
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<tr>
<td>M2.</td>
<td>Metric</td>
<td>31.917</td>
<td>16</td>
<td>.963</td>
<td>.953</td>
<td>.100</td>
<td>.047 -.150</td>
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<tr>
<td>M3.</td>
<td>Scalar</td>
<td>33.943</td>
<td>20</td>
<td>.967</td>
<td>.967</td>
<td>.083</td>
<td>.029 -.131</td>
</tr>
</tbody>
</table>

Note. $\chi^2$=chi-square, $df$ = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.

Table 6.56

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
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<td>.117</td>
<td>.059 -.176</td>
</tr>
<tr>
<td>M2.</td>
<td>Metric</td>
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<td>.966</td>
<td>.957</td>
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<td>.040 -.146</td>
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<tr>
<td>M3.</td>
<td>Scalar</td>
<td>33.734</td>
<td>20</td>
<td>.967</td>
<td>.967</td>
<td>.083</td>
<td>.027 -.130</td>
</tr>
</tbody>
</table>

Note. $\chi^2$=chi-square, $df$ = degrees of freedom, RMSEA = root mean square error of approximation, CFI = comparative fit index, TLI = Tucker Lewis index.

In sum, minimal invariance was achieved for the Multiculturation measure across both gender and grade subgroups, demonstrating that Multiculturation is sufficiently invariant across key groups of interest within the current investigation.

Section Summary

In summary, requiring some modifications the four instruments testing psychosocial outcomes among the student sample (attending ethnic day schools) were found to be valid and reliable measures of academic self-concept, academic motivation, school
belongingness and multiculturation, as demonstrated through CFA methods. Invariance analysis showed that responses from male, female and varying year level groups formed similar factor structures across all the utilised measures. Accordingly, these results indicated the appropriateness of the ASDQII, SMQ, SBS and Multiculturation measures across gender and varying year levels of secondary school students.

Section Three: Testing the Psychometric Properties of the Full Battery of Instruments

Testing the Psychometric Properties of the Full Battery of Instruments

Section Three of this chapter aimed to validate the psychometric properties of the entire battery of instruments utilised to test acculturation, enculturation and the psychosocial outcomes of interest simultaneously. In addition to assessing the psychometric properties of these measures individually, it is also essential to assess the structural integrity of these measures collectively in a multi-scale CFA. The purpose of the test is to examine how all the factors/instruments relate to each other, which could not be examined earlier when the CFAs were examined individually. In addition, the patterns of correlations between the latent factors were evaluated to assess whether they relate in a theoretically coherent manner. For example, current literature shows that academic self-concept and academic motivation are positively correlated and we would hypothesise a similar relationship in the current findings.

The multi-scale CFA model indicated that the structure of the full instrument battery did not fit the data well with a less than adequate TLI of .889, despite presenting acceptable CFI (.900) and RMSEA (.044) values. Consistent with the
findings from the individual instrument CFA’s, factor loadings indicated that all 54 items were well defined, meeting the .30 criteria recommended by Hills (2008). Factor loadings ranged from .469 to .946. Factor loadings were not reported in detail as the results were equivalent to those reported in the CFAs conducted on the individual instruments (as reported in Section Two).

Closer analysis of the output indicated a number of problematic items from the SMQ. All the other instruments and their items were statistically sound. Of the twelve SMQ items assigned to the two factors, four were found to have high modification indices. Two items from each of the Intrinsic Orientation and Competition Orientation scales were removed. The first basis for the deletion of these items was conceptual redundancy within the scales. The second basis for removing items was high modification indices, which indicated relationships between uniquenesses and items, and specified which of these items when freed, would improve the overall fit of the model. The third reason behind this anomaly may be due to methods effects.

The items for Intrinsic Orientation which exhibited high modifications indices included ‘I do my school work because I like learning new things’ (MI = 12.232) and ‘I do school work because I like to solve hard problems’ (MI = 14.001). The items for Competition Orientation which also presented high modification indices included ‘Trying to do better than others make me work well’ (MI = 10.343) and ‘I do well when I try to be the best student in my class’ (MI = 13.711). In addition to producing a high modification index, these Competition Orientation items are also conceptually redundant, as one who tries be the ‘best student in the class’ would also be ‘trying to do better than others’ and were therefore removed from the scale.
The deletion of these four items resulted in a four item Intrinsic Orientation factor and a four item Competition Orientation factor. Following the aforementioned modifications, another CFA was conducted to test the overall fit of the revised SMQ measure. The results of the overall fit of the revised SMQ were improved. A more detailed description of the findings were outlined in Research Question 1.2.9 and within Table 6.39.

A second multi-scale CFA was conducted, this time with the revised SMQ. The results of the revised CFA revealed that the structure of the full assessment battery was improved and demonstrated acceptable fit of the data with a CFI of .921, TLI of .910 and RMSEA of .039. Once again the factor loadings all exceeded the minimum criteria and ranged between .474 and .945 and will not be repeated here as they are similar to the findings within the CFA results of the individual instruments. The factor correlations for all 14 latent factors are presented in Table 6.57.

Correlations between the 14 latent factors ranged from -.87 to .881. High factor correlations were evident between Acculturation/Enculturation Knowledge and Behaviour factors within the DSAEM. As previously discussed, these high correlations may be attributable to the reciprocally reinforced nature of these factors, whereby students behave in line with their cultural knowledge, similarly, cultural knowledge may be imparted on students through cultural behaviour/activities. With the exception of these DSAEM factors, no other correlations exceeded .756, thus demonstrating acceptable discriminant validity for all remaining latent factors. Consistent with theory and logic, School Attachment, was positively correlated with Multiculturation, Acculturation Knowledge, Enculturation Language, Enculturation Knowledge, General Self-concept, English Self-concept, School Subjects Self-concept, and Intrinsic Orientation. While a significant moderate correlation between
Multiculturation and Enculturation Knowledge and Enculturation Behaviour were also evident. Relations between Enculturation Language and Acculturation Language produced a negligible and weak negative correlation, while General Self-concept and Acculturation Language produced a small positive correlation.
Table 6.57

Latent Factor Correlations for the Full Battery of Instruments Utilised in the Current Investigation

<table>
<thead>
<tr>
<th>Instruments</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>6</th>
<th>7</th>
<th>8</th>
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<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
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<td>7 General Self-concept</td>
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<td>8 Math Self-concept</td>
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<td>9 English Self-concept</td>
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<tr>
<td>11 Intrinsic Orientation</td>
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<td>.182</td>
<td>.117</td>
<td>.343</td>
<td>.185</td>
<td>.267</td>
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<td>12 Competition Orientation</td>
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<td>-.017</td>
<td>.074</td>
<td>.002</td>
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<td>.035</td>
<td>.188</td>
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<tr>
<td>SBS</td>
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</tr>
<tr>
<td>14 School Attachment</td>
<td>.151</td>
<td>.225</td>
<td>.149</td>
<td>.408</td>
<td>.501</td>
<td>.550</td>
<td>.307</td>
<td>.102</td>
<td>.171</td>
<td>.350</td>
<td>.349</td>
<td>.140</td>
<td>.697</td>
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</tbody>
</table>

Note: Significant correlations in bold

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Overall, the findings of the multi-scale CFA showed that all the instruments retained their hypothesised factor structures with the exception of the SMQ. The multi-scale CFA brought to light redundant items in the measure. Following the deletion of these items, another multi-scale CFA was conducted with the revised SMQ instrument. Findings showed that the structural integrity of all the instruments was upheld as demonstrated with acceptable goodness of fit indices. Finally, factor loadings and correlations were consistent with preceding psychometric testing of individual instruments, with correlations demonstrating both acceptable convergent and discriminant validity.

**Chapter Summary**

Chapter Six was designed to assess the psychometric properties of Study 1, specifically assessing the reliability and validity of the instruments utilised with adolescents attending ethnic day schools. The instruments utilised in Study 1, which included the DSAEM, ASDQII, SMQ, Multiculturation and SBS, were found to be reliable and valid measures of acculturation, enculturation and psychosocial constructs of interest across the target sample. These findings are particularly valuable, due to the lack of variability in the sample (i.e., ethnocultural students attending ethnic day schools), as many of these instruments have not been tested across such a unique sample prior to this study. In addition to this, a series of extremely rigorous set of statistical tools were utilised to establish the structural integrity of these measures across subgroups such as grade and gender. Thus, the study established that these revised tools were not only structurally and conceptually stable across the total sample, but also across these critical groups within the study. The results of this chapter as well as the implications of the findings will be
discussed in further detail in Chapter 9. This chapter explored within construct-relations using OFC and CFA techniques, the following chapter will examine the between-construct relations using Hierarchical Multiple Regression Analysis (HRMA) and Structural Equation Modelling (SEM) techniques specifically exploring associations between levels of domain-specific acculturation, enculturation and various psychosocial constructs of interest.
CHAPTER 7: STUDY 2 - THE RELATIONS BETWEEN ACCULTURATION, ENCULTURATION AND PSYCHOSOCIAL CORRELATES

Introduction

Study 1 established that the multi-scale instrumentation employed in the survey across adolescent students attending ethnic day schools was psychometrically sound and invariant across grade and gender groups. Results from the study demonstrated strong construct validity for the Domain-Specific Acculturation and Enculturation Measures (DSAEM), Academic Self-Description Questionnaire II (ASDQII), School Belongingness Scale (SBS), School Motivation Questionnaire (SMQ) and the Multiculturation scale. As the previous study examined and established within construct validity of these measures, Study 2 was able to conduct between-constructs analyses with some degree of confidence as the measures utilised in the investigation are considered to be valid and reliable and any differences found between constructs in this study may be considered to be genuine and not attributable to measurement error (Tabachnick & Fidell, 2007, 2013).

The current study will examine the relations between acculturation, enculturation and a variety of psychosocial correlates to determine which domains of acculturation and enculturation benefit adolescents attending culturally tailored
schooling. Structural Equation Modelling (SEM) assessed the extent to which acculturation and enculturation domains associated with the various psychosocial correlates. Finally, hierarchical multiple regression analyses (HMRA) was utilised to further assess the relations between acculturation and enculturation correlates, whilst also accounting for the effects of various demographic characteristics.

As per the previous chapter, the results of Study 2 will be presented in accordance with the research questions, hypotheses and aims which were presented in Chapter 4. The current chapter is divided into two sections, each presenting distinct set of analyses.

(a) Section One utilised SEM to examine the relations between domain-specific acculturation, enculturation and various psychosocial correlates, which include academic self-concept, academic motivation, school belongingness and multiculturation.

(b) Section Two of this chapter employed HMRA which tested the simultaneous relationships between domain-specific acculturation, enculturation (main independent variables of interest) and the psychosocial constructs of interest (dependent variables), whilst also controlling for the effects of a number of demographic characteristics (e.g. grade, gender and cultural background).
Examining Relations of Domain-Specific Acculturation and Enculturation with Academic Self-concept, Academic Motivation, School Belongingness and Multiculturation

Overview of Analysis

The analyses conducted in the following section aimed to identify the domain-specific acculturative and enculturative factors which are positively and negatively associated with student psychosocial correlates. In order to identify these variables and examine their relations between domain-specific acculturation and enculturation across various factors of interest, structural equation modelling (SEM) was conducted. As explained in Chapter 5, this statistical technique applies factor analysis, regression, and path analysis to explore paths between a series of independent variables and a series of correlates (Byrne, 1998). Due to sample size restrictions, the SEM was unable to be conducted with all the independent (i.e., acculturation and enculturation factors) and dependent variables (i.e., psychosocial correlates) simultaneously; instead the SEM was conducted with two factors at a time (see Figure 7.1).
Research question 2.1.1, examined the relations between the Acculturation and Enculturation Language factors and their relations to the four psychosocial correlates of interest. The proposed model presented acceptable goodness-of-fit indices ($\chi^2 = 828.313; df = 620; CFI = .935; TLI = .926; RMSEA = .041$). Inspection of the Beta coefficients (see Table 7.1) showed that of the sixteen paths, four were found to be statistically significant. Explaining the largest portion of variance, the Enculturation Language factor was positively associated with both Multiculturation (14.1%) and School Attachment (20.0%). Acculturation Language was also found to be positively associated with Multiculturation (8.8%) and School Attachment (3.6%).

Figure 7.1. Diagrammatical representation of structural equation modeling (SEM) approach for Acculturation Language and Enculturation Language domains and psychosocial outcomes. This SEM approach was conducted across all predictor (i.e., acculturation and enculturation domains) and outcome variables (i.e., psychosocial outcomes).
Interestingly, no significant pathways were identified between academic self-concept and motivation factors and Acculturative and Enculturative Language factors. In conclusion, results indicated that Acculturative and Enculturative Languages were both positively associated with Multiculturation and School Attachment. In other words, students who felt comfortable engaging in and utilising either their ethnic or English languages were also more likely to perceive cultural respect from the larger Australian community and were more attached to their ethnic day schools.
Table 7.1

Beta Coefficients for the Acculturation and Enculturation Language Factors Predicting Academic Self-concept, Academic Motivations, School Belonging, and Multiculturation as Measured by the ASDQ II, SMQ, SBS, and Multiculturation Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Gen SC % VA</th>
<th>Mat SC % VA</th>
<th>Eng SC % VA</th>
<th>Sch Sub SC % VA</th>
<th>Intri Or % VA</th>
<th>Com Or % VA</th>
<th>Multi % VA</th>
<th>Atta % VA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acc Lang</td>
<td>.26</td>
<td>6.0%</td>
<td>-.12</td>
<td>1.4%</td>
<td>.02</td>
<td>0.0%</td>
<td>.05</td>
<td>0.1%</td>
</tr>
<tr>
<td>Enc Lang</td>
<td>.17</td>
<td>2.0%</td>
<td>-.01</td>
<td>0.0%</td>
<td>.01</td>
<td>0.0%</td>
<td>.16</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

*Note. Acc Lang = Acculturation Language, Enc Lan = Enculturation Language, Gen SC = General Self-concept, Mat SC = Math Self-concept, Eng SC = English Self-concept, Sch Sub SC = School Subjects Self-concept, Intri Or = Intrinsic Orientation, Com Or = Competition Orientation, Multi = Multiculturation, Atta = Attachment, % VA = percentage of variance explained. *p < .05, **p < .01, ***p < .001*
Research question 2.2.1, examined the relations between Acculturation and Enculturation Knowledge factors and their relations to four psychosocial correlates of interest. The proposed SEM model indicated acceptable fit to the data indices ($\chi^2 = 806.171; df = 620; CFI = .942; TLI = .934; RMSEA = .039$) with two of the sixteen pathways statistically significant (see Table 7.2). Beta pathways specified that Enculturation Knowledge factor was significant and positively associated with Multiculturation (explaining 23.6% of the variance) and School Attachment (explaining 23.9% of the variance). Interestingly, the pathway between Acculturation Knowledge and Intrinsic Orientation was marginally significant ($p < .07$).

In conclusion, results have shown that Enculturation Knowledge leads to an increase in Multiculturation and School Attachment among high school participants. In other words, ethnocultural students who are informed of news, current affairs, general knowledge and national heroes of their ethnic cultures are more likely to perceive cultural respect from the larger Australian community and feel a greater sense of attachment to their ethnic day school setting.
Table 7.2

*Beta Coefficients for the Acculturation and Enculturation Knowledge Factors Predicting Academic Self-Concept, Academic Motivations, School Belonging and Multiculturation as Measured by the ASDQ II, SMQ, SBS, and Multiculturation Scales*

| Scale                      | Gen SC | % VA | Mat SC | % VA | Eng SC | % VA | Sch Sub SC | % VA | Intri Or | % VA | Com Or | % VA | Mult | % VA | Atta | % VA |
|----------------------------|--------|------|--------|------|--------|------|------------|------|----------|------|--------|------|------|------|------|------|------|------|
| Acc Know                   | -.14   | 1.1% | .04    | 0.2% | -.12   | 0.7% | .01        | 0.1% | .26*     | 9.2% | -.10   | 0.1% | .04  | 0.9% | .01  | 0.1% |
| Enc Know                   | .12    | 0.7% | .04    | 0.0% | .13    | 1.0% | .20        | 4.2% | .20      | 6.6% | .17    | 2.2% | .48***| 23.6%| .49***| 23.9%|

*Note. Acc Know = Acculturation Knowledge, Enc Know = Enculturation Knowledge, Gen SC = General Self-concept, Mat SC = Math Self-concept, Eng SC = English Self-concept, Sch Sub SC = School Subjects Self-concept, Intri Or = Intrinsic Orientation, Com Or = Competition Orientation, Mult = Multiculturation, Atta = Attachment, % VA= percentage of variance explained. *p < .07, *p < .05, **p < .01, ***p < .001*
Research question 2.3.1, examined the relations between Acculturation and Enculturation Behaviour factors and their relations to four psychosocial correlates of interest. Results of the proposed model demonstrated an acceptable fit of the model to the data ($\chi^2 = 791.180; df = 620; CFI = .946; TLI = .939; RMSEA = .037$). Three of the sixteen estimated Beta paths were positive and significant. As seen in Table 7.3, Enculturation Behaviour was found to be positively and significantly associated with Multiculturation (explaining 16.5% of variance) and School Attachment factors (explaining 29.8% of variance). Acculturation Behaviour was also found to be a significantly and positively associated with Multiculturation (accounting for 6.9% of the variance).

In summary, the results showed that higher levels of Enculturation and Acculturation Behaviour factors are associated with Multiculturation, whilst higher levels of Enculturation Behaviours also promote School Attachment. Put simply, these results suggest that students who behave in line with either their ethnic or Australian cultures are more likely perceive respect and acceptance of their culture from the larger Australian context, while students who behave in agreement with their ethnic culture are also more attached to their ethnic day schools.
Table 7.3

**Beta Coefficients for the Acculturation and Enculturation Behaviour Factors Predicting Academic Self-Concept, Academic Motivations, School Belonging and Multiculturation as Measured by the ASDQ II, SMQ, SBS, and Multiculturation Scales**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Gen SC</th>
<th>% VA</th>
<th>Mat SC</th>
<th>% VA</th>
<th>Eng SC</th>
<th>% VA</th>
<th>Sch Sub SC</th>
<th>% VA</th>
<th>Intri Or</th>
<th>% VA</th>
<th>Com Or</th>
<th>% VA</th>
<th>Mult</th>
<th>% VA</th>
<th>Atta</th>
<th>% VA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acc Beh</td>
<td>.04</td>
<td>0.2%</td>
<td>.17</td>
<td>2.8%</td>
<td>-.13</td>
<td>1.5%</td>
<td>.07</td>
<td>0.6%</td>
<td>.16</td>
<td>2.9%</td>
<td>.07</td>
<td>0.5%</td>
<td>.24**</td>
<td>6.9%</td>
<td>.09</td>
<td>1.4%</td>
</tr>
<tr>
<td>Enc Beh</td>
<td>.12</td>
<td>1.5%</td>
<td>-.06</td>
<td>0.2%</td>
<td>.09</td>
<td>0.7%</td>
<td>.14</td>
<td>2.1%</td>
<td>.17</td>
<td>3.0%</td>
<td>.02</td>
<td>0.0%</td>
<td>.39***</td>
<td>16.5%</td>
<td>.54***</td>
<td>29.8%</td>
</tr>
</tbody>
</table>

*Note. Acc Beh = Acculturation Behaviour, Enc Beh = Enculturation Behaviour, Gen SC = General Self-concept, Mat SC = Math Self-concept, Eng SC = English Self-concept, Sch Sub SC = School Subjects Self-concept, Intri Or = Intrinsic Orientation, Com Or = Competition Orientation, Mult = Multiculturation, Atta = Attachment, % VA = percentage of variance explained. *p < .05, **p < .01, ***p < .001*
Examining Acculturation and Enculturation and Their Relationships with Psychosocial Correlates Whilst Controlling for the Effects of Demographic Characteristics

Overview of Analysis

To extend upon the findings of the SEM, HMRA were conducted with all the independent and dependent variables simultaneously to explore the relationships between these factors whilst also controlling for the background variables which include grade (i.e., Years 7/8 vs. Years 9/10 participants), gender (i.e., male or female participants), and cultural background (i.e., those students identifying with more than one cultural background vs. students identifying with one cultural background). Within the HMRA, the effects of all three demographic characteristics were added in the first block, and then all the acculturation and enculturation variables were added in the second block. Thus, the analyses were divided into two stages. The first, explored the extent to which there were any differences in the demographic variables (i.e. grade, gender and cultural background) in terms of the dependent variables, which include: domain-specific academic self-concepts, academic motivations, school belongingness and multiculturation. The second stage examined whether the independent variables of acculturation and enculturation had any relation to these dependent variables once controlling for student demographic characteristics. The results of the HMRA are presented into four tables, with each presenting the results for a set of correlate (dependent) variables.
Research question 2.4.1 examined the relations between all the acculturation and enculturation factors and the four academic self-concept domains, after taking into account possible differences in background characteristics. Table 7.4 presents a summary of the hierarchical blocked entry regression analysis for domain-specific academic self-concepts. Here, each column contains the standardised regression coefficients (Betas) associated with each of the independent variables, in Block 1 (adding student demographic characteristics) and Block 2 (adding acculturation and enculturation). The Final Beta column (Block 2) includes the standardised regression coefficients for each variable once all of the variables in that block and preceding block of independent variables were entered into the regression analysis. For instance, the Final Beta for Acculturation Language ($\beta = .204$, $p < .01$) in the General Self-concept columns represents the standardised regression coefficient for this variable when all the variables in Blocks 1 and 2 have been entered into the regression equation (i.e., demographic characteristics, acculturation and enculturation).

For General Self-concept, the results of the regression analysis when the Block 1 variables were added to the model indicated that the student demographic characteristics predicted little of the variance ($< 1\%$). There were no differences in any of the demographic variables in terms of General Self-concept. In other words, there were no differences in General Self-concept across grade (i.e., Year levels), gender or cultural background. The results of the regression analysis when the Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in General Self-concept. More specifically, all the independent variables included in the regression analysis account for 6.2% of the variance in General Self-concept.
When controlling for student demographic characteristics, only Acculturation Language was positively associated with higher General Self-concept ($\beta = .204, p < .01$).

For Math Self-concept, male students had significantly lower Math Self-concepts as compared to female students ($\beta = -.231, p < .001$) when only the Block 1 variables were added to the model. All the other demographic variables predicted little variance. The results of the regression analysis when Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in Maths Self-concept (8% as compared to 5.5% in Block 1). However, none of the acculturation and enculturation factors were associated with Math Self-concept. In other words, even when controlling for all the background characteristics, as well as both acculturation and enculturation, male students still had significantly lower Math Self-concepts as compared to female students ($\beta = -.226, p < .001$).

For English Self-concept, when the Block 1 variables were added to the model, students in lower grades (as compared to students in higher grades) exhibited higher English Self-concepts ($\beta = -.233, p < .001$). In addition, students with one cultural background (as compared to students with more than one cultural background) also displayed higher English Self-concepts ($\beta = -.150, p < .05$). Once again, results of the regression analysis when the Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in English Self-concept (9.4% as compared to 7.1% in Block 1). However, none of the acculturation and enculturation factors were associated with English Self-concept. That is, once controlling for student demographic characteristics, acculturation and enculturation...
there were no significant relationships with English Self-concept. Additionally, when controlling for all the demographic variables and acculturation and enculturation in Block 2, students from lower grades continued to exhibit significantly higher English Self-concepts ($\beta = -0.262, p < .001$). Similarly, when controlling for all the demographic variables, and acculturation and enculturation in Block 2, students who identified with one culture also exhibited significantly higher English Self-concepts as compared to students who identified with more than one culture ($\beta = -0.162, p < .05$).

