ATTITUDES, MOTIVATION AND ACHIEVEMENT OF MALAYSIAN SECONDARY SCHOOL STUDENTS TOWARDS LEARNING ENGLISH

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FACULTY OF LANGUAGES AND LINGUISTICS
UNIVERSITY OF MALAYA
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ABSTRACT

Success in second language learning (SLL) is of considerable importance in today's highly interconnected world. However, the reasons behind success in SLL are still poorly understood. One promising line of research (Gardner 1985) proposes that differences in achievement result from differences in individual variables such as integrativeness, attitudes to the learning situation, motivation and language anxiety. However, despite its significance, this theoretical perspective has been much criticized in the literature, with the result that its status is currently uncertain. The objective of this research was therefore to test Gardner's socio-educational model in the modern Malaysian context to evaluate its current utility. Structural equation modeling was used to investigate correlations between the stated variables among 278 upper secondary students in Malaysian National High Schools in the Klang Valley. Significant relationships were found between the model constructs investigated. It was concluded that despite the criticisms it has been subject to, the socio-educational model continues to offer a viable and useful perspective for investigations into the causes of success in SLL. The limitations of the research include the use of purposive rather than probabilistic sampling, the cross-sectional rather than longitudinal design of the research, and the fact that quantitative research, of its nature, is unable to offer deep insights into the reasons behind the findings. The significance of the research is first, that it suggests that researchers need not avoid the use of the socio-educational model where appropriate attention is paid to theoretical issues, measurement methods and analysis; and second, that there appears to be a place for the inclusion of cultural instruction modules in compulsory second language courses in high schools.

Keywords: socio-educational model; integrativeness; second language learning; Malaysia

ABSTRAK

Kejayaan dalam pembelajaran bahasa kedua (SLL) sangat penting dalam dunia yang sangat saling berkaitan hari ini. Walau bagaimanapun, sebab-sebab di sebalik kejayaan dalam SLL masih kurang difahami. Satu garis penyelidikan yang menjanjikan (Gardner 1985) mencadangkan bahawa perbezaan pencapaian hasil daripada perbezaan pembolehubah individu seperti integrasi, sikap kepada situasi pembelajaran, motivasi dan kebimbangan bahasa. Walau bagaimanapun, walaupun kepentingannya, perspektif teori ini telah banyak dikritik dalam kesusasteraan, dengan hasilnya statusnya tidak menentu ketika ini. Oleh itu, objektif penyelidikan ini adalah untuk menguji model sosio-pendidikan Gardner dalam konteks Malaysia moden untuk menilai utiliti semasanya. Pemodelan persamaan struktur digunakan untuk menyiasat hubung kait antara pembolehubah yang dinyatakan dalam kalangan 278 pelajar menengah atas di Sekolah Menengah Kebangsaan Malaysia di Lembah Klang. Hubungan penting ditemui antara konstruk model yang disiasat. Adalah disimpulkan bahawa walaupun terdapat kritikan yang telah tertakluk kepada, model sosio-pendidikan terus menawarkan perspektif yang berdaya maju dan berguna untuk penyiasatan ke atas punca kejayaan dalam SLL. Batasan penyelidikan termasuk penggunaan purposif dan bukannya persampelan kebarangkalian, keratan rentas dan bukannya reka bentuk membujur penyelidikan, dan hakikat bahawa penyelidikan kuantitatif, sifatnya, tidak dapat menawarkan pandangan yang mendalam mengenai sebab-sebab di sebalik penemuan. Kepentingan penyelidikan adalah pertama, bahawa ia menunjukkan bahawa penyelidik tidak perlu mengelakkan penggunaan model sosio-pendidikan di mana perhatian yang sesuai dibayar kepada isu-isu teori, kaedah pengukuran dan analisis; dan kedua, bahawa terdapat tempat untuk kemasukan modul arahan budaya.