Finally, for School Subjects Self-concept, the results of the regression analysis when the Block 1 variables were added to the model indicated that students in lower grades had higher School Subjects Self-concepts as compared to students in higher grades ($\beta = -0.141, p < .05$). Results of the regression analysis when the Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in School Subjects Self-concept (7.3% as compared to 3.2% in Block 1). None of the acculturation and enculturation factors were associated with School Subjects Self-concept. In other words, once controlling for student demographic characteristics, acculturation and enculturation had no relationship with School Subjects Self-concept. Even when controlling for all demographic characteristics as well as acculturation and enculturation in Block 2, students in lower grades still had significantly higher School Subjects Self-concepts as compared to students from higher grades ($\beta = -0.176, p < .01$).
Table 7.4

Hierarchical Multiple Regression of Predictors of Academic Self-concept Domains

<table>
<thead>
<tr>
<th>Demographics</th>
<th>General Self-concept</th>
<th>Math Self-concept</th>
<th>English Self-concept</th>
<th>School Subjects Self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>β after Block 1</td>
<td>Final β</td>
<td>r</td>
</tr>
<tr>
<td>Grade (1= Years 7/8; 2 = Years 9/10)</td>
<td>.032</td>
<td>.030</td>
<td>.004</td>
<td>-.045</td>
</tr>
<tr>
<td>Gender (1=Male; 2 = Female)</td>
<td>-.032</td>
<td>-.030</td>
<td>-.058</td>
<td>-.227</td>
</tr>
<tr>
<td>Cultural Background (1 = One Culture; 2 = More than one culture)</td>
<td>-.013</td>
<td>-.004</td>
<td>-.016</td>
<td>-.014</td>
</tr>
<tr>
<td>Acculturation and Enculturation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation Language</td>
<td>.176</td>
<td>.204**</td>
<td>-.084</td>
<td>-.073</td>
</tr>
<tr>
<td>Acculturation Knowledge</td>
<td>-.042</td>
<td>-.118</td>
<td>.046</td>
<td>.064</td>
</tr>
<tr>
<td>Acculturation Behaviours</td>
<td>-.028</td>
<td>-.006</td>
<td>.099</td>
<td>.068</td>
</tr>
<tr>
<td>Enculturation Language</td>
<td>.050</td>
<td>.059</td>
<td>.024</td>
<td>.034</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
<td>.053</td>
<td>-.014</td>
<td>.057</td>
<td>.061</td>
</tr>
<tr>
<td>Enculturation Behaviours</td>
<td>.126</td>
<td>.134</td>
<td>.053</td>
<td>-.090</td>
</tr>
<tr>
<td>R² after block entered</td>
<td>.002</td>
<td>.062</td>
<td>.055</td>
<td>.080</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01, ***p < .001
Overall, all variables in the final block measuring domain-specific acculturation and enculturation were not significantly associated with any of the academic self-concept domains with one exception. In fact, Acculturation Language was found to have the only significant association of any self-concept factors ($\beta = .204, p < .01$), whilst controlling for the effects of the three demographic variables. In other words, students highly acculturated in the English language also exhibited higher levels of General Self-concept.

Research question 2.4.2 examined the relations between acculturation and enculturation factors and their relations to two academic motivation factors (i.e. Intrinsic and Competition Orientations) whilst controlling for three demographic variables (i.e., grade, gender and cultural background). Table 7.5 presents a summary of the hierarchical block entry regression analysis for factors of academic motivation. For Intrinsic Orientation, the results of the regression analysis when the Block 1 variables were added to the model showed that Years 7/8 students reported significantly higher Intrinsic Orientation as compared with their Year 9/10 counterparts ($\beta = -.177, p < .05$). This difference becomes even greater when the Block 2 variables were added to the model ($\beta = -.228, p < .001$). Results of the regression analysis when the Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in Intrinsic Orientation (4.5% after Block 1, 19.9% after Block 2). When controlling for student demographic characteristics in Block 2, Acculturation Knowledge ($\beta = .226, p < .01$) and Enculturation Knowledge ($\beta = .289, p < .01$) were positively associated with higher Intrinsic Orientation.

For Competition Orientation, the results of the regression analysis when the Block 1 variables were added to the model showed that males students exhibited
higher levels of Competition Orientated when compared to their female counterparts ($\beta = -0.136$, $p < 0.05$). No other significant differences in any of the demographic variables were observed, meaning that, there were no other differences in Competition Orientation across grade or cultural background. Results of the regression analysis when the Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in Competition Orientation. Specifically, all the independent variables included in the regression analysis accounted for more of the variance in the Competition Orientation factor of academic motivation (3.4% after Block 1, 6.9% after Block 2). However, when controlling for student demographic characteristics in Block 2, Enculturation Knowledge was positively associated with higher Competition Orientation ($\beta = 0.224$, $p < 0.05$). Interestingly, once acculturation and enculturation were added in Block 2, the significant difference between males and females disappeared, meaning that the gender difference seen in Block 1 was at least partially attributed to gender differences in acculturation and enculturation.
Table 7.5

Hierarchical Multiple Regression of Predictors of Intrinsic and Competition Orientations of Motivation

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Intrinsic Orientation</th>
<th>Competition Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>β after Block 1</td>
</tr>
<tr>
<td>Grade (1= Years 7/8; 2 = Years 9/10)</td>
<td>-.176</td>
<td>-.177*</td>
</tr>
<tr>
<td>Gender (1=Male; 2 = Female)</td>
<td>.119</td>
<td>.115</td>
</tr>
<tr>
<td>Cultural Background (1 = One Culture; 2 = More than one culture)</td>
<td>-.001</td>
<td>-.045</td>
</tr>
</tbody>
</table>

**Acculturation and Enculturation**

| Acculturation Language                                                       | .043     | .014            | .011    | .033     |
| Acculturation Knowledge                                                      | .309     | .226**          | .004    | -.068    |
| Acculturation Behaviours                                                     | .163     | .037            | .096    | .107     |
| Enculturation Language                                                       | .168     | .029            | -.010   | -.044    |
| Enculturation Knowledge                                                      | .281     | .289**          | .121    | .224*    |
| Enculturation Behaviours                                                     | .141     | -.093           | .015    | -.052    |
| $R^2$ after block entered                                                    | .045     | .199***         | .034    | .069*    |

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

In conclusion, not all the variables in the final block measuring acculturation and enculturation were significantly associated with academic motivation factors. In fact, only two variables were found to be significantly associated with academic motivation: Enculturation Knowledge and Acculturation Knowledge (the latter is for Intrinsic Orientation only) when controlling for the effects of demographic variables. In other words, increases in knowledge of the Australian and ethnic cultures is related to increases in the Intrinsic Motivations among ethnocultural youth attending
ethnic day school. Additionally, increases in knowledge of the ethnic culture also increased the amount of Competition Orientation among the same cohort.

Research question 2.4.3 examined the relations between acculturation and enculturation factors and their relations to Multiculturation whilst controlling for three demographic variables (i.e., grade, gender and cultural background). Table 7.6 presents a summary of the hierarchical block entry regression analysis for Multiculturation. For Multiculturation, there were no differences across grade, gender and cultural background. Results of the regression analysis when the Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in Multiculturation (1.7% after Block 1, 25.0% in Block 2). Even when controlling for these demographic characteristics, Acculturation Language ($\beta = .201, p < .01$) and Enculturation Knowledge ($\beta = .354, p < .001$) were both positively associated with higher Multiculturation.
In conclusion, Acculturation Language and Enculturation Knowledge were found to be the only significant correlates of Multiculturation, whilst controlling for the effects of the three demographic characteristics. In other words, students who exhibited higher acculturation in terms of language and/or higher enculturation in terms of knowledge were also more likely to report respect, acceptance and pride stemming from individuals within the larger Australian context.
Research question 2.4.4 examined the relations between acculturation and enculturation factors and their relations to school belongingness whilst controlling for demographic variables (i.e., grade, gender and cultural background). Table 7.7 presents a summary of the hierarchical block entry regression analysis for School Attachment. For the School Attachment factor, the results of the regression analysis when the Block 1 variables were added to the model showed that there were no differences in attachment factor across grade and cultural background. However, females were more attached to their schools when compared to their male counterparts ($\beta = .155$, $p <.05$). Results of the regression analysis when Block 2 variables were added to the model indicated that the demographic characteristics, acculturation and enculturation factors taken together explained more of the variance in the School Attachment factor (3.9% after Block 1, 29.1% in Block 2). However, when controlling for student demographic characteristics, Enculturation Behaviours ($\beta = .340$, $p <.01$) was positively associated with higher School Attachment.

In sum, the Enculturation Behaviours domain was found to be the only significant predictors of school belongingness, whilst controlling for the effects of the three demographic variables. In other words, as ethnocultural students engaged in more ethnic behaviours, they felt more attachment with their ethnic day school.
Table 7.7

*Hierarchical Multiple Regression of Predictors of School Attachment*

<table>
<thead>
<tr>
<th></th>
<th>r</th>
<th>β after Block 1</th>
<th>Final β</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>-.052</td>
<td>-.027</td>
<td>-.125</td>
</tr>
<tr>
<td>(1= Years 7/8; 2 = Years 9/10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.169</td>
<td>.155*</td>
<td>.075</td>
</tr>
<tr>
<td>(1=Male; 2 = Female)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Background</td>
<td>.121</td>
<td>.097</td>
<td>.025</td>
</tr>
<tr>
<td>(1 = One Culture; 2 = More than one culture)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acculturation and Enculturation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation Language</td>
<td>.129</td>
<td></td>
<td>.103</td>
</tr>
<tr>
<td>Acculturation Knowledge</td>
<td>.214</td>
<td>.018</td>
<td></td>
</tr>
<tr>
<td>Acculturation Behaviours</td>
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<td>.029</td>
<td></td>
</tr>
<tr>
<td>Enculturation Language</td>
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<td></td>
<td>.034</td>
</tr>
<tr>
<td>Enculturation Knowledge</td>
<td>.417</td>
<td>.180</td>
<td></td>
</tr>
<tr>
<td>Enculturation Behaviours</td>
<td>.487</td>
<td>.340**</td>
<td></td>
</tr>
<tr>
<td>$R^2$ after block entered</td>
<td></td>
<td>.039</td>
<td>.291***</td>
</tr>
</tbody>
</table>

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

**Chapter Summary**

Chapter 7 was designed to explore the relations between domains of acculturation and enculturation and a series of psychosocial correlates, namely academic self-concept, academic motivation, multiculturation and school belongingness. SEM results indicated positive and significant pathways between domain-specific acculturation/enculturation and School Attachment and Multiculturation outcomes. Additionally, HMRA revealed that while controlling for
the effects of demographic characteristics, students rating higher in Acculturation Language also rated higher in Multiculturation. Additionally, students who rated higher in Enculturation Knowledge also rated higher in Multiculturation, Intrinsic and Competition Motivation factors, with increased knowledge of the Australian culture (Acculturation Knowledge) also contributing to higher rates of Intrinsic motivation. These findings are particularly pertinent as they have demonstrated the domain-specific relations and effects of acculturation and enculturation factors on psychosocial correlates across adolescent students, something which was yet to be explored across the acculturation literature within the Australian context. Further to this, a series of SEM and Hierarchical multiple regression analysis were utilised to establish not only relations across the independent and dependent factors of interest, but also explored the role of a series of demographic characteristics which may have attributed to these relations. The results of this chapter as well as the implications of these findings will be discussed in further detail in Chapter 9. Both Chapters 6 and 7 used quantitative methods to examine the nature, structure and correlates of acculturative and enculturative processes. The following chapter will enrich and extend upon the findings of these chapters utilising qualitative thematic analysis techniques, particularly exploring the context specificity as well as domain-specificity of acculturative and enculturative processes and their conceptualisation.
CHAPTER 8: STUDY 3 - A QUALITATIVE INVESTIGATION CAPTURING
THE DOMAIN AND CONTEXT-SPECIFIC NATURE OF CULTURAL
ORIENTATION PROCESSES AMONG MIGRANT AND
ETHNOCULTURAL MINORITY STUDENTS

Introduction

Study 1 devised the measures of acculturation and enculturation based on
external patterns of behaviours (e.g., cultural language, cultural knowledge and
cultural behaviours) shared across the cultural groups of interest, thus proposing
“psychic unity” which lies beyond the influences of cultural nuances (Berry, et. al.,
2011). This theory further extends to the internal domains of culture (e.g. cultural
values and cultural identity) however, as these internal domains of culture are
multifaceted and more complex in nature, they have been the most challenging
domains to encapsulate in quantitative cross-cultural measures of acculturation and
enculturation to date (Matsudaira, 2006). According to Zane and Mak (2003), due to
these intricacies, cross-cultural researchers have been known to develop their
measures around the external domains only, thus overseeing the measurement of
these internal domains resulting in biased measures of acculturation and
enculturation. As it stands, much of the challenges in building robust quantitative
measures of these internal domains have been due to the lack of cross-cultural
investigations exploring the domain as well as the context specific nature of these domains. Thus, it would be premature for the DSAEM to also measure these quantitatively. As explicated in Chapter 4, to overcome these shortcomings, the current qualitative study will address the questions ‘why’ and ‘how’ students are engaging in these internal domains of acculturation and enculturation cross-culturally to inform the development of future quantitative measures (such as the DSAEM) which seek to address ‘how much’ they employ them.

Furthermore, a significant gap in current cross-cultural and cultural psychology research disciplines has been the exploration of the domain-specificity and the contextualisation of acculturation and enculturation qualitatively. While acculturation and enculturation have been conceptualised as bilinear domain-specific, Berry (1997) suggests that in order to achieve a more comprehensive understanding of these processes, enquiries must extend to contextual and ecological factors and how these mediate or moderate acculturative and enculturative experiences of individuals. Thus, in addition to exploring the theoretical and conceptual frameworks of acculturation and enculturation theory, the thematic analysis of interviews will be conducted through the lens of ecocultural theoretical framework, to not only contextualise and explore the internal domains of these processes, but to contextualise the external domains which were quantitatively measured in Study 1 (see Chapter 2 and 3; Berry et. al., 2011).

Accordingly, the current qualitative study aims to:

(1) Examine the domain and context-specificity of internal domains of acculturative and enculturative processes;
(2) Examine the domain and context-specificity of external domains of acculturation and enculturation processes; and

(3) When possible, triangulate the findings of Studies 1 (see Chapter 9 for data integration).

In addressing the aforementioned research gaps, eight semi-structured interviews were analysed according to the procedures delineated in Chapter 5. As discussed in further detail in Chapter 5, the data was analysed using a deductive lens, with the analysis largely being driven by a number of pre-existing research questions and theory. Overall findings were assigned to five codes, which encompassed pre-specified research interests of the investigator (Gibson & Brown, 2009), these codes included: 1) Contextualising cultural identity; 2) Contextualising cultural values; 3) Contextualising cultural language; 4) Contextualising cultural behaviours; and 5) Contextualising cultural knowledge, with several new and unanticipated findings encapsulated within subthemes. The current chapter is structured into two sections. Section 1 - explored the ‘Contextualisation of the internal domains of acculturation and enculturation’ – which examined patterns and nuances across contextually embedded cultural identity and values domains. Section 2 - explored ‘Contextualisation of the external domains of acculturation and enculturation’ - which examined patterns and nuances across contextually embedded cultural language, behaviours and knowledge domains and validating the scales and extending upon the findings of Study 1 when possible (see Chapter 9 for data integration).

The following results of the thematic analysis are based on eight semi-structured interviews conducted with four male and four female students attending ethnic day schools in Sydney, Australia. All participants are post first generation
migrants with the exception of one student Garth, whose country of origin is South Africa (see small participant biographies below). The themes were derived through not only the observation of patterns, but when strong emotions were being evoked by the interviewees indicating importance; when there were patterns of inconsistencies within individual interviews or across them; and lastly, when mistakes were made and resolved (Denzin & Lincoln, 1994). Contradictions and inconsistencies within and across interviews are explained through the utilisation of direct quotes and/or contextual information provided by the interviewee (see Chapter 5).

During the interrogation process of the interview data for the a priori codes, a series of empirical subthemes emerged from the themes. These generated a series of sub-codes, thus producing a coding tree. The structure of the coding tree includes: 1) Contextualising cultural identity: which explored the subthemes of ‘instability of cultural identity across contexts’ and the ‘stability of cultural identity across contexts’; 2) Contextualising cultural values: which explored the contexts of ‘family and home’ and within this theme the study examined the subthemes of ‘parent-adolescent cultural consistencies’ and ‘parent-adolescent cultural discrepancies’; 3) Contextualising cultural language: explored the motivations for cultural language use and proficiency, it’s links with identity, and connections with family and ethnic community; 4) Contextualising cultural behaviours: focussed on ethnic celebrations and traditions, cultural distance and compatibilities between behaviours; and 5) Contextualising cultural knowledge: explored knowledge of the past, present and for the future. Prior to explicating these findings, the following section will provide a brief biography of each of the interviewees.
Meet the Interviewees

Emma, is a 16 year-old Australian born young woman, whose father originated from South Africa and whose mother is a United States born migrant. A Year 10 student attending a Jewish day school, Emma regularly visits the United States to visit her mother’s side of the family. She has never been to South Africa and does not agree with some of her father’s South African values. She resides in the affluent Eastern suburbs of Sydney and is a second generation migrant.

Garth, is a 16 year-old South African by birth and has lived in Australia for six years. Garth was initially very resistant to leaving South Africa as it was the country he called home and he has fond memories of his native homeland. Both of Garth’s parents are South African by birth and chose to leave the country as they believed the country was no longer a safe environment to raise children. At the time of the interviews Garth was a Year 10 student attending a Jewish Day school within the affluent Eastern suburbs of Sydney.

Nancy, is a 15 year-old third generation Greek migrant. Both Nancy’s parents were born and raised in Australia. Nancy attends a Greek day school in working class South Western suburbs of Sydney and was a Year 9 student at the time of interview. She resides in the same area and has been on holidays to Greece, visiting the birthplace of her grandparents. All four of her grandparents are Greek migrants and were born in various parts of Greece, ranging from villages to the Islands.

Yvan, is a 13 year-old Year 7 student attending a Greek day school and is residing in the working class area of Sydney’s South Western suburbs. Yvan is a second generation migrant. His father’s birthplace is Cyprus and his mother’s is Greece. He identifies his ethnoculture as Greek and perceives the Greek not the
Cypriot culture to be the culture at home. His entire family, including his Cypriot father, speak Greek at home.

**Sophie**, is a 15 year-old second generation migrant. Both her parents were born and raised in Lebanon, however they were descendants of the Armenian genocide. Thus, while Sophie’s parents were born in Lebanon, they identify themselves as Armenian and are considered to be part of the Armenian diaspora. Sophie emphasises her need to preserve her Armenian ethnoculture, a sentiment transmitted from her parents. Sophie is a Year 9 student attending an Armenian day school in the affluent Northern suburbs of Sydney.

**David**, is also of Armenian descent attending the same school as Sophie, where he is a Year 7 student. David resides in the affluent Northern suburbs of Sydney, he is 13 years of age and is also a second generation migrant. His mother’s country of birth is Kuwait and his father’s, Syria. Like Sophie’s parents, David explained that despite his parent’s country of birth, his parents identify themselves as Armenian. David was raised participating in Armenian Folkloric Dance and other traditional Armenian community sporting organisations; however he has slowly pulled away from such community based organisations over the years.

**Rana**, is a 14 year-old second generation Lebanese migrant, who attends a Lebanese day school in the working class area of Sydney’s South Western suburbs. Residing in the same area, the Year 8 student explained that she has a strong Lebanese identity, partly due to her parents’ wishes to send her to a Lebanese day school. Both Rana’s parents were born and raised in Lebanon and the entire family speak Arabic within the home. Rana enjoys learning how to cook and eat Lebanese food and also engages with Lebanese popular culture via satellite television with her family.
Carl, is a 16 year-old second generation Lebanese migrant who also attends the same day school as Rana. Both his parents were born and raised in Lebanon and he too resides in the working class area of Sydney’s South Western suburbs. Carl explained that he has strong emotional ties to the country, where he has connected with extended family and engaged with other locals. Due to his parents’ limited English language skills, Carl only engages in Arabic at home with his parents, however chooses to speak in English at school with his peers. While not participating in Lebanese cultural organisations, Carl socialises with other friends of Lebanese descent within his local soccer team.

Extending from the external domains of acculturation which were examined in Study 1, the following section examines patterns and nuances across internal domains of acculturation and enculturation. More specifically, Section 1 presents findings from two contextually embedded internal domains of cultural identity and values.

**Section 1: The Contextualisation of the Internal Domains of Acculturation and Enculturation**

**Contextualising Cultural Identity**

Considered to be the degree to which one feels they belong to a group (Phinney, 1990), cultural identity was discussed during the semi-structured interviews. A primary theme of context specific cultural identities emerged from the data when participants were asked two central questions: (1) If you were asked by a fellow Australian ‘what is your cultural identity?’, what would you answer?; followed by (2) If you were travelling overseas and a fellow tourist was to ask you,
‘what is your cultural identity?’, what would you answer? Responses to these two questions elicited responses with consistent and inconsistent cultural identities. The following section explains these two emerging themes, which demonstrate the complex and context-embedded nature of identity.

Instability of cultural identity across context. Similar to sojourners, the findings of the current study revealed that tourists are also challenged with maintaining cultural identity, while adapting to the new society they are visiting (Ward, 2008). Such changes in cultural identity of participants were detected during the interview process. On numerous occasions participants identified with their ethnic identity in their answer to the first interview question (If you were asked by a fellow Australian ‘what is your cultural identity?’, what would you answer?), whilst affiliating more with their national identity in their responses to the latter question (If you were travelling overseas and a fellow tourist was to ask you, ‘what is your cultural identity?’, what would you answer?).

For instance, in response to the first question:

Garth replied: “I was born in South Africa and I am recognisably South African.”

Nancy replied: “I'd say Greek.”

Sophie replied: “I would say Armenian.”

However, these responses changed when asked the second question:

Garth replied: “I would probably say that I live in Australia - in Australia and I am Australian by nationality, but I would tell them that I grew up in South Africa and I'm essentially South African.”
Nancy replied: “I'd probably say Australia[n] and if they do question, oh you're not the blonde hair, blue eye, like stereotypically, I would say, yeah but my grandparents are from Greece so I'm Greek Australian.”

Sophie replied: “I would say I'm from Australia but my cultural background is Armenian.”

Here, participants' cultural identities were not fixed and resolute concepts; instead cultural identity was impressionable and malleable, adjusting with contexts. The dynamic nature of identity seems to be attributable to either socio-political or ecological factors. For instance, Nancy seems to have changed her cultural identity based on socio-political influences, as her ethnic (phenotypical) features are not consistent with the stereotypical ‘blonde hair’ and ‘blue eyed’ Anglo Australian features. However, when further probed about why she changed her response to the second question, Nancy replied, “Because you don't realise how much Australia is unique compared to other places until you do compare it with someone that's from America, someone's from France.” Here, Nancy’s highlights the cultural ‘unique (ness)’ that comes with identifying oneself as Australian when travelling through foreign countries. It is possible that in addition to the socio-political factors, Nancy changed her cultural identity to align herself with a more ‘unique’ or distinct identity.

Further evidence of Nancy seeking cultural distinctiveness was evident when questioned on whether she believed that she was part of Greek culture, she explained:

Nancy: When I'm not around it.

Interviewer: You feel Greek when you're not around Greeks?
Nancy: Yeah.

Interviewer: Wow, why do you believe that is?

Nancy: Because when I'm around Greek I tend to, I tend to know less than other people but when I am not around it those people don't really know what the Greek culture is about so I inform them about some of the things and I do feel more Greek when I'm not around it.

Supporting this dynamic rather than static conceptualisation of culture, Nancy explains that her Greek identity is enhanced when around non-Greeks. Nancy demonstrates that her Greek identity is dependent on whether she knows enough when compared to those she is engaging with, essentially demonstrating the context-specificity of her cultural identity. Perhaps Nancy was unable to maintain positive distinctiveness within her in-group (i.e., Greek culture) as she was less knowledgeable when compared to other members of the Greek community, as such only identifying herself as Greek when it enhances her self-identity or when she feels more knowledgeable.

Instabilities in Nancy’s cultural identity may be exacerbated by the negative cultural socialisation experiences with her family members. Nancy explains her challenges in feeling Greek when her mother corrects her identity: “…if I ever say I'm Greek my mum would always be like, ‘no, you're Australian’ but they want me to be Greek. So [it] just gets a bit confusing sometimes”. Nancy’s mother essentially encourages her daughter to assimilate toward an Australian identity instead of Greek. However Nancy explains her confusion as her Greek identity has also been encouraged by her parents by sending her to a Greek day school. When asked at a later point in the interview ‘do you feel more Australian around other Greeks?’
Nancy replied, ‘No. I don't feel any culture. I don't feel, yeah. I just feel like me. I don't know.’ It was revealed that while Nancy clearly tried to identify with the Greek culture, she did not experience a static or continuous Greek identity. As seen by her earlier comments (i.e., [feeling Greek] “when I'm not around it”; and “I'd probably say Australia[n]”), Nancy identified with the Australian culture within the context of a foreign country, as this choice would provide her with a more positive identity which could enhance her sense of positive distinction. Though, she preferred to identify herself as Greek within the Australian context as this too would provide her with the cultural distinctiveness she seeks within this context. In spite of this, due to the encouragement from her parents to affiliate herself with the Australian identity, as well as her feelings of “knowing less” than other Greeks (when around them), Nancy seemed to find it easier to identify with her self-identity within the context of the Greek culture, as opposed to any one cultural identity. This may have indicated that Nancy is still in the midst of experiencing identity diffusion (i.e., that is has no clear cultural identity) or the moratorium (i.e., that is a period of exploration) stages of developing her cultural identity within the context of her Greek ethnic community. All in all, context has played a pivotal role in Nancy’s cultural identities.

The findings also demonstrated that not all individuals were able to acculturate uniformly into the mainstream society. Bringing to light the domain-specific aspects of acculturation and enculturation, Nancy states: “Yeah, but like I do understand traditions and culture and all those sort of things but language I can't seem to grasp that much.” It is possible that Nancy feels integrated within the behaviours domain, but separated with regard to the language domain of enculturation. Furthermore, such differences across domains are also compounded by contextual factors, both from the host culture and the acculturating individual.
**Stability of cultural identity across context.** The remaining interviewees responded with consistent cultural identities across both interview questions. For instance, when asked “if you were asked by a fellow Australian ‘what is your cultural identity?’ what would you answer?” students replied:

Emma: I am Australian.

Yvan: Greek.

David: Armenian – Australian.

Carl: Lebanese.

Rana: Lebanese.

Following this when participants were asked “If you were travelling overseas and a fellow tourist was to ask you, ‘what is your cultural identity?’ what would you answer?” they responded:

Emma: Australian.

Yvan: Still Greek.

David: I am Australian, but my cultural background is Armenian.

Carl: I’m from Lebanon.

Rana: Lebanese.

When asked why their cultural identity had/ hadn’t changed, all but one student (apart from Nancy) couldn’t explain the rationale behind their answers, often replying with “Not sure”, or “I haven’t given that much thought”. David, was the only student who could rationalise his consistent identity across context, explaining that:
Armenians were the first people to be, first nation to be Christian, like the whole nation...because it's gone smaller over the years. I would say it's one of the oldest nations in history, because it first started from Noah because I think Noah's grandson's son - like Noah's great grandson, was Hayk, Hayk Nahapet, who is one of Armenia's greatest heroes (expressed with enthusiasm).

David showed great pride in the accomplishments and history of his ethnoculture. His knowledge and understanding of history and the challenges faced by his forefathers provided him with esteem. He explained that it is this cultural pride and esteem which sustains his Armenian identity.

**Contextualising Cultural Values**

**Family and home.** When asked during interviews how they had learnt their cultural values, participants explained that they developed their competencies at home through cultural transmission (i.e., either through socialization or enculturation) with family members and socialization at school.

They explained:

David: I reckon I learn Armenian values at school, but I experience them at home. We learn about what the values are at school, but at home it's actually happening.

Sophie: From my parents and from my family.

Yvan: Grandparents taught them to my parents, and now my parents are teaching them to me, then I'll teach them to my kids when I have kids.
Nancy: Greek values? Probably my grandparent's house because I used to stay at my grandparent's house during the holidays…

**Parent-adolescent cultural consistencies.** Evidence of the assessment of cultural compatibility was presented by Carl who only identified with Lebanese values. He explained that when he was on holiday in Lebanon he saw someone experience a breakdown at the side of the road with many strangers attending to the driver to assist with the breakdown. Carl then explained, “Australian values, here if you - what's it called? - need help, on the side of the road that won't be given as much as Lebanon. In Lebanon there's a lot of help.” Here Carl explained that he perceived the Lebanese value of collectivism or altruistic behaviours to be at odds with the individualistic values of the Australian culture. When questioned about what he thought of Australian values, Carl responded: “I'm not sure about some Australian values. I don't know what to say about those.” Carl clearly created distance between his Lebanese and Australian cultural values, by referring to Australian values as ‘those’ values, which he uttered with emphasis whilst briefly shaking his head from side to side. When questioned on which cultural values he implements in day to day life, Carl responds: “Lebanese”, then continued to explain “Because for most of my life I've been taught [by my parents] to be like a Lebanese person…” It is apparent that Carl favours Lebanese values, these may not only be based on his first hand experiences in Lebanon (as per the car breakdown anecdote above), but also enhanced by parental transmission of Lebanese values. His separated values domain, could perhaps be the outcome of such a compartmentalised view of Australian and Lebanese values.

Carl was one of few students who had the opportunity to visit his country of heritage, he had been back to Lebanon “three or four times…” and continued to
explain that “…I saw how they acted and I liked it.” When asked ‘what were some of the values you learnt from your visits to Lebanon’, Carl explained:

Well they'd help a lot. They give a lot of assistance to people in need. For example, I'm not sure who it was, like I didn't know them at all, but their car got stuck on the side of the road. Then I was just walking around the street getting some breakfast and I see them, about four or five really big, strong guys pushing the car trying to start it. When that didn't work they had to jump start it. They helped out.

It is a known practice that teenagers may be sent back to Lebanon by parents with the intention of re-engaging them with their ethnoculture (Reid & Watson, 2015). Therefore, while parents may try to ‘pass down’ the ethnic cultural values to their children, such value transmission may further succeed when combined with other contextual influences which allow the child to be exposed to cultural values consistent with those endorsed by parents.

Parent-adolescent cultural discrepancies. During the interview process, participants conveyed their cultural value discrepancies with their parents. When asked which cultural values are implemented at home, Emma explained: “A mix of all three [Australian, American and South African]. Probably more Australian, South African, just because my dad's side lives here and we associate with them more.” Emma explained that her cultural engagement with South Africans in Australia increased her implementation of South African values; however she later explained that she did not agree with all South African values. Emma drew comparisons between her cultural values and that of her father’s South African cultural values:
Well, I just don't even like the idea of South Africans. Because, I mean, as much as I love my family and everything, I just - some of their values [South African] are a bit - aren't my values. Like, I don't have the same sort of values. Such as, I don't know, like when my dad was in South Africa, he had people working for him, like cleaning their house, doing this, doing that, so he didn't have to do much. Like, I mean, you have to work for yourself. What else?

Emma was then asked, why she thought that these values were at odds with her own cultural values, she responded, “Pretty influenced by my mum”. Emma was further probed, “Are these at odds with her (your mother’s) American values? So she disagrees with some parts of your father's…” Emma interrupted the question and replied, “Yeah, 100 per cent”. When further probed about other South African values she disagreed with Emma explained:

Emma: They're also really overprotective with their kids and stuff.
They just need to relax sometimes.

Interviewer: You feel like the American or Australian values are more relaxed?

Emma: Yep.

Emma’s expectations of autonomy are highly influenced by maternal influences. Similar parent-child family discrepancies also emerged in David’s interview:

Well, not trying to be like racist or anything, but from what I've seen from my friends from my old school who were Australian, they're sort of a bit not as - they don't care but as much as Armenians do but what I mean care, as in they do let them, like they trust them, they trust
them at a younger age to do things themselves. So yeah sometimes I wish my parents would trust me, but I know it's I think they think, they know it's for my own good.

Like Carl, David and Emma see their Australian values at odds with his Armenian and South African values. However different from Carl’s separated values domain, David expresses that “I think I'm more Australian than Armenian”, emphasising that he values the sense of autonomy his friends experience.

Section 2: Contextualising the External Domains of Acculturation and Enculturation

Contextualising Cultural Language

The significance of having ethnic language competencies was emphasised throughout the interviews. Participants agreed that language played a significant role in their ethnic cultural maintenance, however motivations for attaining and/or maintaining language competencies as well as use, varied across the interviewees. Two sources of motivation were highlighted, these included: identity, and connections with the family and ethnic community.

Identity as a source of motivation for cultural language use and proficiency. Identity was observed as a key theme for cultural language use or preservation through the interviews. Sophie demonstrated a strong link between
ethnic language competencies and ethnic identity, she explained: “… if say at home if you're just speaking English all the time you can just forget your Armenian language so you won't really be an Armenian if you don't know your language.” Here Sophie uses the usage of her ethnocultural language as an indicator of her sense of belonging to her cultural group, as well as expressing the importance to conserve and use the language to maintain her Armenian identity. This viewpoint was further emphasised when Sophie was asked to complete the sentence:

Interviewer: To be an Armenian you've got to…

Sophie: … speak the language…

Here Sophie not only expressed a strong connection between ethnic language competencies and ethnic identity, but she also expressed the importance of home as a context in which ethnic language use and competencies can be enhanced. This idea of conserving the Armenian identity was further accentuated by David, “Yeah I think it's very important, because if we don't end up knowing it, it could die out and we don't want that happening because it's a - because I feel like Armenia it's a big part of the world's history, like other countries and nations.” Similarly, Rana who is of Lebanese descent also emphasised the importance of cultural language in maintaining a Lebanese identity when she was asked, ‘why do you learn Arabic’, she explained: “… because that's one of the main things of being Lebanese…”

The connection between identity, ethnocultural language and the home was strong within the interviews, with interplays between social influences (from context) of language use and the maintenance of cultural identity permeating through the interviews. The influences of the home and family context on the maintenance and use of ethnic languages is further explored in the following theme.
Connecting with the family and ethnic community. During the interviews students also highlighted the importance of knowing the cultural language and utilising it “because I have to speak Arabic to people who are very Lebanese and it helps me connect to the culture better” (Rana, Year 8). Rana proceeds to explain “…that the majority of the people speak Arabic and connect in Arabic ways. Yeah it helps me connect more.” While speaking in Arabic may be a cultural preference, another student, Carl (Year 9, Lebanese cultural background) explained that he has no choice and is forced to speak in Arabic “Because they [parents] would understand better than if I say [it] in English.” He proceeds to explain “Basically everything in our day is Lebanese. We always have to talk Lebanese at home.”

Interviewees described that they would change between English and their ethnic languages between home and school contexts. More specifically participants discussed that they would engage in English with their peers. Carl explained, “Well at home I have to speak Arabic but in school I have to speak English. Well I can speak Arabic but it's more common speaking English here.” Rana, another student of Lebanese descent also provided a similar explanation:

Interviewer: “Do you communicate more in Arabic do you think in school or in English?” Rana also explained:

Rana: In English.

Interviewer: Do you speak any Arabic at school with your friends?

Rana: Not really.

Therefore despite the Lebanese schooling context, both Rana and Carl continued to engage in English with their peers. Students from other schools explained that they too generally engaged with their peers in English:
Sophie: “With my friends English but when we're saying our jokes and things we'll say it in Armenian because it will be so much funnier. So yeah, but mostly English.”

Yvan: “English as well. Because some of them aren't too fluent in Greek, they don't know a lot. I'm not 100 per cent with Greek as well, so it's easier to speak in English.”

Thus push and pull factors provoked by socio-political factors (prompted by family, peers and community) can provide individuals with the platform to engage with either their national or ethnic languages. The fundamental urge to belong and connect with others which is prompted by sociocultural interfaces, provides the means (be voluntarily or obligatory in nature) for ethnocultural youth to continue to acquire and utilise their ethnic and national languages, demonstrating the context-specific nature across Acculturation and Enculturation Language domains.

**Contextualising Cultural Behaviours**

Throughout the interviews most students made reference to cultural celebrations, traditions, food and the use of media. While the majority of the students largely made reference to their ethnoculture, few students made reference to Australian traditions, as some participants did not seem to engage in these events as often. When references to Australian traditions were made, participants drew comparisons and at times distanced themselves from the Australian traditions with the pronoun ‘they’ instead of ‘I or ‘we’, perhaps indicative of their lack of engagement with Australian tradition and celebrations. Consequently, the current theme comprises two subthemes; the first focusing on ethnic celebrations and
traditions and the second on perceived cultural distance and compatibilities between ethnic and Australian cultural behaviours.

**Ethnic celebrations and traditions.** The participation of interviewees with cultural traditions and behaviours was emphasised across almost all the interviews. For instance, when Nancy was interviewed she was asked why her parents decided to send her to a Greek day school, she replied, ‘To keep the tradition going’. Participant engagement with ethnic cultural celebrations and traditions were explained with ease by most interviewees. Key cultural behaviours included: traditional dancing, cultural music, eating and cooking.
Carl explains some Lebanese traditions he has participated in:

When a baby gets their first tooth, when their tooth starts to come out you make these special foods for them. If it comes over you have to give it to them. Your weddings, you have to have a really big wedding. Everybody's invited. You have to have a lot of food. For funerals it's a pretty sad day but you're not as sad as you should be because they're going to a better place if they had a good life.

David explains Armenian traditions and behaviours he engages in:

…attending Armenian cultural things, like dancing - Armenian dancing - singing Armenian songs, learning Armenian, the language.

You know even making Armenian food.

Yvan explains some of Greek cultural traditions and explains, “The Greek Christmas is really important, Easter, like I said before, how we celebrate Ochi Day, that's pretty important. On 25 March, when we march, that's important.” Other Greek cultural behaviours Yvan engages in include:

We do similar things, with - like, we eat Greek food, so that would - so that would impact on us being Greek. We listen to the Greek music, play Greek music. We can talk Greek when we want, to each other…. At my cousin's wedding we had Greek music and we were dancing to it, like Greek style dancing. So I think that's part of the reason why I went to Greek dancing, so I could participate at weddings and dance Greek and stuff… We cook or eat Greek food for Easter. My grandmother came over and we made these Greek biscuits.
Participants generally had strong understandings of their cultural traditions, throughout most of the interviews. Nancy’s affiliations with these behaviours were so strong that she spoke about the importance of carrying these traditions on to the next generation:

Yeah, I do enjoy Easter because of those things and I do want to pass it down to my kids and hope they pass it down to their kids and just to keep it going because if it makes me happy, it should make other people happy too.

Interestingly, Nancy’s understandings of the Greek traditions and her engagement with them are much stronger when compared to her Greek language competencies, “Yeah, but like I do understand traditions and culture and all those sort of things but language I can't seem to grasp that much.” Similar notions were explicated by Emma, “Hebrew is not like a language for me, it's not [like] I can speak two languages. I can speak Hebrew, but not very extensively.” Emma did not place much importance on her Hebrew language competencies, instead she emphasised the importance of visiting Israel and other cultural engagements, “…being a Jewish person, you're likely to go to Israel at some stage… I mean, for example, on March of the Living, the program that I was just on, we'd sing songs with people from - 10,000 participants from all over the world who are Jewish, and we'd all sing the same songs…” Both Emma and Nancy highlight that no one individual can hold all the facets of any given culture, underscoring the domain-specificity of acculturative and enculturative phenomena, that is, individuals are likely to possess some stronger affiliations with some cultural domains and not others.

**Cultural distance and compatibilities between behaviours.** When discussing Acculturative Behaviours students quite often either struggled to describe
how they incorporated Australian behaviours into their lives or they described a conflict or distance (see Chapter 2; BII) between their ethnocultural and Australian cultures. Emma described her perceived similarities between Australian and Jewish cultural celebrations, commemorations and traditions:

Yeah, like Australians, they do Australia Day, celebrate Australia Day, Anzac Day. We also have Jewish holidays, like Yom Kippur, Rosh Hashanah, Pesach, and we do Yom Hazikaron, which is like Remembrance Day, and Yom Ha'atzmaut, which is Israel Independence, and Yom HaShoah, which is the Holocaust Remembrance Day.

Emma’s comparisons between Australian and Jewish cultural celebrations and traditions portray the likeness between the two cultures. However, she created cultural distance between her Jewish culture and the Australian culture when she mentioned the pronoun ‘they’ to describe Australians and the pronoun ‘we’ to described her Jewish cultural celebrations/traditions/commemorations. Interestingly, while Emma tries to demonstrate the similarities between these cultural events at the level of the group (i.e., Australian and Jewish cultural similarities), Emma’s use of language may indicate her own individual (level) cultural distance between her own Jewish and her Australian cultures. Here, Emma’s account demonstrates that individuals may understand the similarities between cultures at the level of the group, however these cultural similarities or closeness do not necessarily transcend to the level of the individual. More explicit examples of cultural distance were also expresses by Nancy, Rana and Sophie.

Nancy: I'm going to use Easter as an example like Easter we do the red eggs, we do [spoken in Greek]; we do like [spoken in Greek] and
so like the Australian way is not really about that and they don't really focus it on Christ's resurrection. It's more about the chocolate and the bunnies and things like that.

Rana: Maybe Lebanese have more things to do with their culture and they have more celebrations and stuff than Australians do.

Sophie: Well not really. I think there's a bit of a difference because the Armenian culture has more traditions whereas the Australian culture it's just like not really. It's just like every day comes and you don't really have traditions and things.

While it is simply possible that these students had stronger affiliations and engaged more with these ethnic cultural behaviours, it is also possible that these evaluations were somewhat biased given the cultural context in which these interviews were conducted. It is conceivable that the perceived cultural distance between the interviewees’ ethnic and Australian cultural behaviours have been induced or enhanced by their ethnic day schooling context. For instance, interviews were conducted within the schooling environment, this culminated with possible interviewee suspicions that interview transcripts could be read or disseminated to school stakeholders (despite reassuring them of their anonymity and confidentiality) may have provoked more ecologically and socio-politically desirable responses among students.
Contextualising Cultural Knowledge

When discussing their cultural knowledge, three sub-themes emerged within the data, these included knowledge of the past, present and knowledge they wish to attain in the future, essentially creating a continuum of cultural understandings. ‘Knowledge of the past’ makes reference to historical understandings of the culture, whether this be in relation to conflicts, persecutions, achievements or other significant cultural events, distinct to their cultural background. ‘Knowledge of the present’, makes reference to current cultural understandings with a particular focus on popular (pop) culture. Finally, ‘Knowledge for the future’ represents the interviewees’ desires to acquire further understandings about their culture/s.

Knowledge of the past. Several interviewees’ made reference to their knowledge of cultural history, making reference to past wars, injustices as well as historical characters. One of the most passionate interviewees’ to discuss history was Sophie, she explained:

I know that we have a very strong background and we've had so many - like the Genocide and so many other cultures trying to ruin the Armenians. Yeah, so ... You've got to know your history, your background, speak the language and yeah, just to know your background and your history, the Armenian history. I think they are important because if you know about the history and you know about your background it makes you true Armenian.

Here Sophie’s understandings of the past wars and persecutions made her a very impassioned about her ethnoculture. Her understandings of the Armenian history had clearly touched her and motivated learn more about her ‘background’, ‘history’ and
‘the language’. Sophie concluded her remark by also linking understandings of cultural history to a ‘true Armenian’ identity.

Similarly Garth also demonstrated his understanding of his cultural history, he explained:

“I guess in terms of Jewish values, it's the same kind of thing, just racial tolerance. We've had such a sort of racially unjust history that I guess the least thing we can do is learn from that and make sure that we treat others as we sort of would like to be treated…”.

Clearly, these understandings of the past have affected Garth as he had a desire to learn from the history of his ethnoculture. Both Sophie and Garth have demonstrated that knowledge of the past can affect cultural orientations among ethnocultural adolescents in modern day.

**Knowledge of the present.** An additional subtheme which emerged from the interview data relating to cultural knowledge was understandings of current cultural trends which were encapsulated by popular culture. Interviewees’ referenced engagement with Australian and ethnic cultural music, television programs as well as news and current affairs. While students generally spoke of greater engagement with Australian popular culture, they explained that their engagement with ethnocultural popular (pop) culture was dependent on two factors: (1) having accessibility to ethnocultural resources (e.g., satellite television; ethnic newspapers, on-line sources and magazines, etc.); and (2) whether their family members were engaged with ethnic popular culture. For example, Rana explained:

Yeah, like there was a channel that had music videos and mum would always put it on and I'd watch it and like the *X Factor* stuff…Well
because we watch a show and it stars them and they're also on the radio. Sometimes mum will have it on and so I'll listen to it. But if it's just me, I put on the English radio.

Rana explained a clear preference for Australian popular culture, however is happy to engage with Lebanese popular culture if her family also shows some interest. Diverging from parental influences, David showed an interest in understanding more about current successful Armenians (perhaps considered to be heroes) by conducting his own research through the internet (i.e., via remote enculturation), he explained: “…Raymond Vahan Damadian. He's still alive I think, and I think he invented the first MRI and I was very surprised because you don't really see that every day. I've also heard that there's an Armenian working at the European Space Agency…”.

David showed great pride and enthusiasm (even excitement) in explaining cultural achievements of more successful members of the Armenian community.

**Knowledge for the future.** Several students explained that they had an interest in learning more about both their Australian and ethnic cultures. For instance Sophie explained:

I would like to learn more about the Australian [history]. I would like to because I hardly know anything about the Australian history. So I would like to know a bit about that but also Armenian. I would like to know more about the Armenian history too.

Sophie’s interest in cultural history does not simply lie in her ethnoculture but in her understandings of her Australian history too. Conversely, Carl’s interest simply lied in the history of his ethnoculture: “Because it would be interesting to learn something new about my own background, something that relates to me, see how it all
happened, what happened, where it happened, who and where, what happened.” These findings indicate that even within the subtheme of ‘knowledge for the future’ there lied some distinct preferences of cultural knowledge attainment across participants. However, motivations for the attainment of future cultural knowledge were not apparent. Overall the theme and subthemes of contextualising cultural knowledge have indicated that there exists a sense of continuity and change across each of the domains of acculturation and enculturation at the level of the individual as well as across individuals. Additionally it highlighted that time must also be considered as an important contextual consideration when assessing cultural continuity and change.

Chapter Summary

The current chapter explicated and discussed insights into the internal (values and identity) and external (language, knowledge and behaviour) domains within acculturative and enculturative processes. All in all, the findings of this study emphasised the need for future research to recognise that individuals’ lives are fixed within multiple contexts, which in turn work collectively to shape cultural engagement processes. It has demonstrated that both inter and intra cultural contextual factors not only have the propensity to impact acculturation and enculturation as a global constructs, but impact the discrete domains of these processes within-individuals and their adopted cultural orientation strategies at various rates and in numerous ways, hence, emphasising the dynamic and variegated nature of the acculturative and enculturative processes. Thus future research in the field would benefit from the investigation of such contextual factors and their impact on domain-specific acculturative strategies.
CHAPTER 9: DISCUSSION AND IMPLICATIONS FOR THEORY, RESEARCH AND PRACTICE

Introduction

The current thesis adopted a mixed methods approach to gain a more holistic understanding of both acculturative and enculturative phenomena and its relations to a number of psychosocial correlates. More specifically, this thesis comprised three overarching objectives:

(1) To develop and test the properties of a new psychometrically sound measure of domain-specific acculturation/enculturation which is developmentally appropriate for ethnocultural adolescents.

(2) To investigate the psychosocial correlates of domain-specific acculturation and enculturation.

(3) To explore the domain-specificity and context-specificity of acculturative and enculturative processes.

The study adopted both etic and emic approaches to evaluate these processes. By administering surveys to adolescents from a variety of ethnocultural groups, Study 1 devised theoretically derived and psychometrically sound domain-specific measures of acculturation and enculturation as a means to progress current conceptualisations
and operationalisations in research. This etic examination of acculturation and enculturation was also compared and contrasted with emic accounts (Study 3) from participants taking part in semi-structured interviews.