Kata kunci: model sosio-pendidikan; integrasi; pembelajaran bahasa kedua; Malaysia

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CHAPTER 1: INTRODUCTION

The purpose of this chapter is to introduce the research and provide sufficient information for the reader to understand what the research is about, what the research problem is, what was done to investigate the problem, what was found, and what the significance of the findings is. It therefore aims to briefly indicate the background, introduce key concepts, indicate the research gap, present the research problem, indicate the research objectives, present the research questions and statistical hypotheses, explain the research design, indicate the significance, position the study relative to the existing literature, indicate the original contribution of the study, indicate the structure of the work, and state the scope and limitations of the research. After reading this chapter, it is expected that the reader will be better placed to understand the context of, rationale for and methodology of the study, and will be in a position to follow the subsequent chapters and grasp the significance of the findings.

1.1 Background

Modern scientific research into the causes of success in second language learning (SLL) dates back to at least 1930, when Ruch, reviewing studies investigating the question of whether intelligence or language aptitude was more strongly associated with success in SLL, declared that 'the sweep of the evidence suggests that special prognosis tests predict success in the study of foreign languages somewhat better than intelligence tests' (p. 322). Thus, the first major reorientation in the field was a shift from general intelligence to language aptitude as a theorized dominant contributor. However, this reorientation does not appear to have led to a flourish of scholarly investigation of the problem. Little systematic work on a possible role for motivation in language learning is seen in scholarly journals in the period following Ruch's publication. At the end of the 1950s, however, a paper which was to launch a sixty-year line of research was

published. This paper (Gardner & Lambert, 1959) had an enormous impact on the way in which second language learning was understood, and sparked another major reorientation. The central claim of the paper was that success in language learning does not depend on language aptitude alone; additional variables are involved (Gardner & Lambert, 1959, p. 267). The most controversial of these variables has come to be known as integrativeness. Research by Gardner and associates over the years, as well as a theoretical model (Gardner, 1985a) and a test battery (Gardner, 1985b), have supported the 1959 claim, as shown by a comprehensive review (Masgoret & Gardner, 2003). A recent 343-page publication focusing on the model (Al Hoorie & MacIntyre, 2020b) attests to its continued influence. Authors writing in that publication stated, for example, that Gardner's seminal paper initiated a new research direction and proposed an entirely new way of theorizing language learning (Dornyei, 2020); that Gardner's work 'launched innumerable studies' (Al Hoorie & MacIntyre, 2020a, p. 1); and that Gardner's insights continue to be 'central to our understanding of the social psychology of language' (Edwards, 2020, p. 262). The present research, then, is about the causes of success in SLL, and proceeds from a Gardnerian perspective.

1.2 The socio-educational model

Modern The socio-educational model (Gardner, 1985a) suggests that achievement in SLL is affected by integrativeness, attitudes to the learning situation, language anxiety and motivation. The theoretical relationship between these constructs, as represented by the theoretical model (Gardner, 1985a, p. 147) (Appendix A), has been the subject of much discussion over the years and will be explored in detail in this thesis. As an introduction, however, a straightforward way to begin to appreciate the relationships proposed by the model is to consider the operational model (Gardner, 1985a, p. 153) (Appendix B). This model suggests that cultural beliefs (developed in response early

environmental factors) influence individual differences such as integrativeness, motivation and attitudes to the learning situation, which along with language aptitude, affect learners' reactions to formal and informal learning situations, which in turn lead to non-linguistic and linguistic outcomes. It also shows that attitudes to the learning situation, integrativeness and motivation may together be classified as integrative motivation (referred to in the diagram as 'integrative motive'). Note that even though the operational representation is a useful introduction to the socio-educational model, some important elements of the model (such as language anxiety) are not shown. The inconsistency of Gardner's representations of the model over time, while understandable when one appreciates the desire to focus on different variables in different studies, may be a source of difficulty for those unfamiliar with his corpus. Note too that the term 'integrative motive' is not unproblematic, as will be discussed elsewhere in this thesis.

Another way to approach the socio-educational model is to consider the structural equation model (Gardner, 2006, p. 246) (Appendix C). This model indicates that each of the main constructs is measured by one or more variables which contribute to the content of that construct (e.g., 'teach' and 'class' contribute to the construct 'attitudes to the learning situation'). All this will be explained in greater detail throughout the thesis. Gardner's 2006 labels (Appendix C) map to labels used in this thesis as follows: IO = INO, ALC = ALC, IFL = IFL, TEACHER = EVT, CLASS = EVC, MI = MIN, DESIRE = DLL, ALL = ALL, CLASS = LCA, and USE = LUA. Operational definitions of these labels are provided in Table 1.3 (Section 1.28).