Study 2 investigated the impacts of acculturation and enculturation on a series of psychosocial correlates. Findings of this study may serve to explain the effects of acculturative and enculturative processes on ethnocultural youth attending ethnic day schools in New South Wales, as well as emphasise the domain-specific differences in the relations of these phenomena with academic self-concept, academic motivations, school belongingness and multiculturation.

Extending upon the quantitative findings of Study 1, Study 3 examined the internal domains of these processes (i.e., values and identity) through one-on-one semi-structured interviews. By considering interactions with ecological and socio-political factors, the study specifies complexities of these multi-faceted internal domains and explicates their implications to conceptualisations, measurement and theory of acculturative and enculturative processes. Further to this, through the emic accounts of ethnocultural adolescents, the discussion of Study 3 presents qualitative findings to inform future enhancements of the DSAEM and other measures of acculturation and enculturation. Qualitative interview data extended upon the quantitative measures by exploring the subjective understandings, commitments, and choices made by adolescents during their acculturation and enculturation experiences. Accordingly, the discussion will utilise these qualitative findings to: (a) methodologically triangulate the domain-specific measure of acculturation and enculturation; (b) contextually and substantively enhance and clarify the influences of acculturative and enculturative processes; and (c) to inform future refinements of the DSAEM and other domain-specific measures.
The findings of Chapters 6, 7, and 8 are synthesised with discussions drawing on theoretical underpinnings from Berry’s ecocultural framework with a foci on individual differences in acculturative and enculturative processes. In addition, the findings of the study will also make reference to three theoretical perspectives known as the ABC’s (Affective, Behavioural and Cognitive perspectives) of acculturation/enculturation with the addition of D, pertaining to the developmental perspective of these processes (Ward, 2001; Ward, Bochner, & Furnham, 2001).

The key themes resounding throughout the discussion of all three studies include: (1) domain-specificity; and (2) context-specificity of acculturation and enculturation processes. Exemplifying these key themes, the current chapter discusses current conceptual and theoretical frameworks with relation to two major findings: (1) the measurement and contextualisation of domain-specific acculturation and enculturation (as presented by Study 1 and 3); and (2) the examination of psychosocial correlates of acculturation and enculturation (as presented by Study2). As such, this chapter briefly reviews and discusses these two major research findings in relation to theory and research. Secondly, the strengths and limitations of the research are explicated. To conclude, the significance and the implications for theory, research and practice are delineated.

**Measurement and Contextualization of Domain-Specific Acculturation and Enculturation**

With the increase of intercultural contact through globalisation and migration, acculturation and enculturation research have made significant advances. However, there remains a lack of consensus in the literature on the theoretical conceptualisation and operationalisation of these processes. While research mostly advocates for the
bilinear multidimensional, it has more recently advanced toward a domain-specific theoretical approach and measures of acculturation and enculturation. Few instruments have been able to encapsulate this theoretical model within psychometrically sound measures. Such measures are particularly pertinent when considering the cultural diversity in Australia. Thus, in addressing these research and real-world challenges, this section presents the findings of Study 1 which are directed at addressing these issues through the presentation of a theoretically driven, and psychometrically sound domain-specific measure of acculturation and enculturation. These domain-specific measures make a significant contribution to both research and practice, as they are the first Australian standardised and continuous measures of the external factors (i.e. language, behaviours and knowledge) of acculturation and enculturation and have the potential to aid understandings of these processes in Australia for Australian ethnocultural groups. While other Australian measures of acculturation and enculturation do exist, they tend to oversimplify these processes, by measuring them as unidimensional or operationalising them as unilinear phenomena and rarely have been subjected to invariance testing to validate whether their structure is stable across subgroups (e.g., Acculturation and Resilience Scale [AARS]; Khawaja, Moisuc, & Ramirez, 2014). Hence, the following sections of the chapter discuss the:

(a) validation of the factor structure of the DSAEM - by specifically explicating the structural validity, invariance and reliability of the newly devised DSAEM, with the revisions to the a priori model and the finalised measures further validated and through emic accounts of ethnocultural adolescents when possible; and
(b) examination of the context-specificity and domain-specificity of both the internal (i.e., values and identity) and external (i.e. language, behaviours and knowledge) constituents of acculturative and enculturative processes through the emic accounts of ethnocultural adolescents.

Validating the Factor Structure of the DSAEM

The bilinear nature of the DSAEM demonstrates that both acculturation and enculturation are processes by which individuals acquire attributes of their culture of origin whilst adopting characteristics of their new culture. While there have been several studies which have attempted to measure acculturation and enculturation within the Australian context, few have attempted to validate these findings using both emic and etic approaches concurrently. As such, the DSAEM not only extends upon previous studies by being grounded in strong theoretical and conceptual underpinnings, but uses more robust and stringent mixed methodological techniques to enhance oversimplified conceptualisations and operationalisations of these processes.

Considering the exploratory nature of the study and the relatively small sample size, the reliability estimates across the total sample as well as across gender and grade (i.e., year levels) were deemed acceptable for all the a priori and revised DSAEM factors. A meta-analysis by Huynh, Howell and Benet-Martinez (2009) suggested that bilinear acculturation scales below the conventional .80 cut-off may be attributable to scale length that is, scales with more items yielded stronger reliability coefficients. This was especially evident in the reliability estimates of the revised scales, where reliability estimates dropped with the deletion of two additional items from the scales. Alternatively, these lower reliability coefficients within the
acculturation measure may be explained by floor effects which may be attributable to the biased sample used in this study (i.e., all the students in this study attend ethnic day schools where their ethnoculture is appreciated and imparted on participants), which in turn may have contributed to the under-reporting of acculturation variables.

Despite requiring revisions of the a priori measurement model (due to conceptual overlaps, high modification indices and low factor loadings of some items – see Chapter 6 for further details), the revised model supported an excellent fit of the data. In line with the findings and suggestions made within previous studies (Flannery et al., 2001; Nguyen, Messe, & Stollak, 1999; Rudmin & Ahmadzadeh, 2001; Ryder et al., 2000; Stephenson, 2000; Zea et al., 2003), the DSAEM supported acculturation and enculturation as domain-specific constructs, each consisting of three external domains: Language, Knowledge, and Behaviours. Convergent interview data with adolescent students provided validation for the three factor structure of the external domains of acculturation and enculturation by explicitly recounting their engagement, understandings and perceptions with each of the six factors (i.e. Acculturation Language, Acculturation Knowledge, Acculturation Behaviours, Enculturation Language, Enculturation Knowledge, Enculturation Behaviours – see Chapter 6 for results). However, all interviewees did not provide clear evidence for each domain across all interviews. Potential reasons for this include that interviewees vary in their engagement and understandings with acculturative and enculturative domains (see subsection on Behaviour domains for examples), essentially demonstrating domain-specific differences at the level of the individual. Explanations for these differences can be explicated by Berry’s four-fold theory of acculturation, with some students achieving various acculturative outcomes including integration, marginalisation, assimilation, and separation across domains.
While Berry’s acculturative outcomes are based on a more cumulative measures of acculturation (i.e., sum of all domains), it is possible to adapt this approach to domain-specific measures, meaning that individuals can be highly assimilated in their language use/proficiencies but integrated or separated in their cultural behaviour domains, explaining some of the inequities across these cultural facets. On the other hand, research on intergenerational transmission has noted that such inequities across the transmission of cultural domains may be due to the filters or choices made by both cultural transmitters (i.e., facilitators) and receivers. Here, choices on which cultural facets to acquire or transmit are largely influenced by both ecological and socio-political contexts (Phalet & Schönpflug, 2001; Vathi, 2015). Finally, as demonstrated by the current study, acculturative and enculturative processes are also context-specific. That is, one may be highly acculturated in their language use around Australians, while being highly encultured around members of their ethnic group. The contextualisation of these six domains is further delineated in an impending section of the current chapter (see - Exploring context and domain-specificity among the overt/external domains of acculturation and enculturation).

**Language.** Across the eight interviews, ethnocultural students depicted language as “one of the main things of being Lebanese” with others explicating that in order to claim a sense of belonging to a cultural group you have got to “speak the language” (Rana and Sophie). This finding is not only consistent with current acculturation measures (Cortés et al., 1994; Cuéllar et al., 1995; Mendoza, 1989; Stephenson, 2000; Tsai, Ying, & Lee, 2000), which also identify the importance of language as an acculturating and enculturating factor (also the most popularly measured domain; Matsudaira, 2006), but with studies which explore the relations between language proficiency and ethnic identity development (Cho & Krashen,
1998; Imbens-Baily, 1996). These studies have shown that increases in language proficiency among Armenian-American children also increase their identification with their ethnic community. While others have demonstrated a lack of language proficiency may provoke feelings of isolation or separation from a cultural community (Cho & Krashen, 1998; Imbens-Baily, 1996). Results of both emic and etic accounts of acculturation and enculturation language indicate that “language may serve as an especially powerful transmitter of cultural lineage” (Schwartz et al., 2014, p. 61), as well as feelings of belonging or connections with a cultural group and its members. For instance, Rana explains “…people speak Arabic and connect in Arabic ways”.

**Behaviours.** Similarly, consistent with current and previous quantitative scales (e.g., Gim Chung, Kim, & Abreu, 2004; Suinn et al., 1987), Enculturation Behaviours were qualitatively conceptualised as engagement with cultural traditions and foods. David explains “…attending Armenian cultural things, like dancing - Armenian dancing - singing Armenian songs, learning Armenian, the language. You know even making Armenian food.” Interestingly, students had difficulties in explicating Australian cultural celebrations and traditions; however some were happy to explain disparities between Australian and their ethnocultural traditions. For instance, Sophie explains: “I think there's a bit of a difference because the Armenian culture has more traditions whereas the Australian culture it's just like not really. It's just like every day comes and you don't really have traditions and things.” As per the earlier explanations provided, these disparities between cultural behaviours may be due to the nature of the sample or the fact that interviews were taking place within school grounds and in an attempt to enhance their social identity (or self-esteem), interviewees may have felt the need to enhance their ethnocultural domains.
Alternatively, it is possible that these students may be classified as separated (see Berry’s fourfold theory) with regard to their cultural behaviours domain that is, they responded in favour of their ethnoculture as they may engage more with these behaviours on a daily basis when compared to their Australian cultural behaviours.

Knowledge. Lastly, Acculturation and Enculturation Knowledge were the final external domains that were quantitatively measured in the DSAEM. Consistent with previous measures of this domain (Stephenson, 2000; Zea, Anser-Self, Birman, & Buki, 2003), Acculturative and Enculturative Knowledge were operationalised as engagement with news and current affairs, a willingness to (covertly) acquire more about the culture, knowledge and engagement of pop culture and understanding of cultural history. These forms of acculturative and enculturative behaviours were supported by emic accounts by ethnocultural interviewees through three emergent subthemes: knowledge of the past, knowledge of the present, and knowledge for the future. In succession, each of these subthemes made references to historical understandings of cultural knowledge such as cultural persecutions and wars of the past; present cultural trends such as popular culture (e.g., pop music and reality televisions shows); and an interest for future acquisitions of either Australian and/or ethnocultural histories (see knowledge domains subsection for more detailed discussion). Different from previous operationalisations of Acculturative and Enculturative Knowledge, interviewees described a continuum of knowledge, which spans from knowledge of the past, present and for the future. While current measures of these domains operationalise knowledge of the past and present in quantitative measures (e.g., Stephenson, 2000), rarely do they encapsulate an individual’s desire to enhance their current understandings.
Correlations among the DSAEM factors suggest that each domain of acculturation and enculturation in the model are related to an extent, however the size of the correlations between factors (except for Knowledge and Behaviour domains across acculturation and enculturation) indicated their distinctiveness. The moderate (see Table 6.57) to stronger (see Tables 6.9 and 6.18) positive correlations noted between Knowledge and Behaviour factors across both acculturation and enculturation measures convey that behaviour and knowledge domains were reciprocally reinforced factors. That is, students behave in line with their understandings and knowledge of their culture, or that their cultural knowledge is imparted on students through their activities and behaviours. Alternatively, this may be indicative of a more generalised theoretical construct or a higher order factor (see Chapter 6 for more details). Emic accounts by adolescents supported the former, that is knowledge and behaviours are reciprocally reinforced factors. For instance, when discussing their understandings of cultural behaviours (i.e., ethnocultural), interviewees referred to their comprehension of ethnic celebrations and traditions. For example, students explained their understandings of traditional practices which take place “when a baby gets their first tooth” (Carl) or during “Easter we do red eggs” (Nancy). Conversely, when expressing their understandings of cultural knowledge, interviewees reflected on their knowledge of the past (historical understandings) whilst also explaining how these have affected their actions or behaviours in the present. Garth explains: “We've had such a sort of racially unjust history that I guess the least thing we can do is learn from that and make sure that we treat others as we sort of would like to be treated…”. Had the current study been a purely quantitative investigation, these higher correlations, would have been interpreted as indicating a lack of discriminant validity, perhaps prematurely
prompting either the deletion of one of these variables/domains or the collapse of these domains into one factor. As such, these examples emphasize the limitations in the extent to which quantitative research captures the contextual characteristics that explain these relations.

Currently, domain-specific measures make up the minority of acculturation and enculturation measures, yet even these domains are categorised into internal/external domains, majority/minority cultures, and acculturative outcomes (e.g., assimilation, separation, marginalisation and integration) with very few focusing on the more intricate features of these processes (e.g. Language, Knowledge, Behaviours etc.). As it stands, due to a lack of domain-specific research, especially within the Australian context, it is difficult to quantitatively assess whether these relations are due to measurement error or whether these high correlations are due to the reciprocally reinforced nature of two independent factors as suggested by the qualitative findings.

The orthogonal bilinear feature of the acculturation and enculturation model, which conceptualises these processes on two separate continua, was generally supported. The study noted no significant negative correlations between acculturation and enculturation domains, thus dissuading the applicability of the unilinear model within the current research context (Matsudaira, 2006; Oetting & Beauvais, 1991). However, while results generally indicated that acculturation had no significant relations on their equivalent enculturation domains (supporting orthogonality and the bilinear model), Enculturation Knowledge and Acculturation Knowledge factors were the exception (see Table 6.57). These domains indicated a significant positive moderate relation (Cohen, 1988). However, as the size of the correlation between these factors was not high enough to refute their independence, it
perhaps indicated that individuals acquiring knowledge of their ethnoculture are also likely to have an interest in acquiring knowledge of their new society’s culture (or vice-versa). Consistent with the findings by Miller (2010), this study’s findings support the bilinear domain-specific modelling of acculturation and enculturation among ethnocultural youth, essentially encapsulating a larger variety of cultural variables than previous Australian unidimensional measures, making the DSAEM a more useful and practical operationalisation of these cultural phenomena (Ryder et al., 2000).

Strong psychometric properties of the instrument were also demonstrated through the invariance tests. Findings indicated measurement equivalence across both Years 7/8 and Years 9/10 participants as well as male and female subgroups. However, as partial invariance was met for both the Enculturation and Acculturation Behaviour factors across gender and grade (i.e., Year levels), these results should be interpreted with some caution. Taken together, these detailed findings have provided support for the bilinear domain-specific conceptualisation of acculturation and enculturation processes each comprising of three distinct external factors including Language, Knowledge and Behaviours.

Exploring Context and Domain-Specificity Among the Overt/External Constituents of Acculturation and Enculturation

Despite the wealth of quantitative scales that measure external domains (Mariño, Stuart, & Minas, 2000; Matsudaira, 2006; Zane & Mak, 2003), little research has been conducted relating to the roles played by ecological or socio-political contexts of domain-specific acculturation and enculturation within the context of ethnocultural Australians. Contextual factors create a variety of
psychological acculturation and enculturation trajectories both across individuals and within individuals (across various domains of acculturation and enculturation). Díaz, Neal, and Amaya-Williams (1990) describe acculturation and enculturation as comprising qualitative and unconscious changes within the level of the individual. While this study contends that there exists a psychic unity in acculturative and enculturative processes, which lie beyond the influences of cultural nuances, these processes, may vary at the level of the individual, as contextual factors differ from person to person. Such qualitative changes are difficult to quantify. Thus, one of the objectives of the current chapter is to extend upon the findings of the DSAEM, by exploring the subjective understandings, commitments, and choices made by adolescents during acculturative and enculturative experiences. When possible, the chapter will also use any qualitative findings to: (a) contextually and substantively enhance and clarify the quantitative findings; and (b) use the qualitative findings to inform future quantitative research.

**Language domains.** Supporting the notion that both acculturation and enculturation domains may also vary according to intragroup relations (in addition to intergroup relations), Rana described: “…because I have to speak Arabic to people who are very Lebanese and it helps me connect to the culture better”. Interestingly, Rana, among other interviewees also explained that she speaks in English with her (Lebanese-Australian) peers within the school context. Here, Rana’s switch to and from Lebanese and English may be explained by subjective intragroup dynamics, whereby the ethnoculture shapes and creates boundaries for the ways in which groups members should behave within various contexts. For instance in this example, Rana speaks in Arabic with those who are regarded ‘very Lebanese’ (perhaps from Lebanon) and feels comfortable conversing in English with her peers at school.
(generally Australian born children of Lebanese decent). According to literature on cultural transmission, cues from vertical (i.e., parents), oblique (i.e., other adults and institutions) and horizontal (i.e., peers) transmitters may also elicit certain culturally suitable behaviours. According to Marques et al. (2001), members from within the cultural group who diverge from these standards are deemed to be ‘black sheep’ (see Chapter 2), thus providing a socio-political motive behind the switch to and from the Lebanese and English languages. However, such an explanation leans toward assimilationist ideologies at the level of the cultural group, whereby acculturation undermines the enculturation of individuals. An alternative theoretical explanation for this finding, which also lends itself to the integration of multiple cultures at the level of the individual (as opposed to assimilationist stance), is the SIT (Tajfel, 1978; Turner & Tajfel, 1986). According to SIT, individuals may behave differently depending on their ecological and socio-political contexts in order to maintain a positive self-identity (Turner & Tajfel, 1986; See Chapter 2). In the aforementioned quote, Rana may be changing her language use based on the contextual setting (i.e., that is who she is culturally engaging with), in order to enhance or sustain a positive self or social identity. Thus, whether these changes in language use were influenced by the cultural group standards or whether Rana decided to adopt identity management strategies (see SIT – Chapter 2) to enhance/maintain her positive identity or whether a combination of these influences were at play remains unclear. Either way, it is clear that context has played a major part in facilitating these changes with Rana’s language use.

Links between group belonging, cultural context (i.e., home) and language use were demonstrated by Sophie, “… if say at home if you're just speaking English all the time you can just forget your Armenian language so you won't really be an
Armenian if you don't know your language.” Similar relations between cultural group identity and language use were also conveyed by Rana, “… because that's [language] one of the main things of being Lebanese…” Interestingly these results may indicate that ethnic language use and fluency are positively related to ethnic identity. Studies preceding these findings have also noted that language has an important influence on ethnic identity, with this especially being the case for members of migrant and ethnocultural groups (Fishman, 1977; Hurtado & Gurin, 1995; Phinney, Romero, Nava, & Huang, 2001). Essentially, the use of the ethnic language can be used by individuals to indicate their identification or their sense of belonging within their ethnic groups or communities (Oh & Fuligni, 2010). Thus, such changes in the use of language may be attributable to the underlying desires to maintain or gain a positive social identity across intercultural and within intracultural contexts.

**Behaviour domains.** During discussions of their cultural behaviours, students drew comparisons between Australian and ethnocultural behaviours. Some students alluded to cultural distance between the two types of culturally specific behaviours, with more favourable assessments made toward their ethnocultural behaviours. For example, Rana explained, “Maybe Lebanese have more things to do with their culture and they have more celebrations and stuff than Australians do”. Either such biased evaluations may be attributable to genuinely stronger affiliations with the ethnoculture or perhaps they are influenced by ecological and socio-political contexts. For instance, all of the interviews were conducted in the ethnic day schools attended by interviewees. As previously noted, such a setting may elicit responses that are more socially desirable within this context. Motivations behind such responses may have been prompted by a desire to maintain a positive social identity.
and in turn induce a positive self-esteem. Berry (2011) explains that cultural behaviours and abilities are only expressed if ‘the stage’ is ‘set appropriately’ (p.99), meaning that the motives behind expressing certain cultural behaviours may be enhanced or suppressed depending on contextual incentives or penalties. Such notions support the context-specificity of these processes, with individuals changing or enhancing their cultural affiliations based on ecological and socio-political factors, altering the domain-specific acculturative and enculturative outcomes (see Berry’s four-fold theory) within individuals. Cultural distance was further evident when interviewees stated ‘they’ when referring to Australians and ‘we’ with reference to their ethnocultural group, making the Australian culture the out-group and the ethnoculture the in-group. As the behaviour domain was not tested across contexts other than the ethnic day school environment (i.e., an Australian context), the current study is unable to evaluate if such socially and contextually desirable responses are at play in this instance or whether these evaluations of cultural traditions are stable across ecological and socio-political contexts. However, the possibility of these contextual influences cannot be entirely dismissed (as some interviewees demonstrated contextually desirable changes to their cultural identities during these interviews – see Contextualising Cultural Identity theme in Chapter 6).

Finally, domain-specificity of enculturation was also highlighted when discussing their engagement with Enculturative Behaviours. A few interviewees drew comparisons between their engagement with their heritage cultural behaviours and their lack of use and/or competencies of their ethnocultural language. Nancy explained: “Yeah, but like I do understand traditions and culture and all those sort of things but language I can't seem to grasp that much.” It is very possible that Nancy feels integrated within the behaviours domain, but separated with regard to the
language domain of enculturation. Nancy elucidates the domain-specificity of enculturation, explaining that while she feels comfortable with her understandings and engagement with her cultural behaviours, so much so that she would like “… to pass it down to my kids”. However, Nancy has had difficulty acquiring and in other instances engaging in her ethnocultural language. In this instance, Nancy highlighted that no one individual is capable of possessing all of the facets of culture as this lies beyond the psychological and biological capability of any one individual (Berry, 2011; Phalet & Schönpfug, 2001). This argument and the interviewee quotes highlight the domain-specificity of acculturative and enculturative phenomena, that is, individuals are likely to possess stronger affiliations with some cultural domains and not others. With current operationalisations (i.e., unilinear) and aggregate scoring of acculturation and enculturation domains across quantitative measures of these phenomena, there exists a clear disparity between theory and research. Future quantitative measures of these processes need to lend themselves to this understanding by focusing on domain-specific measures to reflect the multiple facets of acculturation and enculturation phenomena. These findings bring to light the complexities of acculturative and enculturative processes among ethnocultural youth and the significance of assessing variability within individuals. Few studies have been successful at demonstrating the domain-specificity of acculturative and enculturative processes (e.g., Miller et al., 2013; Miller et al., 2011) and much more need to be done to elucidate the domain-specific nature of these processes. Potential variations across additional domains within individuals must be considered, with further conceivable variations perhaps caused by contextual factors, be socio-political and ecological in nature.
Knowledge domains. In addition to ecological and socio-political influences observed in the language domain and hypothesised in the behaviour domain, students spoke of timeframes as a context in which one can attain understandings of cultural knowledge. Interviewees spoke of knowledge of the past, present, and for the future. While the ecocultural framework identifies the influences of both ecological and socio-political contexts, the framework should also extend to time, as an additional contextual factor. In other words, how the past, present and prospective ecological and socio-political interactions both at the level of the group and at the level of the individual may affect acculturative and enculturative processes of the present and the future. Within the current study, the ‘knowledge of the past’ theme referred to understandings which ethnocultural adolescents have gained previously. Most commonly, students referred to knowledge of ethnocultural histories, for instance, Sophie explained:

I know that we have a very strong background and we've had so many - like the Genocide and so many other cultures trying to ruin the Armenians. Yeah, so ... You've got to know your history, your background, speak the language and yeah, just to know your background and your history, the Armenian history. I think they are important because if you know about the history and you know about your background it makes you [a] true Armenian.