1.3 Motivation

Motivation was first suggested as a potential contributor to second language learning as early as 1929, but it was not systematically investigated at the time, possibly due to measurement difficulties (Gardner & Lambert, 1959, p. 266). Early attention, after initially focusing solely on intelligence, was centered on language aptitude rather than motivation. An interpretation typical of the period, offered by Ruch in a review of a collection of foreign language aptitude studies presented by Henmon in the same year, was that 'the sweep of the evidence suggests that special prognosis tests (i.e. language aptitude tests) predict success in the study of foreign languages somewhat better than intelligence tests' (Ruch, 1930, p. 322).

Little systematic work on a possible role for motivation in language learning is seen in scholarly journals prior to 1959. Gardner and Lambert's (1959) paper is widely acknowledged in the language motivation field as the seminal event which helped spark interest in researching language learning from a a motivational perspective, a research approach which is still part of an active research program (MacIntyre, 2010, p. 375). At the time of the 1959 paper, the focus of many researchers was still on aptitude, as spearheaded by Carroll. In fact, Carroll's own Factor B, linguistic interest (1958, p. 18), although later abandoned by him, arguably foreshadowed the massive upswing in scholarly interest in motivation. Carroll's modern language aptitude test, which tested grammatical sensitivity, phonetic coding, inductive learning ability and rote learning ability, is still in use today (Sasaki, 2012, pp. 315, 317). It is worth noting that despite continuing controversies and unanswered questions, language aptitude research remains a flourishing field and has developed in parallel with language motivation research; readers interested in a discussion of the current conceptualization of the association between language aptitude and SLA are referred to Li's useful meta-analysis (2015).

1.4 Integrativeness

Integrativeness is a major part of Gardner's socio-educational model. It is measured in the model by assessing levels of attitudes towards the language community, integrative orientation and interest in foreign languages (Gardner, 2006, p. 246) (Appendix C). The construct has been characterized in many ways in the literature and will be discussed throughout this thesis. As a working definition, it could be said that integrativeness implies '… openness to other cultures in general and an interest in the target culture in particular' (Gardner, 2006, p. 247). Key claims of the model for present purposes, based on a review of the Gardnerian corpus, are that (a) openness to and/or interest in the culture and/or people of the target language community are linked to higher levels of motivation; and (b) motivation, not only aptitude, is linked to success in second language learning.

1.5 Continuing relevance

The continuing relevance of integrativeness to language learning has been demonstrated by a substantial body of research. One study, for example, meta-analyzed 75 studies based on 10,489 individuals and found that (a) correlations between motivation and achievement were invariably more marked than correlations between achievement and instrumentality or attitudes to the learning situation and achievement, and that (b) integrativeness appeared to consistently correlate with higher motivation levels; the context (level of language use in the surrounding environment) had no clear moderating effect on these correlations (Masgoret & Gardner, 2003, p. 169). Support for integrativeness is not limited to the pre-2003 period. A structural equation analysis of 8,593 Hungarian students in 2005 showed that integrativeness was the most important part of the motivation of language learners, and in fact was the one which mediated the effect of all other investigated factors (Csizer & Dornyei, 2005, p. 28); it was noted by the authors that many empirical investigations have connected integrativeness to

language learning success ‘in a statistically significant way’ (p. 20). In another study from this period, analysis of data from 1,473 students in Croatia, Romania, Spain and Poland conducted by Gardner and colleagues highlighted the applicability of both the socio-educational model and the AMTB to non-Canadian, modern-day contexts (Gardner, 2006). A more lengthy account of studies continuing to connect integrativeness and success in English language learning in the post-2003 period is presented elsewhere in this thesis, but recent studies indicating an ongoing role for integrativeness include a survey of research from 14 mainly Arab countries which found integrativeness was an important factor supporting EFL motivation (Al Harthy, 2017) and a mixed methods study which found that integrative orientations influenced the English language skills of the surveyed Mexican participants, and stated that feelings of closeness to or openness to the target language community (TLC) influenced the English language learning desire of the participants (Albarracin, Cabedo Timmons, & Delany Barmann, 2019).