Here, Sophie not only emphasised the need to possess knowledge of the past, but its role in one’s cultural membership or perhaps cultural identity in the present. In addition to demonstrating the link between the past and present, Sophie also explicated links between knowledge of the past and its relations to other domains of enculturation, in this instance, identity. Similarly, as discussed earlier in this chapter,
Garth also demonstrated how knowledge of the past links to Enculturative Behaviours of the present (see above Validating the factor structure of the DSAEM ‘Knowledge’ subsection for example). These understandings of the past have clearly drawn links between the past and present ecological and socio-political contexts, essentially explicating how knowledge of the past influences current enculturative domains of the present.

Knowledge of the present was conveyed through current understandings of pop (i.e., popular) culture across both the ethnoculture and Australian cultures. More specifically, interviewees discussed current music, television programs, and news they would engage with on a regular basis, thus acquiring cultural knowledge through remote enculturative processes. While most students explained particular interests with Australian pop culture, they described that engagement with ethnic pop culture was dependent on two factors. The first being ecological in nature - accessibility to cultural resources (e.g. satellite television; ethnic newspapers etc.). The second being socio-political in nature - whether families were interested or engaged with ethnic pop culture themselves (i.e., vertical transmission). For instance, Rana explains how the popularised "XSeer Al Najah" (X Factor Arabia) which originated in the United Kingdom is also being televised in the Arabic language via satellite:

Yeah, like there was a channel that had music videos and mum would always put it on and I'd watch it and like the X Factor stuff…Well because we watch a show and it stars them and they're also on the radio. Sometimes mum will have it on and so I'll listen to it. But if it's just me, I put on the English radio.
While Rana would sit and watch these pop Arabic shows with her parents, she expressed a clear preference for Australian popular media. Perhaps some of the reluctance to engage with ethnic pop culture may be due to the relatively newer pop cultures, which are still maturing within these heritage countries, with most still being influenced by the pop cultures of westernised societies (Gans, 1997). Alternatively, it may be easier for Rana to engage with and understand pop culture in her first language (English).

Knowledge for the future can be explained as the desire to acquire further understandings of an individual’s ethnoculture or Australian culture. A number of interviewees expressed such desires to acquire greater understandings of either and/or both cultures. Sophie explained:

I would like to learn more about the Australian [history]. I would like to because I hardly know anything about the Australian history. So I would like to know a bit about that but also Armenian. I would like to know more about the Armenian history too.

Whether these aspirations for new cultural understandings were prompted by intrinsic desires to acquire new cultural knowledge or whether they were driven by external or contextual influences was unclear. However, the ecocultural framework of acculturation and enculturation research shows that domains of these processes are expressed or suppressed based on social cues. Additionally, the framework explains that motivations to attain new cultural understandings can also be dependent on such ecological and socio-political factors, which incentivise or penalise individuals who do or do not have certain cultural understandings (Berry, 2011). Hence, the ecocultural framework explains the possible influences of contextual cues, but does not consider intrinsic desires for acquiring further cultural knowledge, essentially
raising the nature versus nurture debate. Carl conveyed: “Because it would be interesting to learn something new about my own background, something that relates to me, see how it all happened, what happened, where it happened, who and where.”

It is difficult to decipher whether Carl and Sophie’s interests in attaining further cultural knowledge is prompted by intrinsic urges or whether they feel that their understandings are deficient based on previous social interactions with judgements from individuals from their ethnic and or Australian cultures. Either way, the emic accounts conveyed that quantitative assessments of this domain should consider future aspirations of cultural knowledge acquisition.

All in all, the findings across all three external domains of acculturation and enculturation have emphasised the need for future research in the area to recognise that cultural orientations of individuals are fluid within multiple contexts, which in turn work collectively to shape cultural engagement processes. The study demonstrated that inter and intra cultural factors (e.g., forms of transmission, socio-political or ecological contexts) not only have the propensity to impact acculturation and enculturation as global constructs, but impact the discrete domains of acculturation and enculturation within individuals. Furthermore, such influences may also extend to the acculturative strategies (i.e., see Berry’s four-fold theory) adopted by individuals, which may take place at various rates and in numerous ways across various domains, hence, emphasising the dynamic and variegated nature of the acculturative and enculturative processes.
Exploring Context and Domain-Specificity Among the Covert/Internal Constituents of Acculturation and Enculturation

Study 1 focussed on the measurement and contextualisation of the external domains of acculturation and enculturation. Study 3 aimed to expand upon these findings by qualitatively exploring the internal domains of acculturation and enculturation as these are psychological and more covert in nature. These more subjective changes in culture are reflected in identities and values and have been found to be more intricate and complex to encapsulate quantitatively across multiple cultures (Matsudaira, 2006). As it stands, the DSAEM measures the external or more overt areas of these acculturative and enculturative processes which include language, knowledge and behaviours. For the purposes of future enhancement of the DSAEM, it is necessary to consider the measurement of these internal subjective changes also, essentially providing a more holistic and well-rounded representation and assessment of these processes. Thus, drawing on theoretical perspectives as well as the conceptual frameworks outlined in Chapter 2, the following section extends upon Study 1 by discussing distinctions, patterns and complexities across various contexts of internal domains of acculturation and enculturation.

Identity. When posing two central interview questions addressing the context-specificity of identity, interviewees demonstrated two sets of patterns in their responses, these included: (a) instabilities of cultural identity across context; and (b) stabilities of cultural identities across context. While some interviewees supplied consistent cultural identities to address both questions (denoting the theme of stabilities), others changed their responses (denoting the theme of instabilities). Such patterns of continuity and deviation were observed across responses.
Instabilities of cultural identity across context. Respondents generally identified their ethnoculture in their responses to the first interview question (i.e., if you were asked by a fellow Australian, ‘what is you cultural identity?’ what would you answer?), “I’d say Greek.” While associating more with their national identities in their responses to the second interview question (i.e., if you were travelling overseas and a fellow tourist was to ask you, ‘what is your cultural identity?’ What would you answer?), “I’d probably say Australia and if they do question, oh you're not the blonde hair, blue eye, like stereotypically, I would say, yeah but my grandparents are from Greece so I'm Greek Australian.” This pattern of classifying and reclassifying cultural identity, supports the notion that cultural identity is a malleable concept which can adapt or adjust based on the social and cultural ‘stage’ or context (Arends-Tóth & Van de Vijver, 2007; Berry, 2011; Berry et al., 2011; Fang, 2005; Hong et al., 2000; Leung, Bhagat, Buchan, Erez, & Gibson, 2005).

Similar theoretical perspectives are evident within the cognitive approach. Specifically, SIT explains that cultural orientations are a set of complex processes where individuals classify, reclassify, and build their own and others’ cultural identities (Ward et al., 2001). As outlined in Chapter 2, the observed changes in cultural identities across these excerpts may be examples of individual mobility - an identity management strategy to enhance positive distinctiveness of an individual’s cultural identity when they feel that their current identity status is devalued. Here, participants perceived their cultural identity to be socially acceptable within their host-society (Australia) and perhaps believed that this identity would be received less favourably overseas (i.e., as some cultures are received less favourably than others; Steiner, 2009), consequently feeling the need to switch their cultural identity to enhance or maintain a positive self-esteem through perceived distinctiveness. Nancy
(perhaps providing the most detailed thought processes of any interviewee) adopted both ‘social comparison’ and ‘psychological work’, two psychological processes of SIT to compare her cultural identity with other cultures as well as expresses the need to maintain a positive distinctiveness in her cultural identity. She explains: “Because you don't realise how much Australia is unique compared to other places until you do compare it with someone that's from America, someone's from France.”

Interestingly, these cognitive evaluations between cultures were not limited to intercultural (i.e., comparing one’s own cultural identity with a foreign culture) but extended to intracultural comparisons (i.e. comparing the multiple cultures one identifies with). For instance, Nancy explains that she feels most Greek:

When I'm not around it… Because when I'm around Greeks I tend to, I tend to know less than other people but when I am not around it those people don't really know what the Greek culture is about so I inform them about some of the things and I do feel more Greek when I'm not around it.

Nancy's intracultural evaluation, explains her use of the social competition identity management strategy, whereby she attempts to enhance her cultural distinctiveness (i.e., self-esteem) in the context of her non-Greek counterparts. Both these intercultural and intracultural evaluations support the dynamic and intricate, rather than the static conceptualisations of identity domains. Influences on cultural identity stemmed from levels of the cultural group Nancy was immersed in, as well as familial pressures which were also at play. Nancy explained, “…if I ever say I'm Greek my mum would always be like, ‘No! You're Australian!’ but they want me to be Greek. So just gets a bit confusing sometimes”. It seems that even Nancy’s mother is torn between her daughter’s Australian and Greek identities, perplexing
Nancy, perhaps trapping her between two cultures. Studies in social identity have shown that observed rejection from either the majority or the minority cultures may impede bicultural identity integration (see Hornsey & Jetten, 2004; Marques et al., 2001). For individuals who belong to a segmented cultural group, who demonstrate domains of acculturation (e.g., behaviours and identities) which are incongruent with that of their minority culture, may be labelled as charlatans by members of their minority cultural group (Marques et al., 2001). Such individuals labelled as charlatans, can be rejected by their in-group and are at times treated worse than individuals whom belong to the out-group (whose characteristics the individual may be exhibiting), as their actions are compromising the cultural distinctiveness of the in-group. In line with this understanding, Nancy’s mother is perhaps questioning her daughter’s Greek identity as Nancy’s lack of Greek knowledge when compared to other Greeks as well as her lack of competency in the Greek language, makes her more Australian than Greek.

On the other hand, Tam, Lee, Kim, Li and Chao (2012), tested the perceived norms perspective using multi-level analyses and found that parents select their ideas of what cultural facets to transmit to their children based not only on their own cultural orientations, but also on their perceptions of what is endorsed within the society of settlement. Meaning that, the more parents favour their cultural orientations and the more they perceive this to be valued by fellow Australians, the more likely they are to transmit them to their children. It is possible that, Nancy’s mother has mixed feelings about which cultural identity she would like to transmit to her daughter as her cultural identity is incongruent with that of the majority society. In this instance, her preference for the Australian identity may be largely influenced.
by her perceived endorsement for an ‘Australian identity’ among other parents within the larger Australian society.

It is also important to contend the possible role of identity development to explain the inconsistent cultural identity responses provided by Nancy, Garth, and Sophie. According to the developmental perspective, individuals do not develop their sense of cultural or ethnic identity until late adolescence to early adulthood, as they do not possess the abstract and counterfactual cognitive skills to contend with identity issues (Marcia, 1994; Umaña-Taylor et al., 2014). Therefore, according to this perspective, it is likely that the adolescent interviewees were perhaps still contesting, negotiating, and exploring their cultural identities otherwise known as the identity diffusion stage (Phinney & Ong, 2007; Umaña-Taylor et al., 2014). However, as the current study is cross-sectional in nature, it is impossible to assess the effects of developmental trajectories of acculturation and enculturation in the current study. Ideally, longitudinal methodological approaches would better inform the impact of developmental aspects of cultural identity. Nevertheless, its possible impact on responses should still be deliberated.

While Berry (2006) argues that this integration strategy is by far the most favourable for acculturating individuals (i.e. due to positive psychosocial outcomes; Phinney, Berry, Vedder, & Liebkind, 2006; Schwartz & Zamboanga, 2008), Rudmin (2003) disagrees, proposing that such an acculturative outcome or strategy may cause migrating individuals to be trapped between their two cultures. An extension of Rudmin’s (2003) position, the BII theory devised by Benet-Martinez and Haritatos (2005) may also serve to explain some of the current findings. These explanations go beyond Berry’s integration outcome by explicating how individuals combine two cultures which can be conflicting or congruent. According to BII, it is possible that
Nancy (and perhaps other interviewees) sees her two cultural identities as conflicting, essentially possessing lower BII (see Chapter 2) as she feels the need to choose one culture over the other and is unable to maintain both simultaneously.

While these findings do explain the intracultural cognitive processes of cultural identity well, the findings of the current study challenge some of the fundamental assumptions of BII processes, especially with relation to intercultural processes. For instance, the literature presupposes that acculturation can drive cultural integration only through intra-national or intra-cultural settings (i.e., cultural environments affiliated with the bicultural identity only) and that such integrated identities are not generated by foreign or international settings as these provoke acculturation stressors such as cultural isolation and prejudice. While studies of BII generally explore the cultural pulls and pushes (e.g., cultural conflict and cultural distance) of mainstream and ethnocultural identities, they assume that only two cultures contribute to or influence the emergence of bicultural and multicultural identities. Secondly, the theory proposes that low BII individuals compartmentalise their two identities, ‘switching’ between one and the other based on cultural cues. Both of these assumptions of BII are contested by the interview data. The inconsistencies in cultural identity exhibited by Garth, Nancy and Sophie, may be indicative of a lower BII, meaning that these participants perceive their previously separated cultural identity statuses to be incompatible, or in opposition with that of the new host society they are travelling through. Perhaps they chose to blend their ethnocultural identities with that of their national identity (Australian), in an effort to enhance the compatibility between their identity and that of the receiving society. This questions the validity of the notion that low BII individuals only compartmentalise their ethnic and national identities. As seen in the responses to the
question “If you were asked by a fellow Australian ‘what is your cultural identity?’ what would you answer?”; three interviewees responded with separated identities within their national context; yet replied with bicultural or integrated identities, when asked the very same question by a fellow tourist in a foreign country. The integration or blending (high BII) versus compartmentalisation (low BII) of the two identities is not a static but dynamic process which changes within the individual over ecological and socio-political contexts. Here, the compatibility analysis conducted by these participants was not only between their ethnocultural and national identities, but also took into consideration the third culture, that of either the tourist (asking the question) or the travel destination. It is likely that in order to enhance the compatibility of their cultural identity with that of the third culture, students chose to integrate their ethnic and national identities, instead of choosing one or the other. This challenges the suggestion that BII is a static process, as individuals are able to switch between high or low BIIs depending on their contextual cues and forces the theory to move beyond the discrimination of individuals into categories. Finally, the suggestion that contact with a new society is a stressor and an inhibitor of BII rather than a facilitator is also challenged, as the integration of both the ethnic and national identities was aided by the presentation of the foreign culture. Research in understanding the dynamic nature of biculturalism and its cognitive and affective underpinnings is still at its primitive stages. Future research in BII would benefit from more context embedded studies, and research should move away from the abstract assessments of the process. The current study presented findings which challenge current conceptualisations of BII and has provided a small but insightful contribution on explicating the intricacies and dynamic nature of bicultural identity negotiations.
Stabilities of cultural identity across context. On the other hand, a pattern of continuity of cultural identity was observed across both interview questions with the remaining interviewees. For example, when asked “if you were asked by a fellow Australian ‘what is your cultural identity?’ what would you answer?” Yvan replied, “Greek.”. Following this when participants were asked “If you were travelling overseas and a fellow tourist was to ask you, ‘what is your cultural identity?’ what would you answer?” Yvan responded “Still Greek.” Similar responses were also expressed by the remaining four participants. Most interviewees were unable to justify their responses, responding with “Not sure” and “I don’t know”. According to the developmental perspective, this consistency in cultural identity across both international and intranational domains may be evidence that individuals are experiencing foreclosure or achieved stages of ethnic identity development, thus exhibiting more salient identities which are consistent across changes in context. However, as previously mentioned, because interviewees were unable to provide a rationale for the continuity of their responses (e.g., “I don’t know”), it is more likely that these individuals are at the foreclosure stage (as opposed the achieved stage) of development (i.e., when individuals have made a commitment to an ethnic identity, but have not explored their ethnic identity; see Phinney & Ong, 2007). This is largely because at the achieved ethnic identity stage, individuals have a greater self-awareness for the reasons behind their cultural group membership and providing a justification should have been relatively easy (Phinney & Ong, 2007).

SIT provides two possible explanations for the consistencies in cultural identities across these contexts. The first would suggest that students with such a stable sense of cultural identity may perceive their cultural group to be in possession of positive cultural distinction within the new society (i.e., the society they are
travelling to). Such tendencies to perceive the in-group culture as superior or socially distinct from the out-group may be enhanced by ethnocentrism. Ethnocentric individuals perceive the members of their in-group to be superior to members of the out-group and in turn create social distance from its (out-group’s) members (Brewer, 2001; Chang & Cheng, 2011; Gudykunst, 1991; LeVine & Campbell, 1972). David, was the only student who could rationalise his consistent identity across context:

Armenians were the first people to be, first nation to be Christian, like the whole nation……because it's gone smaller over the years. I would say it's one of the oldest nations in history, because it first started from Noah because I think Noah's grandson's son - like Noah's great grandson, was Hayk, Hayk Nahapet, who is one of Armenia's greatest heroes.

While few studies have shown how ethnocentrism affects tourists’ cultural identity, some have shown that ethnocentric individuals are more likely to prefer the preservation of the ethnoculture instead of host cultural integration or assimilation (Chang & Cheng, 2011; Rasmi, Ng, Lee, & Soutar, 2014). In such a case, perhaps David would not feel the need to adopt identity management strategies to enhance his social standing as he already feels that he is in possession of such a positive status. The second explanation provided by SIT suggests that these interviewees with consistent responses are still in search of a positive distinction in this new society; however they go about achieving it by adopting alternative identity management strategies. Rather than employing the individual mobility strategy (i.e., changing cultural identity to achieve a positive distinction from the out-group – as seen by participants with inconsistent cultural identities across both contexts), these participants may be utilising the social competition strategy to enhance their sense of
social identity and in turn their self-esteem. For example, by stating that Armenia is the “first nation to be Christian”, David may be adopting the social competition strategy to show-off the distinct and unique attributes of the Armenian culture, in turn gaining a more positive social identity.

Values. As demonstrated by the previous theme, acculturation and enculturation require appropriate contexts to allow for the expression of suitable characteristics of cultural competence. Individuals may interpret some contexts to be suitable for the expression of characteristics from one culture but not the other, or perhaps in contexts where cultural heterogeneity is commonplace and perhaps even valued, individuals may choose to express a fusion of their bi/multi-cultural characteristics. Such fusions were observed in the cultural identity domain (e.g., “I would say I'm from Australia but my cultural background is Armenian.”), and were also observed within the values of some participants, at times switching ‘on and off’ cultural values based on socio-political cues. That is, rather than mixing aspects of cultural values in any given context, participants would switch to and from their ethnocultural and national cultural values. This notion does not imply that individuals are incapable of possessing both ethnocultural and national values simultaneously, the findings simply imply that their development and activation through observed behaviours are contextually sensitive.

Consistent with previous research, the findings of the current study indicated that the vertical and oblique belts of cultural transmission (i.e., parents and other adults and institutions) play a significant role in the acculturation and enculturation of values (Gecas & Seff, 1990; Roberts & Bengtson, 1999). Yvan explains, “Grandparents taught them to my parents, and now my parents are teaching them to me, then I'll teach them to my kids when I have kids”. Similarly, Sophie explained
that she learned her cultural values “From my parents and from my family.” Further to this, researchers have identified that there is a high level of similarity between the values of parents and their children, recognising three factors which influence the transfer of family values to progressive generations. These include: 1) occupational or social class influences; 2) perceived similarities and differences of values; and 3) family behaviours (Gecas & Seff, 1990). David explains his experiences of family behaviours which have transferred his cultural values, “I reckon I learn Armenian values at school, but I experience them at home. We learn about what the values are at school, but at home it's actually happening.” Whether these skills are acquired through overt (i.e., socialisation) or covert (i.e., enculturation) transmission processes remains unclear.

Despite the influences of family and home on the acquisition and implementation of cultural values, immigrant parents are sometimes faced with conflicts between the ‘passing down’ of their cultural values to their children whilst allowing their children to attain and enforce the values of national culture. The challenges for parents of acculturating adolescents as well as the adolescents themselves is the paradox between cultural transmission (i.e., enculturation and socialisation) and acculturation, with competing cultural models and cues from both the host society and cultural transmission belts (Phalet & Schönpfleg, 2001). These conflicts are especially prevalent in adolescents whose values are similar to their non-ethnic peers than with their families’. The following section explores two divergent discourses that emerged from the data: a) parent/adolescent cultural consistencies, and b) parent/adolescent cultural discrepancies.

**Parent-adolescent cultural consistencies.** In his emic accounts, Carl noted cultural value consistencies between him and his parents. He explained that his
cultural values were ‘Lebanese’ similar to those of his parents. This was further affirmed when questioned about his Australian values, explaining, “I'm not sure about some Australian values. I don't know what to say about those.” His lack of understanding of the Australian values and/or his preference for the Lebanese values was noticeable within the tone of his response. His separated values domain could perhaps be the outcome of such a compartmentalised view of Australian and Lebanese values.

Despite research suggesting that children of immigrants adapt faster to national cultural values than their parents (Phinney et al., 2000), Carl did not convey any cultural value discrepancies between himself and his family. To understand the possible explanations behind the cultural transmission of his values, other contextual factors need to be considered, which have perhaps facilitated the perceived maintenance of Carl’s ethnic values. Allowing him to reconnect with his heritage cultural values (unlike other students), Carl also had the opportunity of visiting his country of heritage “three or four times…” He explained that “…I saw how they acted and I liked it.” While only a temporary form of contact with his heritage country, this form of remote enculturation provided Carl with opportunities to experience Lebanese cultural values first hand.

Other explanations behind this consistency across intergenerational cultural values may lie in the large Lebanese presence in New South Wales. The Lebanese have a lengthy history in Australia with settlements dating back to the 1880s. In addition, New South Wales retains 75 percent of Australia’s Lebanese population (Australian Lebanese Historical Society of Victoria, 2000). Such a large presence of individuals from the same or similar ethnocultural group may enhance an individual’s exposure to their ethnocultural values. This culminated with their
attendance at an ethnic day school, socialising with peers within the same ethnocultural group through extra-curricular activities such as soccer (which Carl engages in) as well as his experiences with remote enculturation may reaffirm the ethnocultural values imparted by Carl’s parents. Therefore, while parents may try to ‘pass down’ the ethnocultural values to their children, such value transmission may further succeed when combined with other ecological (i.e., socioeconomic status – parents can afford sending Carl to Lebanon on numerous occasions) and socio-political (i.e., horizontal and oblique transmission belts) influences which allow the child to be exposed to cultural values consistent with those endorsed by parents. Thus, the homogeneity in the beliefs across transmission belts (i.e., parents, school and peers), in addition to ecological factors which have facilitated remote enculturation have allowed Carl to experience greater Lebanese value transmission (Ferguson et al., 2016; Schönpflog, 2001).

On the other hand, such parent-child family congruence may have less to do with the family transmission of cultural values and more to do with Carl’s perceived social identity. Due to Carl’s many opportunities to culturally socialise with individuals with the same cultural background as himself (than non-Lebanese individuals), he may consider the Lebanese values to be more applicable and relevant in his day to day functioning. For instance, Carl may perceive his Lebanese values to be congruent not only with his family’s but those of his peers at school (attends an ethnic day Lebanese high school), church (Lebanese) and extra-curricular activities (soccer – where “there's a lot of Lebanese people that play there”). Such salient Lebanese values may be well regarded in these social circles, especially in a community which seeks to conserve what is Lebanese. Thus, such socio-political influences, may not only provide Carl with a greater sense of belonging within his
Lebanese community, but may also enhance his social standing and self-esteem within the context of his Lebanese community (Tajfel, 1981).

**Parent-adolescent cultural discrepancies.** In contrast to the previous finding, parent-adolescent cultural value discrepancies were more apparent. Emma explained:

Well, I just don't even like the idea of South Africans. Because, I mean, as much as I love my family and everything, I just - some of their values [South African] are a bit - aren't my values. Like, I don't have the same sort of values. Such as, I don't know, like when my dad was in South Africa, he had people working for him, like cleaning their house, doing this, doing that, so he didn't have to do much. Like, I mean, you have to work for yourself. What else?

Upon further questioning, Emma conveyed that her values were at odds with her father’s, because she is “Pretty influenced by my mum” later mentioning that her mother’s values were at odds with her father’s (as mentioned in the biography - mother has an American Jewish heritage and father has a South African Jewish heritage). According to Portes (1997) changes in cultural values during acculturation are faster across adolescents than across their parents, which in turn see an increase in value discrepancies between parents and their children. Alternatively, research by Waters and Jimenez (2005) has demonstrated intermarriage as a considerable threat to cultural continuity. Simons, Whitebeck, Conger, and Melby (1990) convey that value transmissions of mothers are also more influential than those of the fathers.

Similar notions of ‘overprotectiveness’ and ‘trust’ issues were also permeating through both Emma and David’s accounts. Emma exclaimed, “They're
also really overprotective with their kids and stuff. They just need to relax sometimes.” Similarly David explained:

I’ve seen from my friends from my old school who were Australian, they’re sort of a bit not as - they don’t care but as much as Armenians do but what I mean care, as in they do let them, like they trust them, they trust them at a younger age to do things themselves. So yeah, sometimes I wish my parents would trust me.

It can also be argued that to some extent such discrepancies in values may reflect a universal norm between parents and adolescents in westernised societies, with parents struggling to conserve existing beliefs and child rearing practices and adolescents questioning parental expectations. However, researchers believe that within immigrant and ethnocultural groups, such intergenerational differences are less accepted by both parents, due to the norms and beliefs which value greater respect to elders (Phinney et al., 2000; Yau & Smetana, 1996). Perhaps David’s value of autonomy is similar to his non-Armenian peers than with the values held by his parents. Armenians, like the Lebanese and Greek cultures, possess collectivist values (Phinney et al., 2000; The Hofstede Centre, 2015). Collectivist cultural values are generally characterised by a heavy emphasis on conformity to cultural beliefs, cultural interdependence and interpersonal relations. On the other hand, individualism (i.e. neoliberal values) can be characterised as a looser cultural framework, where self-preservation is valued, there is heavier emphasis on individual goals, and personal attitudes precede cultural group attitudes and cultural group preservation (Berry et al, 2011; The Hofstede Centre, 2015). Perhaps parents and adolescents see such values (not all) at odds particularly when contextual boundaries are crossed. For example, it is theoretically easier to switch to and from
Armenian and Australian when the contexts in which these two sets of values are applied are independent of each other (i.e., implement Australian values when surrounded by Australians and Armenian values around Armenians). However, when parents cross such contextual boundaries, this system of switching to and from domain-specific values (e.g., parents do not allow David to be as autonomous as his friends), may illicit intergenerational conflicts of cultural values. Specifically, David conveys his reluctance to such collectivist values which are enforced at home as he sees this to be at odds with the Australian cultural values of autonomy, which he perceives his Australian peers to possess. Such parent-adolescent value discrepancies have the potential to create difficulties for acculturating adolescents, particularly when adolescent refutation of ethnocultural values is interpreted as an increase in disrespect towards parents (authority), in turn adding stress within parent-adolescent relations. It is also possible that the more time David culturally socialises with his non-Armenian peers, the likelihood of cultural value discrepancies between him and his parents will also increase (Phinney et al., 2000).

These socio-political influences through cultural engagement with family and friends, once again have shaped the acculturation and enculturation of values among adolescents. According to the BII theory, these socio-political influences through instances of cultural engagement may create cultural conflict, whereby David perceives his heritage cultural values clashing with his Australian cultural values, which may in turn elicit anxiety within David, especially around his Australian peers (Hirsh & Kang, 2015). Corresponding with the SIT, it is possible that these cultural conflicts are prompted not only by David’s Australian social circles, but is perhaps intensified by his desires to attain or maintain a positive social identity within his Australian and Armenian circles, in turn perhaps seeing his parents as a barrier to
achieving this. According to this theory, it is possible that David identifies his parents as a barrier in adopting identity management strategies such as individual mobility. Such a strategy would give him the means to change his cultural values toward those possessed by his Australian peers which would in turn allow him to possess a more positive social standing among them.

**Summary**

Overall, systematic and stringent methodological practices were employed in the development of the DSAEM to ensure that the measures were continuous, standardised and domain-specific for ethnocultural youth attending ethnic day schooling. Quantitative methods were used to assess scale reliabilities, construct validity and measurement invariance to test the psychometrics and measurement models were consistent across gender, grade (i.e., year level) and the total sample. Further to this, emic accounts from interviews were utilised to explain and validate the psychometric findings of the DSAEM. These preliminary results suggest that the DSAEM demonstrates the bilinear domain-specific conceptualisations of acculturation and enculturation, overcoming many of the current measurement issues (i.e., unilinear and unidimensional measures, aggregate scoring etc.) which plague this area of research. Extending from this, the qualitative research component also made efforts to contextualise both external and internal domains of acculturation and enculturation, which were otherwise challenging to encapsulate quantitatively. Consistent with the ecocultural framework, qualitative results not only showed the context-specificity of these processes but also supported the domain-specificity.
Examining the Psychosocial Correlates of Domain-Specific Acculturation and Enculturation Among Ethnocultural Adolescents

Globally, most of the current research focuses on the unilinear conceptualisation of acculturation and enculturation result in dichotomous features, that is: Australian-orientated (assimilation) versus Ethnic-orientated (separation) acculturative outcomes (Kim, Newhill, & Lopez, 2013). Consequently, much of the literature which examines these relations focuses on the separation or assimilation outcomes and their impacts on academic and psychosocial outcomes. Other studies simply utilise proxy measures such as language competency or generation status (e.g., Ibañez, Kuperminc, Jurkovic, & Perilla, 2004). Utilising such proxy measures, a substantial amount of research indicates that more separated youth are likely to be identified as successful students when compared to their assimilated counterparts (e.g., Perreira, Fulgni, & Potochnick, 2010; Schwartz, Zamboanga, & Jarvis, 2007; Zarate, Bhimji, & Reese, 2005). However, these findings have not been consistent across studies utilising the unilinear framework of acculturation and enculturation, with other studies demonstrating that assimilated individuals are more academically successful than their separated counterparts (e.g., Guzmán, Santiago-Rivera, & Hasse, 2005; Ibanez et al., 2004). Thus, the relationship between acculturation/enculturation and academic adjustment has been a point of contention among researchers utilising unilinear frameworks and proxy measures of these phenomena. As such, Study 2 examined the intricacies and dynamic multifaceted nature of these cultural phenomena and its impacts on four psychosocial outcomes: academic self-concept (General, Maths, English and School Subjects); academic motivation (Intrinsic and Competition Orientations); school belongingness (School Attachments); and Multiculturation.
Psychometric Assessment of Instrumentation

In addition to the development and psychometric testing of the DSAEM, Study 1 also conducted psychometric testing on a series of established instruments given the unique characteristics of the sample. The psychosocial measures utilised in the current study have not yet been administered to ethnocultural adolescents recruited from ethnic day schools. Consequently, the current study is also extending upon research, by examining whether the psychometric properties of these established measures also hold for this unique student cohort. Contrary to expectations, the psychometric properties of the four selected factors of the ASDQII, two selected factors of the SMQ, and the Multiculturation scale, were not supported, with the Attachment factor from the SBS being the exception. The standardised models of these measures did not produce an acceptable fit to the data. Thus the construct and convergent validities of these measures for the current sample were problematic. Further to this, other variables, which may have affected the psychometric properties of these measures, include the length of the survey and the time (i.e., end of the year/school term) of administration. The survey took roughly 45-50 minutes to administer, thus student fatigue could be a factor. Moreover, schools were only available for survey administration toward the end of the school term, adding to student fatigue.

The measures were revised with the deletion of weaker items and each of the revised measures was subjected to further psychometric analyses (see Chapter 6). The refined ASDQII, SMQ, Multiculturation and the a priori model of School Attachment (from the SBS) scales produced acceptable reliability estimates across the total sample, as well as across both grade (i.e., Year levels) and gender subgroups (Cohen, 1988; Nunnelly, 1978). The refined models of the measures produced an
excellent fit to the data. Measurement invariance across individual revised measures also indicated that the refined models held similar structures across gender and grade (i.e., year levels) subgroups, with the exception of the Attachment factor (from the SBS) which did not reach minimal invariance across gender only (Cheung & Rensvold, 2002). Overall, Chapter 6 established the structural validity of the battery of revised measures, meaning that all the measures were structurally upheld when all the instrumentation was merged into a single assessment. Measurement invariance across the battery of instruments was not testable, due to the lack of power within the small sample size.

**Psychosocial Correlates**

The current investigation examined the psychosocial correlates of domain-specific acculturation and enculturation across: (a) domain-specific self-concepts (General, Maths, English, and School Subjects); (b) academic motivation (Intrinsic and Competition Orientations); (c) school belongingness (School Attachment); and (d) Multiculturation. The results indicated that the psychosocial correlates of acculturation and enculturation are domain-specific, with each domain showing correlations of varying degrees. As such, the following section discusses the domain-specific correlates of acculturation and enculturation.

**Acculturation and Enculturation Language Domains**

The SEM results revealed that adolescents who were acculturated in their national and enculturated in their ethnic languages reported higher rates of perceived cultural respect (i.e., Multiculturation) from the larger Australian community. Additionally, both Acculturative and Enculturative Language domains were
positively associated with School Attachment. While these findings may seem somewhat similar to those reported by Andriessen and Phalet (2002), revealing that Moroccan students who related well with the host society culture exhibited stronger sense of school belongingness, they are also distinct, as the aforementioned study was conducted within the setting of a culturally heterogeneous school. Different from this school setting, the current study took place within ethnic day schools whereby the cultural language, values, identity and other facets of the ethnoculture were transmitted, either through socialisation/formal education (i.e., in conjunction with the Australian curriculum) or through enculturation/informal engagement with peers (i.e., horizontal transmission). As such, students within the ethnic day school settings would have perhaps felt more comfortable conversing either in English or their ethnocultural language on school grounds, creating a sense of acceptance and belonging for its students. In consideration of these ethnic day schooling contexts, it is not surprising that students who engaged (and felt competent) in English as well as those who spoke (and were proficient) in their ethnocultural languages, were more likely to have feelings of attachment toward their school.

Upon conducting a more comprehensive analysis of these domains by controlling for the effects of both demographic characteristics (i.e., grade, gender and cultural background) and other acculturative and enculturative domains using HMRA, Acculturation Language was still positively associated with Multiculturation. These findings corroborate the ideas of Imbens-Bailey (1996) and Phinney and colleagues (2001) who suggested that language domain plays an integral role in creating links to an individual’s culture, as it assists in the enhancement and maintenance of cultural engagement, thus providing greater accessibilities to the cultural community. Such access would provide individuals not only with a sense of
acceptance and respect (i.e., Multiculturation), but would enhance one’s sense of belonging to the group. Thus, the study findings highlight the important relations of English language with literacy skills and perceived respect and acceptance by others in the larger Australian society.

In addition to these findings, results indicated that Acculturation Language was positively associated with higher General Self-concept among the ethnocultural sample. Here, the possible influence of the ethnic day school setting must be acknowledged. These settings are perhaps creating opportunities for ethnocultural cohorts to make choices with the manner in which they acculturate (Phinney et al., 2001). By providing a school environment where the heritage and Australian cultural languages are valued, pressures to assimilate (which may cause anger, depression and violence) are eased. It is possible that feelings of comfort and acceptance across the ethnocultural cohort could increase. Consequently, these findings may suggest that school environments which value an integration strategy of language acquisition may enhance the General Self-concepts of ethnocultural adolescents (Phinney et al., 2001). Alternative explanations are provided by the social comparison psychological process of SIT (Tajfel, 1981). According to this process, as the English language is currently considered to be the international language of business, as well as the language of the society of settlement, it is likely that ethnocultural individuals affiliate English language competence and use with higher social status. Thus, an increase in perceived distinction or status (elicited on by an increase in Acculturation Language) may in turn increase the General Self-concept of ethnocultural adolescents.
**Acculturation and Enculturation Knowledge Domains**

Like Enculturation Language, SEM results indicated that ethnocultural students who are familiar with news, current affairs and historical events relating to their ethnoculture (i.e., Enculturation Knowledge) were also likely to feel a greater School Attachment (i.e. school belongingness) whilst also perceiving cultural respect (i.e., Multiculturation) from the larger Australian community. The pathway between Acculturation Knowledge and Intrinsic Motivation was found to be marginally significant. This pathway may reach significance within future studies comprising of larger sample sizes and must not be completely dismissed. Unlike Enculturation Knowledge, the Acculturation Knowledge domain was not significantly associated with any other psychosocial factors. These findings may be indicative of the context-specificity of these relations. For instance, it is possible that students see the benefits in attaining cultural understandings of their ethnoculture, as they are culturally engaging and socialising with peers and teachers (not all) with similar ethnic backgrounds. The ecocultural framework assists in the understandings of these findings; here knowledge of the ethnoculture may be used as a tool to enable peers and teachers to interact with each other by drawing on common cultural interests and understandings. By effectively utilising this common ground to build their social networks within their ethnic day schooling contexts, adolescents are perhaps able to adapt to the schooling context, which in turn builds a greater sense of school belongingness (Berry, 2011; Berry et al., 2011).

HMRA findings revealed that like the language domains, Enculturation Knowledge was also found to be a strong positive correlate of Multiculturation. According to SIT, perhaps the association between Enculturation Knowledge and Multiculturation can be explained through the identity management strategies
adopted by students to maintain positive distinctiveness among the larger Australian society. For instance, ethnocultural adolescents may potentially draw upon their ethnic cultural knowledge to emphasise parts of one’s ethnicity, which attains positive reactions from Australian society (i.e., individual mobility strategy). Other strategies such as social competition and social creativity (see Chapter 2) may also be used to also attain positive cultural distinctiveness within the Australian society, when students draw on their ethnocultural knowledge. For instance during interviews, David discussed his knowledge of famous Armenians: “…Raymond Vahan Damadian. He's still alive I think, and I think he invented the first MRI and I was very surprised because you don't really see that every day. I've also heard that there's an Armenian working at the European Space Agency…” Sharing such cultural achievements may increase a sense of social competition and even tap into social creativity strategies to develop positive cultural distinctiveness within Australian society, essentially increasing the perceived ethnocultural respect and acceptance (i.e., Multiculturation) ethnocultural adolescents procure from the larger society (Turner & Tajfel, 1986).

On the other hand, considering that ethnic day schools are miniature societies of settlement, it is possible that such an environment (i.e., oblique transmission) would enhance one’s engagement with cultural acquisition and transmission (i.e., horizontal transmission) via overt and covert interactions with peers and staff. Due to the culturally continuity within these schools, such an environment may elicit a mutual sense of cultural respect and acceptance among its cohort.

Supporting the domain-specificity of acculturative and enculturative domains (once controlling for the effects of demographic characteristics as well as other acculturative and enculturative domains), Acculturation Knowledge (i.e.,
understandings of the Australian history, news and pop culture) was significantly and positively associated with Intrinsic Motivation. Perhaps this relationship can best be explained as students having an intrinsic desire to learn more about the Australian history, news and pop culture within the academic or schooling contexts. Additionally, Enculturation Knowledge was also found to be positively associated with higher Intrinsic Motivation among the ethnocultural sample, meaning that students also had an intrinsic desire to learn or attain knowledge about their ethnoculture. These findings are consistent with the emic accounts previously discussed in this chapter (see ‘Knowledge for the future’ theme) with students explaining their motivations to gain greater knowledge and understandings of their ethnic and Australian cultures.

Unlike Acculturation Knowledge, Enculturation Knowledge was also positively associated with higher Competition Motivation, signifying possible rivalry among students to have greater understandings of their ethnoculture. According to the ecocultural framework, this trend may be somewhat evocative of the ethnic day schooling context which may incentivise (knowledge) or penalise (lack of knowledge) cultural understandings increasing the amount of competition for ethnocultural knowledge among the cohort (Berry, 2011). Drawing on both SIT as well as self-worth theory (see Covington 1992, 1998; Covington & Beery 1976), student learning or performance reflect a “life-spanning struggle to establish and maintain a sense of worth [i.e., social distinctiveness] and belonging in a society [or culture] that values competency and doing well” (Covington, 2000, p. 181). Here, students may view their cultural knowledge competency in terms of maintaining positive social distinction which involves performing better than their peers in their understandings of culture. In this case, the incentive may be maintaining positive
distinctiveness among peers of similar cultural backgrounds (essentially making them feel more ethnic compared to their peers), while the penalties would mean being lost in the crowd (Covington, 2000).

**Acculturation and Enculturation Behaviour Domains**

Supporting the utility of the bilinear domain-specific (i.e., termed domain-specific by Miller) conceptualisation of acculturation and enculturation, the SEM findings from the current study demonstrated the ways in which Behavioural domains of acculturation and enculturation relate to ethnocultural students’ perceived cultural respect and acceptance from the larger Australian community. For instance, results for Acculturation Behaviour suggest that students who engaged in behaviours corresponding with the Australian culture were more likely to perceive cultural acceptance and respect from the larger Australian community (i.e., Multiculturation). Similarly, Enculturative Behaviours (i.e., ethnic behaviours) were also significantly affiliated with Multiculturation, however different from the Acculturation Behaviour domain, Enculturation Behaviour was also affiliated with greater school belongingness among students. As research on Multiculturation and School Attachment as correlates of domain-specific acculturation and enculturation is a new area of cross-cultural psychology, there is a dearth of research to draw on in support of these findings. Unlike the findings of previous studies (e.g., Bankston & Zhou, 1997; Eisikovits; 1995; Gibson, 1988; Trickett & Birman, 2005) which took place in heterogeneous educational settings, the current study took place within more culturally homogenous school settings. As such, the findings of these studies are neither analogous nor comparable. Instead, these findings can best be explained in light of the ecocultural framework which takes into account the influences of
ecological and socio-political factors in acculturative and enculturative processes. According to this framework and the behavioural as well as affective theoretical perspectives of acculturation, this culturally consistent learning environment allows students to explore and carry out their Australian and ethnocultural behaviours in such a way that it does not illicit stress due to the relative cultural continuity of the school cohort. Furthermore, it also allows students to attain the necessary behavioural traits and skills required at a pace they feel comfortable with, thus providing them with the necessary skills to function outside of the schooling context, essentially making the schooling environment ‘a miniature society of settlement’ (Berry et al., 2011, p. 326). Thus, the socio-political and ecological factors within the school context pacify acculturative stress and facilitate behavioural acculturation and enculturation through cultural transmission among ethnocultural students. In turn, this may enhance their sense of cultural respect from their ethnoculture and larger Australian communities, whilst Enculturative Behaviours enhance their ethnicity and their sense of belongingness to their ethnic day schools.

While the purpose of SEM was to compare the relations between corresponding acculturative and enculturative domains on psychosocial correlates, the purpose of the HMRA was to observe if these relations would hold when controlling for the effects of all other remaining domains as well as demographic characteristics. A more thorough analyses using HMRA revealed no significant relations between Acculturation and Enculturation Behaviour domains and psychosocial correlates (when controlling for demographic characteristic and other acculturative and enculturative domains), with the exception of the Enculturative Behaviours domain with School Attachment. This correlation may be considered to be the strongest of the relations observed in the SEM findings as they are consistent
with the HMRA, a more comprehensive analysis, only allowing the most direct and robust relations to prevail.

Summary

The findings of this study have demonstrated that domain-specific acculturative and enculturative processes can exert positive influences on student’s General Self-concept, Intrinsic and Competition orientations of motivation, perceived cultural respect (as measured by Multiculturation) and School Attachment. More specifically, Enculturation Knowledge was the strongest significant correlate with Multiculturation, Intrinsic and Competition orientations of motivation. Additionally, Acculturation Language was found to be the only correlate of student’s General Self-concept. The Acculturation Language domain was also a correlate of Multiculturation; however, this correlation was somewhat weaker (than correlations observed with Enculturation Knowledge). Finally, higher levels of Acculturation Knowledge were also linked to Intrinsic Motivation. Overall, these findings support the notion that different domains of acculturative and enculturative processes may have varying effects on psychological constructs among ethnocultural youth. Taken as a unidimensional construct, the complexities and intricacies of these relationships would be overshadowed, indistinguishable, and oversimplified. As such these findings may indicate that both acculturation and enculturation are a complex set of independent domains, which have varying effects on psychosocial outcomes among ethnocultural youth.
Contributions, Limitations and Implications for Research and Practice

This investigation has provided critical insights into the dynamic nature of acculturation and enculturation processes among ethnocultural adolescents. However, these findings should be considered in light of some limitations. As such the following section delineates these limitations with relation to theory, measurement, as well as the research design. Following this, contributions to research, policy and practice are illuminated. Recommendations for future research extending from both the investigation’s limitations as well as its contributions are discussed throughout.

Theoretical and Measurement Considerations

Like the study of Miller and colleagues (2011), these findings support the utility of the bilinear domain-specific conceptualisations of acculturation and enculturation. The conceptualisation maintains that an increase in one’s cultural domain (i.e., Acculturation Behaviours) does not bring about a decrease in the other (i.e., Enculturation Behaviours) and the direct ways in which domains of acculturation and enculturation relate to ethnocultural students’ psychosocial constructs. These findings may be largely influenced by the value placed on multicultural ideology within Australian society and more specifically within the ethnic day schooling context in the Sydney metropolitan area, where the management of multiple cultures is generally valued and considered to be the norm. However, this is not to say that this model would hold in more culturally homogenous communities within Australia, as the value placed on multiculturalism may differ across Australian communities and its sub-cultures, where discrimination may be prevalent and assimilation is the preferred acculturative outcome. In line with
the ecocultural framework, the applicability of the unilinear versus bilinear model is ecologically and socio-politically dependent. Thus, future research must carefully take into consideration the local context before dismissing the unilinear multidimensional conceptualisations of acculturation and enculturation altogether, with special considerations made to both the cultural and sub-cultural Australian contexts.

Further to this, while the current study was an important first step in developing a quantitative measure to encapsulate the domain-specificity of acculturation and enculturation across ethnocultural students (i.e., DSAEM), the measured domains were limited to the external facets of these processes (i.e., Language, Knowledge, and Behaviours). In consideration of the qualitative emic accounts, future revisions of the DSAEM would benefit from also measuring internal domain-specific changes (across Identity and Values) to provide a more holistic quantitative measure of these dynamic processes. With relation to the psychometrics of the DSAEM, a potential limitation was the low reliability estimates across the Acculturation Language and Knowledge factors for the males and Years 7/8 subsamples. Therefore, caution should be taken when drawing inferences from these findings (see Chapter 6). Another potential measurement limitation observed were the high correlations among the Acculturation Behaviour and Acculturation Knowledge factors, as well as the Enculturation Knowledge and Enculturation Behaviour factors of the DSAEM. Difficulties in achieving good discriminant validity across these domains may be attributable to two reasons. Firstly, adolescents are perhaps unable to distinguish between knowledge and behaviour factors. Secondly, perhaps the adolescents perceive these factors to be reciprocally reinforced (see factor structure of the DSAEM). Further research is warranted to gain more
comprehensive understandings of the manners in which these domains of acculturation and enculturation inter-relate.

Finally the DSAEM could have made clearer distinctions between socialisation and enculturation transmission processes. For instance, whilst the item “I have learnt about the national heroes from my native country” (see Appendix D, section 2, items 2, and 3 of the Enculturation Knowledge domain) of the Enculturation Knowledge domain, is measuring cultural transmission, it is not clear if the form of transmission being measured is overt (i.e., socialisation) or covert (i.e., enculturation). While high to moderate factor loadings were observed across the items in question, future revisions of the DSAEM may be enhanced with items or factors articulating the distinctions between these two forms of cultural transmission.

**Research Design**

The current study demonstrated the domain-specificity of acculturative and enculturative process qualitatively and quantitatively, however, it was unable to quantitatively determine the context-specificity of these processes. As per the qualitative findings, which suggest that each of these domain-specific processes are also context-specific, it would have been beneficial to collect data from public schools with culturally heterogeneous student cohorts to investigate whether the findings of the DSAEM and its relations to psychosocial correlates differed across these two educational contexts. Unfortunately, due to time and resource constraints, this was not feasible within the current investigation. Future research would benefit from such research designs to enhance current understandings of the context-specificity of both domain-specific acculturative and enculturative processes.
In hindsight, it would have been beneficial for the qualitative interviews to also explore students’ perceived compatibilities with the host society culture (they would be travelling to) to that of their current cultural identity status (society of residence - in Australia). This would have allowed the research to examine their perceived social standing of these cultural domains across the two (or more) contexts, allowing the study to elucidate more pertinent explanations for the consistencies and changes in cultural domains across context.

Additionally, the findings of this study indicated cross-cultural value discrepancies between adolescents and their parents as a potential hurdle for acculturation. However a note of caution is due, the data only presents the perceived cultural value discrepancies and consistencies from the perspective of adolescents. For a more balanced understanding of the divergence and convergence parent-adolescent cultural values, future research must investigate parental perspectives in addition to that of their adolescent offspring and simultaneously measure acculturation and enculturation across these cohorts to establish whether these differences are attributable to a faster rate of acculturation amongst adolescents, then compare these findings to parent-adolescent relations amongst their non-ethnic peers. Such a research design could provide the foundation for future interventions which reduce frictions within family relations.

In addition, while the developmental theory of culture formation may have relevance in the observed changes in cultural identity, a study with a longitudinal mixed methods approach (which includes causal modelling) of measuring consistencies and inconsistencies of cultural domains from childhood into adulthood would validate and strengthen the credibility to this theoretical approach. Due to time and financial constraints, the current study was a cross-sectional correlational design.
Such a design does not explain long term trajectories regarding adolescent development, inhibiting conclusions to be drawn regarding the causal nature of domain-specific acculturation and enculturation and their correlates, whilst also limiting the validation of the DSAEM. Future research examining the relations between domain and context-specificity should consider longitudinal approaches to account for the influences of developing a self-identity as a cause for changes in acculturative and enculturative domains in adolescents. That is, to elucidate how much of the changes in culture are attributable to the development of the self-identity (a natural developmental process during adolescents) and how much these changes can be attributed to acculturative and enculturative processes. Additionally, such a research design would allow investigators to examine the causal nature of these domain-specific processes and their psychosocial correlates, in addition to building stronger validation of the measure.

An additional limitation of the current investigation is the sample size and its characteristics. The finalised sample consisted of 200 students attending four different ethnic day schools from four various cultural backgrounds. Due to an imbalance in the sampling of schools, cultural groups, immigrant generations, in addition to the overall small sample, the cross-cultural, cross-school, and cross-generational examinations of the measurement validity as well as differences across these groups for the DSAEM were unfeasible. To conduct these tests of invariance as well as examine possible group differences (i.e., MIMIC analysis) a larger more balanced sample across these sub-groups is essential. Furthermore, while the size of the factor loadings (range for acculturation domains: .461 - .823; range for enculturation domains: .558 - .943) were relatively large (Tabachnick & Fidell, 2007), it is possible that the sample may lack stability across other samples of
ethnocultural adolescents. The issues of representative sampling are also pertinent, as all the ethnocultural students recruited within the current study attended ethnic day schools. While this sample may not characterise all the ethnocultural adolescents in New South Wales, thus limiting the generalisability of these findings, the sample within the current study were deliberately chosen as they are more likely to encounter experiences and issues relating to enculturation as well as acculturation.

Furthermore, the explanations drawn from the variances explained must be interpreted with some careful considerations. This note of caution is due, as researchers commonly conceive larger variance explained values with more meaningful findings. Such interpretations are misconstrued as the observed variances may be caused by multiple extraneous and confounding factors which have not been accounted for within the current investigation. Thus, the variance explained values must be interpreted in consideration of the possible moderator effects from such confounding and extraneous factors, as well as to the time and resource constraints within the current investigation (Cohen, 1988; Nunnally, 1978; O’Grady, 1982). For instance, research has shown immigrant generation (e.g., Chang, Tracey, & Moore, 2005; Miller, 2010; Miller et al., 2011; Tsai et al., 2000) and culture effects (e.g., Cokley, 2007; Yoon, 2011) on acculturation and enculturation, however as these were not integrated as moderators within the current study, their effects on the variance explained cannot be dismissed altogether.

Finally, the current study was also reliant on self-report measures and qualitative interviews. The employment of self-report measures is based on the assumption that survey respondents have an understanding of the concepts and processes under investigation and that their responses to the items in the survey as well as interview questions are objective and void of any bias (Murphy & Alexander,
Given the context in which surveys and interviews were administered (i.e., on school grounds), it is possible that response bias or socially desirable responses were at play within the current study. As such, future research may consider adopting alternative methods of inquiry which may reduce response bias. Alternatively, social desirability measures may be included as part of the instrument battery to allow researchers to account for the effects of response bias among the sample.

**Contributions to Research**

The current study has addressed many criticisms posed at attempts to theoretically conceptualise and measure both acculturation and enculturation. For instance, some of the well-established issues relating to the measurement and research of these processes which have also been addressed in the current study include: (a) the development of psychometrically sound bilinear domain-specific measures; (b) the utilisation of domain-specific scores which allowed for the examination of the within-individual differences; (c) the consideration of context-specificity of acculturation and enculturation processes (as per the findings of the qualitative interviews); (d) examining beyond the overt/external domains; (e) adopting a mixed methods research design which utilises both emic and etic approaches; (f) research cultural groups beyond Asian/Latino Americans; and (g) exploring relations between domain-specific processes and psychosocial correlates (Berry, 2011; Matsudaira, 2006; Miller, 2010; Yoon, 2011).

First, the preliminary findings of this study have provided insights into the utility of the bilinear domain-specific model of acculturative and enculturative processes. While measurement and theoretical problems have been noted in unilinear theoretical conceptualisations of acculturation and enculturation (Abe-Kim et al., 2000).
2001; Cuéllar et al., 1995; Kim & Abreu, 2001; Miller, 2007), and with much of the literature favouring bilinear measures (since 2005; Yoon et al., 2011), the current study utilised CFA to develop and validate the bilinear domain-specific nature of the DSAEM. Very few studies have utilised such robust tests during scale development and validation, with a meta-analysis by Yoon et al. (2011) indicating that only 5.1% of studies adopted such techniques to validate their measures. Like Miller and colleagues (2007, 2010) researchers must now consider validating linearity of these processes at the level of individual domains as well as across various ecological and socio-political contexts. The current study supported acculturation/enculturation as bilinear, domain-specific processes (within the context of ethnic day school settings among an Australian ethnocultural sample) which varied over ecological and socio-political contexts. However, it is important to note that such conceptualisations may differ across macro and micro societies within Australia, as they may vary in their ecological and socio-political (i.e., assimilationist) frameworks. As such, further research is warranted to examine the dynamic and multifaceted conceptualisations of these processes across various settings as well as across various Indigenous and settlement groups.

The study has extended current understandings of the domain-specific nature of acculturation and enculturation among ethnocultural youth, by conveying that students are able to maintain their ethnoculture as well as develop their identity, behaviours, knowledge, values, and language of the Australian (majority) culture, within more culturally homogeneous educational settings. As such, it is recommended that future research conceptualise the bilinear nature of acculturation and enculturation processes at the level of the domain, but only when the bilinear model is contextually valid (i.e., within societies or communities which value
multiculturalism instead of the assimilation strategy of acculturation; Matsudaira, 2006; see Figure 9.1).

![Figure 9.1. The bilinear domain-specific model of psychological acculturation and enculturation.](image)

Second, there is a paucity of current research focusing on the domain-specificity of acculturation/enculturation processes. According to Yoon et al. (2011), this area of study is still in its infancy and is yet to examine how these domains relate to one another and other outcome variables. To address this research gap, the current study utilised the psychometrically sound DSAEM to examine how these domains relate, revealing the independence of these acculturative and their corresponding enculturative domains (thus supporting the bilinear model at the level of the
domains). More specifically, the preliminary findings of the study demonstrated that even at the level of the domain, acculturation did not take place at the expense of the equivalent enculturation domains. For example, Acculturation Language was independent to Enculturation Language, Acculturation Behaviour was independent to Enculturation Behaviour and Acculturation Knowledge was found to be independent to the Enculturation Knowledge domain. Furthermore, the study also illuminated the domain specific relationships with five outcome variables, which included General Self-concept, Intrinsic and Competition Orientations of motivation, Multiculturation and School Attachment, further validating the domain-specificity of these processes.

With the majority of acculturation and enculturation literature concentrating on within-group variabilities (e.g., generational status; Miller 2010; Miller at al., 2011), and with a content analysis revealing that only 28.4% of measures provide domain-specific scoring (Yoon et al., 2011), the current study has made a significant contribution by taking a within-individual differences approach. By measuring acculturation and enculturation at the level of the domain, the DSAEM allows practitioners to gain more detailed insights of the cultural facets individuals are engaging in, thus enabling interventionists, educationalists, clinicians and practitioners to generate more specialised immigration and educational policies, clinical practices and interventions. Furthermore, this individual differences approach to cross-cultural psychology research provides researchers with more intricate and comprehensive understandings relating to the common psychological process underlying acculturative and enculturative processes (see Berry, 2011). Such an approach has the benefit of informing more holistic settlement interventions and policies (see contributions to policy and practice).
Third, despite the recommendations made by Berry’s ecocultural framework, only more recently has the body of literature within cross-cultural psychology encapsulated the influence of the social context on these processes. For instance, Yoon et al.’s (2011) meta-analysis revealed that only 2.9% (of 138 journal articles which were examined) of studies has included the examination of context as part of their research design. While these have been included within the conceptual discussions within some studies, they are rarely incorporated into the research design (Yoon et al., 2011). This dissonance between theory and research was addressed within the current study by utilising a mixed methods approach. While the preliminary findings of the DSAEM addressed the question of ‘how much’ students are engaging in domain-specific acculturative and enculturative processes, the qualitative interviews encapsulated ‘why’ and ‘how’ students were engaging in these domain-specific process, with the findings revealing how ecological and socio-political forces were influencing them. Results revealed that multiple layers of ecological contexts, socio-political structures, culminated with the domain-specificity of acculturation/enculturation, make these processes much more dynamic than first conceived. More distinctively, the current research which was conducted within ethnic day school settings, presents its own significant theoretical development as it is yet to be addressed within the acculturative/enculturative literature.

Fourth, measures of acculturation and enculturation must move beyond the measurement of observable and more overt domains of these processes and must consider quantifying the more qualitative psychological and internal domains to establish more global and holistic understandings (Matsudaira, 2006; Zane & Mak, 2003). This is particularly pertinent as research has demonstrated that observable overt changes (i.e., external domains of acculturation) and internal psychological
changes (i.e., internal domains of acculturation) take place at varying rates, with overt changes (e.g., language; Wolfe et al., 2001) taking place at a faster rate during settlement compared with more internal changes (e.g., values; Cuéllar et al., 1995). The preliminary qualitative findings from this study provide future researchers with the tools to develop and refine the DSAEM by adding internal domains to the existing measures. It is recommended that future measures encapsulate both these overt and internal domains to generate more holistic measures and enhance scholarship of these processes.

Fifth, as per the recommendation made by Matsudaira (2006), the current study utilised semi-structured interviews to provide more detailed emic accounts of acculturative and enculturative processes. These perspectives not only validated the DSAEM for the sample of interest, but contextualised the findings by addressing the question ‘why’ and ‘how’ some of the acculturative and enculturative processes were enacted upon. Furthermore, interview data explicated individual perceptions of issues relating to these processes. While etic approaches are considered to be more absolute and perhaps universal, they rarely address the question ‘why’ the scholarship in this area of study is observing domain-specificity or ‘how’ context can make acculturation and enculturation a more malleable and dynamic process. The emic accounts of the qualitative interviews provided such insights, specifically shedding light on the influence of sociocultural, ecological and socio-political factors.

Sixth, Asian, Asian-American, Latino and Latino American cultural groups in North America have been over-represented within acculturation/enculturation research. A small scale meta-analysis conducted by Yoon et al. (2011) demonstrated that 30.4% of studies were conducted on Latino/as and 51.4% on Asians/Asian Americans. This overwhelming majority of studies limit the generalisability of these
findings to other cultural minority groups. Also of concern has been the overreliance of college student samples with 56.5% of studies reliant on this cohort and with only a small number of studies (14.5%) recruiting school aged students ranging from kindergarten to grade 12. To overcome this empirical gap, the current study conducted an individual differences study on ethnocultural adolescents belonging to one of four ethnocultural groups (i.e., Lebanese, Armenian, Jewish, and Greek), which externally validated the bilinear domain-specific conceptualisation of acculturation/enculturation, essentially extending the dearth of knowledge on ethnocultural groups in Australia.

Seventh, when comparing the current study to previous research, which has explored the relations between acculturation/enculturation and psychosocial correlates, the current study has two added strengths. To begin with, the current study utilised sophisticated and robust analytical techniques to address within-construct issues, prior to conducting between-construct analysis. Unfortunately, despite the profusion of research on acculturation/enculturation and its association with outcomes of interest, much of the findings within the literature have been conflicting. Such incongruous results have had little influence on settlement and educational policies. Much of the reluctance to create policy reforms has been largely attributable to the aforementioned theoretical and methodological issues plaguing this area of research, which is also exacerbated by the various research designs and interpretative research positions in this area of study. Thus, these within-construct setbacks pertaining to the theoretical, conceptual and measurement issues were addressed prior to proceeding with between-construct analysis.

Additionally, there is a scarcity of research which has explored the relations between domain-specific relations of acculturation/enculturation and psychosocial
correlates. Much of the existing studies utilise domain-generic (also known as aggregate scores) measures (of acculturation/enculturation) to explore their relations to psychosocial, school adjustment and mental health outcomes. These domain-generic measures assume that only one fundamental factor accounts for the cultural orientations of individuals (i.e., acculturation) and that it is not necessary to differentiate between these culture-specific domains (Miller, 2010). However, more recent works by Miller and colleagues (2007, 2010, 2011) have demonstrated that the bilinear domain-specific model’s superiority, as well as their domain-specific associations with mental health. Thus, extending from these works, the current study also examined domain-specific relations of acculturation/enculturation with a series of psychosocial correlates, also revealing domain-specific relations. All in all, these findings highlight the complex nature in which domain-specific acculturation and enculturation factors associate with self-concept, motivation, school belongingness and multiculturation factors, whilst providing supportive evidence for the bilinear domain-specific operationalisations of these processes.

**Contributions to Policy and Practice**

Given the scarcity of reliable and valid domain-specific measures of acculturation and enculturation, the findings of the current study have made a significant contribution to advancing future research and practice by generating theoretical and methodological synergies. To date, many of the existing Australian measures have been bilinear, however, they lack multidimensionality. Fewer have operationalised domain-specific measures, making the DSAEM a stronger domain-specific and psychometrically sound measure to be validated within Australia, for Australian ethnocultural adolescents. Such measures are crucial within Australian
society in a time when civil wars, terrorism as well as international relations are acting as catalysts for the recent flow of migrants and refugee arrivals. While research has generally focused on the cultural orientations of first generation arrivals in Australia, little work has been conducted on ethnocultural groups, who have longer histories in Australia and who are descendants of refugees, migrants and/or earlier settlements. As such, the current study bares significant implications for intervention, policy and practice targeting these groups which are explicated in the following sections.

**Implications for education.** As previously noted, schools are considered to be small societies of settlement often representing a foreign culture to migrant students (Berry et al., 2011). However different from this notion, the current study took place within ethnic day schools, essentially representing part of the students’ ethnoculture as well as the culture of the host society. As such, the schooling environment (i.e., an oblique transmitter) has essentially provided students with the opportunities to culturally orient themselves to either culture, when and how they feel most comfortable.

With relation to educational and social policies, the findings from the current study indicate that ethnic day school leaders and teaching practitioners must provide greater opportunities for ethnocultural adolescents to interact and engage with their heritage cultural knowledge. Findings suggest that students who learnt, engaged with their cultural understandings were more likely not only to perceive enhanced cultural respect and acceptance from the larger Australian community, but experience greater Competition and Intrinsic Motivations within the schooling environment. Additionally, the association between Acculturation Language and student’s cultural respect suggests that attainment of the English language also plays an integral role in
educational and psychosocial outcomes among this cohort. Thus, the mutual preservation and development of cultural orientations across specific domains seem to be having varying beneficial outcomes among ethnocultural adolescents and their psychological and educational outcomes. By targeting and developing these specific domains of acculturation and enculturation among ethnic day schools, educationalists may cultivate more positive educational and psychological outcomes among their student cohorts.

**Implications for counselling.** The current findings underscore individuals’ abilities to internally manifest two discrete cultures simultaneously (Benet-Martinez et al., 2002; Berry et al., 2011). The study has also demonstrated that while some individuals are capable of cohesively integrating their two cultures (i.e., high BII) others who are also considered to be bicultural conceive these two cultures to be discordant and incompatible (i.e., low BII). While acculturative stress has generally been affiliated with migrant and refugee groups, the current study findings have suggested that cultural value discrepancies between parents and adolescents (perhaps caused by dissonant acculturation; cf. Portes, 1997) may illicit intergenerational conflicts and cultural stress among ethnocultural adolescents, especially when such cultural domains are perceived as incompatible or in opposition. Emic accounts also conveyed that acculturative as well as enculturative stress among ethnocultural adolescents who viewed their cultures to be discordant, sometimes unwilling or unable to maintain domains of both cultures concurrently.

Consequently, counsellors (as well as educators) working with ethnocultural adolescents must be sensitive and aware of the possibility of such cultural stressors (Mak & Shaw, 2015; Phinney et al., 2000), whilst also being attentive to the very acculturative and enculturative domains which may be eliciting these tensions. The
DSAEM holds promise as a valuable assessment tool for clinicians to investigate and pinpoint underlying acculturative and enculturative domains which may elicit stress responses in clients. This may be a particularly useful tool for psychologists who lack sociocultural competencies within therapeutic relationships (Mak & Shaw, 2015). Gaining insights into the family and peer dynamics may be valuable (Hwang & Wood, 2009; Mak & Shaw, 2015). In addition to being aware of these broader cultural issues, it may be beneficial for counsellors or therapists to assist clients to process their biculturalism. While counsellor/client culture matching has been suggested to enhance the overall relationship, this is rarely possible (Suinn, 2010). Nonetheless counsellors who are also bicultural may have better tools to normalise these cultural incompatibilities. By facilitating bicultural self-efficacy (individual’s confidence to deal with cultural incompatibilities; Miller, 2010), clients may reduce their acculturative/enculturative stress as well as increase levels of overall well-being (David, Okazaki, & Saw, 2009; Miller, 2007, 2010). To enhance bicultural self-efficacy counsellors may need to enhance their client’s skills which would allow them to: (a) identify and resolve cultural discrepancies; (b) alleviate culture-specific roles and affiliated expectations; and (c) confidently articulate their views when confronted with cultural discrepancies (Mak & Shaw, 2015; Miller, 2010).

Chapter Summary

This chapter has outlined how universal approaches to acculturation/enculturation research have the potential to create more holistic and comprehensive understandings of these processes. By developing psychometrically sound and theoretically derived bilinear domain-specific measures of acculturation/enculturation and testing their associations with student outcomes, the
study has sometimes challenged and advanced existing theoretical perspectives in the field. Limitations and caveats in mind, the parallel use of emic and etic approaches within this investigation have delineated within-individual differences as well as underscoring the dynamic and context-embedded nature of these processes.
CHAPTER 10: CONCLUSIONS

With the growing cultural diversity and the more general effects of globalisation, more needs to be done to elucidate acculturative and enculturative experiences of the Australian ethnocultural populace. The paucity of scholarship in this field has been partially attributable to the lack of theoretically derived and psychometrically sound measures of these cultural orientation processes in Australia. Major issues relating to the theoretical conceptualisations and operationalisations of current models have hindered the usefulness of current measures. Extending from the work of Miller and colleagues (2011), this mixed methods thesis offers a unique contribution to the field of cross-cultural psychology by providing an exploratory step towards establishing theoretical and methodological synergies in constructing a new domain-specific measure of acculturation and enculturation among ethnocultural adolescents in Australia.

In an attempt to create a universal theoretical model of acculturation and enculturation in cross-cultural psychology, researchers have paid relatively little attention to the varying socio-political and ecological contexts. Prior to contesting theoretical models, it is vital to consider these contextual factors in which these theoretical models are being examined. For instance, unilinear models of acculturation and enculturation - which suggest that individuals adopt their new
culture at the expense of their ethnic or heritage culture - may retain stronger validity in the contexts of more assimilationist societies. Such assimilationist ideologies are not commonplace in Australia, rather the country retains a stronger emphasis and value on multiculturalism and cultural cohesion. Thus, it is probable that migrants and members of ethnocultural groups in Australia feel more accepted and comfortable in preserving their ethnic culture whilst adapting to the culture of the host society. The current reluctance to acknowledge the interdependence of culture and context has been the basis for much of the current debate relating to the theoretical and measurement models of acculturation and enculturation research. It is also imperative to recognise that whilst as a nation Australia values multiculturalism, there are also sub-cultures or geographical pockets within Australia where such strong assimilationist views are strongly pronounced. It is very possible that the acculturation and enculturation experiences of migrant and ethnocultural youth within these contexts would be dissimilar and more reflective of the unilinear supposition. Further shaping these acculturative and enculturative experiences are the contextual factors brought in by settlement groups and their individual experiences which may also influence the relations between the culture of settlement and the culture of heritage. Thus, with these caveats in mind, the findings of the current study have supported the bilinear domain-specific model of acculturation and enculturation among a sample of ethnocultural adolescents attending Greek, Armenian, Jewish, and Lebanese day schools.

The thesis further advances the conceptualisation of this model, by presenting a bilinear domain-specific model through the validation of the factor structure of the Domain-Specific Acculturation and Enculturation Measure (DSAEM) as well as through emic accounts from ethnocultural adolescents. Supporting the findings of the
few international studies which have focused on the domain-specific nature of these cultural orientation processes (e.g., Miller, 2007; Miller et al., 2013; Yoon et al., 2011), the study demonstrated that both acculturation and enculturation takes place across a series of internal and external domains. Internal domains include values and identity, while external domains include language, knowledge, and behaviours. Thus the findings of the study advocate the conceptualisation of cultural orientations among ethnocultural adolescents to be at the level of individual cultural domains, rather than at the level of global acculturative or enculturative constructs. By developing the DSAEM, the study has made a significant contribution to cross-cultural psychology research by advancing its measurement tools which encapsulate the multifaceted and dynamic nature of these cultural orientation processes among this sample. With further validation, the DSAEM has the potential not only to be a strong tool to generate more cohesion across investigative studies, but also the potential to be used as a clinical tool to assess, address and target stress elicited from domain-specific acculturative and enculturative processes. Pertinent for Australian cross-cultural psychology research, the DSAEM is the first domain-specific acculturative and enculturative measure to be validated with an Australian sample. With trends of reliance on international measures which have been developed and validated for multiple or culture-specific groups overseas, upon further development and validation, the DSAEM has the potential to be a more authentic and justifiable tool to measure acculturative and enculturative processes in Australia for its ethnocultural populace.

While more recent international studies have demonstrated the differences between the various domains of acculturation and enculturation and mental health outcomes (e.g., Liao, Rounds, & Klein, 2005; Miller et al., 2013; Miller, Yang, Hui
et al., 2011; Ruzek, Nguyen, & Herzog, 2011), few if any have explored whether
domain-specific acculturation and enculturation are related to psychosocial outcomes
among ethnocultural adolescents in Australia. The findings suggested that the
relationships among psychosocial outcomes differed across acculturative and
enculturative domains, further supporting the domain-specificity of these processes.
Thus, the relations between acculturation/enculturation and psychosocial outcomes
are more complex and dynamic than first thought. Considered as a unidimensional
construct, the particulars of these relations would be indistinguishable and
overgeneralized. With this in mind, future research in cross-cultural psychology must
steer away from exploring relations between global constructs of acculturation and
enculturation and their outcomes, and begin to recognise the intricate and dynamic
nature of these processes beyond its most recent bilinear multidimensional
conceptualisations. By examining multiple domains of acculturation and
enculturation, the current study provides explanations as to why previous studies
have provided conflicting findings in determining the relations between
acculturation/enculturation and psychosocial outcomes in the past. By shedding light
on the complexities of these processes, as well as constructing a psychometrically
sound domain-specific tool, this study has made noteworthy contributions to the
enhancement of the theoretical conceptualisations, as well as advance not only
Australian but global measures of acculturation and enculturation, benefiting both
research and practice.
REFERENCES


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Ferguson, G. M., Costigan, C. L., Clarke, C. V., & Ge, J. S. (2016). Introducing remote enculturation: Learning your heritage culture from afar. *Child Development Perspectives, 0*(0), 1-6. doi:10.1111/cdep.12181


*British Journal of Educational Psychology, 70*(3), 305-316. 
doi:10.1348/000709900158128

doi:10.1080/1467598032000139859


doi:10.1086/soutjanth.23.4.3629450


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APPENDICES
Appendix A: Principal consent and information letter

Dear Principal,

Longing and Belonging: A Study of Ethnic Australian Students

Purpose

We would like to invite your school to participate in a research study being conducted by the Centre for Positive Psychology and Education, University of Western Sydney. The purpose of the study is to:

- Measure and identify the impact of acculturation and enculturation on participating NSW secondary students;
- Investigate students’ perceptions of acculturation and enculturation and its relationship to student academic motivation, self-concept, school belongingness and perceived cultural respect.

Participation

The participation of your school would involve:

- Students in Years 7-10 completing a 1 hour survey administered by trained researchers to year groups of students with parental permission in your school hall;
- Students with parental permission participating in a 45 minute interview with a researcher;
- Year coordinators/roll call teachers distributing and collecting parental permission slips to students in Years 7 to 10 and being present for the administration of surveys to year groups; and
- School counsellor to be available by request if students need further debriefing after any survey or interview session participation.

The information obtained from this study will help us find out the impact of acculturation and enculturation on student academic motivation, academic self-concept, school belongingness and perceived cultural respect. The information provided for this study will not be identifiable to anyone apart from the researchers and all information obtained for this study will be stored in a locked and secure location with all identifiable information (e.g., consent forms) kept separately from the data. The overall summary results will then be distributed via research reports and publications to the schools, the educational organisations, and publishers. All published information will only be reported in group form that neither identifies schools or individual students. The data may be further analysed by other university researchers aiming to improve educational practice, but once again, no personal information will be included that may aid in the identification of any participant.

Your school’s participation in this study is voluntary, and there will be no adverse consequences if you wish to not participate and/or withdraw participation after giving consent to be in the study.

If you consent to your school participating in this study please complete the attached consent form below and return the form to:

Nyrie Nalbandian (Fax): 9772 6432

Centre for Positive Psychology and Education
University of Western Sydney
Locked Bag 1797
Penrith South DC, NSW, 1797
This research is being conducted by Professor Rhonda Craven (9772-6557; r.craven@uws.edu.au), Dr Nida Denson (9772 6849; n.denson@uws.edu.au), Dr. Marjorie Seaton (9772 6829; m.seaton@uws.edu.au); and PhD candidate Nyrie Nalbandian (9772 6302; n.nalbandian@uws.edu.au). Please do not hesitate to contact the researchers if you have any questions relating to the study.

Thank you for your time in your consideration of this important study.

Yours sincerely,

Professor Rhonda Craven
Head
Centre for Positive Psychology and Education, College of Arts
University of Western Sydney
Bankstown Campus
Locked Bag 1797
Penrith South DC NSW 1797 Australia
Email: r.craven@uws.edu.au
Telephone: + 61 2 97726557

NOTE: This study has been approved by the University of Western Sydney Research Ethics Committee (Approval Number H9640). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on telephone (02) 4736 0083, fax (02) 4736 0013, or email humanethics@uws.edu.au. Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

Consent Form School Principal

Please return your consent form as soon as possible to
Nyrie Nalbandian (Fax): 9772 6432

Centre for Positive Psychology and Education
University of Western Sydney
Locked Bag 1797

Longing and Belonging: A Study of Ethnic Australian Students

I wish to advise that my school will:
(Please tick your response)

☐ Participate in ‘Longing and Belonging: A Study of Ethnic Australian Students’.

☐ Not be able to participate in the ‘Longing and Belonging: A Study of Ethnic Australian Students’.

Principal’s Name: _________________________ (please print)
School: ________________________________
Principal’s signature _________________________ Date ______________
Appendix B: Parental Consent and Information Sheet

Centre for Positive Psychology and Education
University of Western Sydney
Locked bag 1797
Penrith NSW 2751

Dear Parent / Guardian,

Longing and Belonging: A Study of Australian Students

We wish to invite your child to be involved in a research project conducted by the University of Western Sydney. The aim of this study is to explore the extent to which students’ cultures (e.g., being Australian, being Armenian Australian, being Chinese Australian etc.) are related to academic motivation, self-concept, school belongingness and perceived cultural respect.

Participation would involve your child completing a 1 hour survey at school with a trained researcher on one occasion. Additionally, a small number of students from each year will be invited to participate in a 45 minute audio-recorded interview with a researcher at school.

More details about the research are outlined on the next page. If you are willing for your child to participate in this research, please fill out the consent form below and return it to your child’s school.

Yours sincerely,
Nyrie Nalbandian
PhD Candidate
Telephone: 02 9772 6302; Fax: 02 9772 6193; Email: n.nalbandian@uws.edu.au

CONSENT FORM
Longing and Belonging: A Study of Australian Students

I acknowledge that I have read the additional information sheet entitled "Longing and Belonging: A Study of Australian Students Additional Information Sheet" on the attached page about the study and that I have discussed the project with my child.

I wish to advise that I give my permission for my child to:

Participate in the surveys  □Yes □No  (tick your answer)
Participate in the Interview  □Yes □No  (tick your answer)

Your Child’s Name (please print):

____________________________________________________________________________________________
Date of Birth:

____________________________________________________________________________________________
Year/Class:

____________________________________________________________________________________________
School:

____________________________________________________________________________________________
Parent/Guardian Name:

____________________________________________________________________________________________
Parent/Guardian Signature and Date:

____________________________________________________________________________________________
Additional Information for Parents and Students

Longing and Belonging: A Study of Australian Students

Purpose

We would like to invite your child to participate in a research study being conducted by the Centre for Positive Psychology and Education, University of Western Sydney.

The purpose of the study is to investigate students’ perceptions of culture and its relation to student motivation, self-concept, school belongingness and perceived cultural respect.

Participation

Participation for your child would involve completing a 1 hour survey and a small number of children will be interviewed for 45 minutes which will be audio-recorded by a researcher.

Nature of Participation

Your child's assistance in this study is entirely voluntary. There will be no adverse consequences should your child choose not to assist. You may also withdraw your child's involvement in the study at any time. Information provided in this study by individuals will not be given to others. Students will be advised that should they feel distressed as a result of participation they can meet with the school counsellor.

Results

The results of the study will be reported back to your school. Results in research reports will be reported in group form, without identifying individuals or schools. The data will be kept in a locked file, accessible only to the university researchers in this study. The unidentified data may be stored in a databank for further analysis by other university researchers.

Researchers

This research is being conducted by:
Nyrie Nalbandian, University of Western Sydney (02 9772 6302, n.nalbandian@uws.edu.au);
Prof. Rhonda Craven, University of Western Sydney (02 9772 6557, r.craven@uws.edu.au);
Dr. Marjorie Seaton, University of Western Sydney (02 9772 6829, m.seaton@uws.edu.au);
Dr. Nida Denson, University of Western Sydney (02 9772 6849, n.denson@uws.edu.au).

Please contact the researchers if you require any further information.

NOTE: This study has been approved by the University of Western Sydney Human Research Ethics Committee (Approval no. H9640) If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email humanethics@uws.edu.au. Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix C: Student Survey

Longing and Belonging: 
A Study of Australian Students

Purpose

The purpose of this survey is to find out your thoughts about your culture. Your participation in the study is voluntary and you can withdraw from the study at any time. Not participating in the study will not affect your relationship with your school.

This is not a test. There are no right or wrong answers and everybody will have different answers. Just make sure that your answers show what you really think about yourself. I will read the questions aloud to you and explain how to answer each one. There are some questions that seem the same. This is not a trick. It is just that this type of survey needs to ask questions in slightly different ways. Just answer them in a way that shows what you really think about yourself.

Your answers will only be seen by the researchers and will not be shown to anyone in your school or your community. The researchers will remove the consent form you sign below and store this separately. The research team will not report the names of students or schools that participate in the study.

Student Consent

Student Consent Form to Participate in Research Study

Student’s Name: _________________________
Class: __________________
Date of birth: _____/_____/_______

I agree to participate in the study

Signature: ______________________________________
Today’s date: ___________________________________
1. Are you Male /Female? □ Male □ Female

2. How old are you today? ________________ years old

3. What school year are you in? _______________

4. What is the name of your school? ___________________________________________

5. What is the name of your class? _______________

6. Are you of Aboriginal or Torres Strait Islander origin?  
   (If you are of both Aboriginal and Torres Strait Islander origin, mark both “yes” boxes)  
   □ No □ Yes, Aboriginal □ Yes, Torres Strait Islander

7. What do you consider your cultural/ native background to be? (e.g. when someone asks you what culture are you from, what do you say? E.g. Australian, Chinese, Chinese-Australian, Australian-Chinese etc.) Please write your answer.
   ____________________________________________________________________

8. Where were you born?  
   □ Australia □ Other (Please specify country): ____________________

9. Where were your parents born?  
   Mother: □ Australia □ Other (Please specify country): ____________________  
   Father: □ Australia □ Other (Please specify country): ____________________

10. Do you have more than one cultural / native background or ancestry?  
    □ No → Go to question 12  
    □ Yes, (Please specify):  
    Mother’s side: ____________________________  
    Father’s side: _____________________________
11. When you were growing up, did your family do anything to emphasize one part of your background more than the other(s)?

- [ ] No
- [ ] Yes, (Please explain):

_________________________________________________________________________

12. How many generations ago did your family leave their native country?

<table>
<thead>
<tr>
<th>Mum’s side of the family</th>
<th>Dad’s side of the family</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] My generation</td>
<td>[ ] My generation</td>
</tr>
<tr>
<td>[ ] My Mum’s generation</td>
<td>[ ] My Dad’s generation</td>
</tr>
<tr>
<td>[ ] My Grandparents generation</td>
<td>[ ] My Great Grandparents generation</td>
</tr>
<tr>
<td>[ ] My Great Grandparents generation</td>
<td>[ ] Prior to my Great Grandparents</td>
</tr>
<tr>
<td>[ ] Prior to my Great Grandparents</td>
<td>[ ] I don’t know</td>
</tr>
<tr>
<td>[ ] I don’t know</td>
<td>[ ] I don’t know</td>
</tr>
</tbody>
</table>

13. Do you or anyone else in your home speak a language other than English?

- [ ] Yes
- [ ] No

*If “No”, go to the next page.*

*If “Yes” for section 13, what languages do you speak in your home? (can be more than one)*

- [ ] Arabic
- [ ] Chinese
- [ ] English
- [ ] Farsi
- [ ] French
- [ ] Hebrew
- [ ] Japanese
- [ ] Lebanese
- [ ] Armenian
- [ ] Greek
- [ ] Other______________
**Please read the following statements and indicate how much you agree with them. There are six possible answers for each statement – ranging from “Strongly Disagree” to “Strongly Agree”. Please circle your response.**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1. I like to be informed of news relating to my native culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*2. I often behave in ways typical of the Australian culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3. I keep up to date with Australian news.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*4. I am proud of being able to speak English.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*5. I often speak my native language.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6. I keep up to date with the news from my native culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7. I am proud of being able to speak in my native language.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8. I feel comfortable working with Australians.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9. I like to speak English.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10. I eat traditional foods from my native culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*11. I have learnt about Australian pop culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*12. I think in my native language.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*13. I enjoy learning about my native culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14. I feel comfortable working with people of the same native culture as myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15. I have learnt about Australian national heroes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16. I feel comfortable speaking in my native language.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*17. I enjoy eating Australian foods.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>*18. I like to be informed of Australian news.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. I enjoy speaking English.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Please read the following statements and indicate how much you agree with them. There are six possible answers for each statement – ranging from “Strongly Disagree” to “Strongly Agree”. Please circle your response.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>20.</strong> I often behave in ways that are typical of my native culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>21.</strong> I feel more connected to my native culture the more I learn about it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>22.</strong> I enjoy participating in the traditions of my native culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>23.</strong> I express myself well in English.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>24.</strong> I eat Australian foods.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>25.</strong> I enjoy learning about Australian culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>26.</strong> I feel comfortable speaking in English.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>27.</strong> I like to behave in ways typical of the Australian culture.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>28.</strong> I enjoy speaking my native language.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>29.</strong> I participate in my native cultural traditions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td><strong>30.</strong> I have learnt about the national heroes from my native country.</td>
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</table>
### About My School and Culture

*Please read the following statements and indicate how much you agree with them. There are six possible answers for each statement – ranging from “Strongly Disagree” to “Strongly Agree”. Please circle your response.*

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>1. I feel like I belong at my school.</td>
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<tr>
<td>2. People I meet respect my cultural identity.</td>
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<tr>
<td>3. I feel good about being in my school.</td>
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<tr>
<td>4. People I meet like to learn about my culture.</td>
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<tr>
<td>5. People I meet accept my cultural identity.</td>
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<tr>
<td>6. People I meet are welcoming to me regardless of my cultural background.</td>
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<tr>
<td>7. I feel that I have a good relationship with my school.</td>
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<tr>
<td>8. People I meet are often proud of the achievements of people from my culture.</td>
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<tr>
<td>9. I feel the best when I am at my school.</td>
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<tr>
<td>10. People I meet generally respect people from my culture.</td>
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</tbody>
</table>
# Self-Confidence

*Please read the following statements and indicate how much you agree with them. There are six possible answers for each statement – ranging from “Strongly Disagree” to “Strongly Agree”. Please circle your response.*

<p>| | | | | | | |</p>
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Overall, I have a lot to be proud of.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>I am hopeless when it comes to <strong>MATHEMATICS</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>I get good marks in <strong>ENGLISH</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>I have always done well in <strong>SCHOOL SUBJECTS</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>I can do things as well as most people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>I learn things quickly in <strong>MATHEMATICS</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Work in <strong>ENGLISH</strong> classes is easy for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Compared to others my age I am good at <strong>SCHOOL SUBJECTS</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>9</td>
<td>Most things I do, I do well.</td>
<td>1</td>
<td>2</td>
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<td>5</td>
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<tr>
<td>10</td>
<td>I have always done well in <strong>MATHEMATICS</strong> classes.</td>
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<td>5</td>
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<tr>
<td>11</td>
<td>I am hopeless when it comes to <strong>ENGLISH</strong> classes.</td>
<td>1</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>I get good marks in <strong>SCHOOL SUBJECTS</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13</td>
<td>Nothing I do ever seems to turn out right.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>Compared to others my age I am good at <strong>MATHEMATICS</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>I learn things quickly in <strong>ENGLISH</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>16</td>
<td>Work in <strong>SCHOOL SUBJECTS</strong> classes is easy for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
</tr>
<tr>
<td>17</td>
<td>Overall, most things I do turn out well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
</tr>
<tr>
<td>18</td>
<td>Work in <strong>MATHEMATICS</strong> classes is easy for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19</td>
<td>Compared to others my age I am good at <strong>ENGLISH</strong> classes.</td>
<td>1</td>
<td>2</td>
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<td>5</td>
</tr>
</tbody>
</table>
Please read the following statements and indicate how much you agree with them. There are six possible answers for each statement – ranging from “Strongly Disagree” to “Strongly Agree”. Please circle your response.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. I learn things quickly in <strong>SCHOOL SUBJECTS</strong> classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>6</td>
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<tr>
<td>21. I don’t have much to be proud of.</td>
<td>1</td>
<td>2</td>
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<td>6</td>
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<tr>
<td>22. I get good marks in <strong>MATHEMATICS</strong> classes.</td>
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<td>2</td>
<td>3</td>
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<tr>
<td>23. I have always done well in <strong>ENGLISH</strong> classes.</td>
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<td>2</td>
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</tr>
<tr>
<td>24. I am hopeless when it comes to <strong>SCHOOL SUBJECTS</strong> classes.</td>
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<td>2</td>
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<tr>
<td>25. I feel that my life is not very useful.</td>
<td>1</td>
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<tr>
<td>26. It is important to me to do well in <strong>MATHEMATICS</strong> classes.</td>
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<tr>
<td>27. I am satisfied with how well I do in <strong>ENGLISH</strong> classes.</td>
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<tr>
<td>28. It is important to me to do well in <strong>SCHOOL SUBJECTS</strong> classes.</td>
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<tr>
<td>29. Overall, I am a failure.</td>
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<tr>
<td>30. I am satisfied with how well I do in <strong>MATHEMATICS</strong> classes.</td>
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<tr>
<td>31. It is important to me to do well in <strong>ENGLISH</strong> classes.</td>
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<tr>
<td>32. I am satisfied with how well I do in <strong>SCHOOL SUBJECTS</strong> classes.</td>
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<tr>
<td>Motivation</td>
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<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I do my school work because I like learning new things.</td>
<td>1 2 3 4 5 6</td>
<td></td>
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<tr>
<td>2. I like trying to do better than other students.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>3. I do my school work because I enjoy figuring things out.</td>
<td>1 2 3 4 5 6</td>
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<td>4.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>5. I learn the most when I try to do better than other students.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>6. I do my school work because I enjoy thinking hard.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>7. I work harder when I try to do better than other students.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>8. I do my best work when I try to do better than other students.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>9. I do my school work because I enjoy trying to understand new things.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>10. Trying to do better than others makes me work well.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>11. I do well when I try to be the best student in my class.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>12. I do my school work because what we learn is really interesting.</td>
<td>1 2 3 4 5 6</td>
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</table>
Appendix D (Section 1): A priori Domain-Specific Acculturation and Enculturation Measure (DSAEM) Items.

<table>
<thead>
<tr>
<th>Acculturation Language</th>
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<tbody>
<tr>
<td>Item 1</td>
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<td>Item 3</td>
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<td>Item 4</td>
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<td>Item 5</td>
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<tr>
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</thead>
<tbody>
<tr>
<td>Item 1</td>
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<td>Item 3</td>
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<td>Item 4</td>
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<td>Item 5</td>
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<table>
<thead>
<tr>
<th>Acculturation Behaviour</th>
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</thead>
<tbody>
<tr>
<td>Item 1</td>
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<td>Item 2</td>
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<tr>
<td>Item 3</td>
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<td>Item 4</td>
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<td>Item 5</td>
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</table>

<table>
<thead>
<tr>
<th>Enculturation Language</th>
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</thead>
</table>

| Item 1 | I enjoy speaking my native language.  
| Item 2 | I often speak my native language.  
| Item 3 | I think in my native language.  
| Item 4 | I feel comfortable speaking in my native language.  
| Item 5 | I am proud of being able to speak in my native language.  

**Enculturation Knowledge**

| Item 1 | I like to be informed of news relating to my native culture.  
| Item 2 | I enjoy learning about my native culture.  
| Item 3 | I have learnt about the national heroes from my native country.  
| Item 4 | I feel more connected to my native culture the more I learn about it.  
| Item 5 | I keep up to date with the news from my native culture.  

**Enculturation Behaviour**

| Item 1 | I enjoy participating in the traditions of my native culture.  
| Item 2 | I often behave in ways that are typical of my native culture.  
| Item 3 | I participate in my native cultural traditions.  
| Item 4 | I feel comfortable working with people of the same native culture as myself.  
| Item 5 | I eat traditional foods from my native culture.  

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Appendix D (Section 2): Revised Domain-Specific Acculturation and Enculturation Measure (DSAEM) Items.

<table>
<thead>
<tr>
<th><strong>Acculturation Language</strong></th>
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</thead>
<tbody>
<tr>
<td>Item 1  I feel comfortable speaking in English.</td>
</tr>
<tr>
<td>Item 2  I am proud of being able to speak English.</td>
</tr>
<tr>
<td>Item 3  I express myself well in English.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Acculturation Knowledge</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1  I like to be informed of Australian news.</td>
</tr>
<tr>
<td>Item 2  I enjoy learning about Australian culture.</td>
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<tr>
<td>Item 3  I have learnt about Australian pop culture.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Acculturation Behaviour</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1  I enjoy eating Australian foods.</td>
</tr>
<tr>
<td>Item 2  I often behave in ways typical of the Australian culture.</td>
</tr>
<tr>
<td>Item 3  I eat Australian foods.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Enculturation Language</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1  I enjoy speaking my native language.</td>
</tr>
<tr>
<td>Item 2  I often speak my native language.</td>
</tr>
<tr>
<td>Item 3  I think in my native language.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Enculturation Knowledge</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1  I like to be informed of news relating to my native culture.</td>
</tr>
<tr>
<td>Item 2  I enjoy learning about my native culture.</td>
</tr>
<tr>
<td>Item 3  I have learnt about the national heroes from my native country.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Enculturation Behaviour</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
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<tr>
<td>Item 2</td>
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<td>Item 3</td>
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<td>Item 1</td>
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<tr>
<td>Item 2</td>
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<tr>
<td>Item 3</td>
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</tbody>
</table>
APPENDIX E: Semi-Structured Interview Schedule

Interview introduction

Background Information:
- Where were you born?
- What is your cultural background?
- Which part of the (country of origin/birth) are your parents from?
- Family history?
- How did your parents raise you?
- Did you want to enrol at this school? Why/Why not?

What makes a person a member of this cultural group?
What would you describe as the most important components/parts of your culture to be?

Language:
- How do you communicate at home in (ethnic language/English)? Why/Why not?
- Is this different to the way you communicate at school? Why/Why not?
- Usage? Ethnic vs Australian
- What language do you think in?
- Competency? Ethnic vs Australian
- Feel about the language? Why? Ethnic language vs English
- Speak in different dialect? Ethnic language vs English

Values:
- What are (insert ethnic culture/Australian) values?
- Are there differences between them?
- Which do you apply in your life? At home? Why? How?
- Do you believe/or feel comfortable with these values?
- Where do you think you learn, implement these values more, home or school or any other areas?
- Gender differences? (insert ethnic culture) vs Australian
- Religion? (insert ethnic culture) vs Australian
- Childhood? (insert ethnic culture) vs Australian
- Family dynamics? (insert ethnic culture) vs Australian
- Respect? (insert ethnic culture) vs Australian
Identity:
Do you feel like you are part of (insert ethnic culture) culture?
Can you relate to your (insert ethnic culture)? How?
Do you feel you are part of the Australian culture?
Can you relate to the Australian culture? How?
If you were asked by a fellow Australian ‘what is your cultural identity’ what would you say? Why?
If you were travelling overseas and a fellow tourist was to ask you ‘what is your cultural identity’ what would you say? Why?
Do you identify with the (insert ethnic culture/ Australian culture) culture? How?

Knowledge:
What do you know of (insert ethnic culture/ Australian) pop culture? How?
(insert ethnic culture/ Australian) history?
(insert ethnic culture/ Australian) / National news? How do you learn of these?
(insert ethnic culture/ Australian) Community history in Australia?
Are you happy with the understandings/knowledge of your (insert ethnic culture/ Australian) background? Or would you like to learn more? Why and what?

Behaviour:
Foods? (insert ethnic culture) vs Australian
Dialect? (insert ethnic culture) vs Australian
Dress? (insert ethnic culture) vs Australian
Customs? (insert ethnic culture) vs Australian
Participation of customs? (insert ethnic culture) vs Australian
Participation with community or cultural events? (insert ethnic culture) vs Australian
Have you travelled back to your motherland?
Do you think behaving Australian and (insert ethnic culture) is the same? How?
Why?

Other:
Do you engage with other cultures other than your own? How? When?
How do you feel about your school?

Conclusion:
Why did you agree to this interview?
How did you find the interview?
Thank you for participating.