1.6 Criticisms of integrativeness

Despite the substantial empirical support for integrativeness referenced above, it has been much criticized over the years. Two sets of connected critical approaches, the first relating to issues of power, identity and multilingual contexts, and the second relating to the nature, availability and approachability of target language communities, may be discerned in the literature. Key strands of each of these critical approaches will be dealt with below.

The first set of arguments claims, among other things, that power and identity issues profoundly affect language learning motivation and yet have been largely ignored or at least under-theorized in mainstream debate and mainstream models (Peirce, 1995); that integrativeness may not be applicable in Asian contexts since a group of Asian students

overwhelmingly rejected it even though it had been claimed to be indispensable (Shaw, 1981); that integrativeness fails to adequately reflect the situation in multilingual societies in which learning multiple languages and negotiating multiple identities is part of life (Agnihotri & Khanna, 1998); that in-group identification, not integrativeness, was linked with higher English language attainment levels in a group of upper secondary Afrikaans respondents (Coetzee van Rooy, 2002), and most strikingly, that integrativeness is not applicable to learners of English in World Englishes environments for reasons such as the difficulties and even harm which attempting to integrate into another culture may involve, the unavailability or unwelcoming nature of some speaker communities and the debatable nature of the assumption that to be successful, learners need to want to integrate with target language communities (Coetzee van Rooy, 2006).

The second set of challenges to integrativeness focuses on the question of whether the changing position of English globally and/or the absence of sizeable and accessible local speaker communities in many foreign language learning (FLL) contexts render the notion inappropriate. It was argued as early as 1983 that the precise nature of integrativeness and instrumentality varies across cultures and cannot be assumed to be invariable (Clement & Kruidenier, 1983); many of the challenges in this line since then can be seen in a sense as an extension of this argument across space and time, that is across space from Canadian contexts with substantial target language speaker communities to European and Asian contexts lacking them, and across time from the 1960s and 1970s, when integrativeness and instrumentality were first theorized, to the present, when the passage of time has brought about substantial changes in the ways in which English is perceived and used throughout the world. Dornyei, basing his comments on observations of Hungarian learners of English, pointed out that in many English language learning contexts, English is learned as a foreign language rather than a second one, and argued that attitudes towards target language communities have little

relevance in such contexts since the learners lack significant contact with them, suggesting that in such contexts, learner motivation may be more strongly related to attitudes towards language learning itself or the language being studied than to attitudes towards the language community (Dornyei, 1990). Researchers since then have advanced further arguments along similar lines, relying on the lack of direct contact or the changing role of English in the world to discount or greatly weaken the supposed ongoing role of integrativeness among second language learners in FLL contexts.

1.7 Response to criticisms

The importance of the criticisms mentioned above - those regarding identity, power and multilingual contexts and those relating to the nature, availability and approachability of target language communities and the changing status of English globally - is acknowledged, and it is believed that there is still much room for debate as to the impact of these issues on notions of integrativeness. For example, the idea of imagined communities, which according to the revised and updated version of the 1983 volume available to the present author proposes in part that *all* communities based on notional relations between persons who will never meet each other (such as nations) can be considered imaginary (Anderson, 2006, p. 6), has been used in the analysis of language learning. Along these lines, Norton describes an immigrant in Canada who saw her ESL teacher as not only as a language teacher but also as a representative of a community of professionals, implying that for this learner at least, the target language community may not have been native English speakers as such, but rather an (English-speaking) imagined professional community (2001, p. 164). Al Hoorie, building on such ideas and pointing out (as indeed the current thesis does) that according to Gardner, integrativeness as used in the socio-educational model does not necessarily indicate a desire to integrate into a target community (Gardner, 2010, p. 223), argues that in view of globalization, integrativeness can be interpreted as openness towards an imagined

community (Al Hoorie, 2021). According to this line of thinking, the target language community does not have to be a native speaker community as such, but could in some cases rather be an imagined community the learner hopes to join, such as a community, perhaps, an international English-speaking business community (p.11).

While it is not within the scope of this section to engage in a detailed discussion of these concerns, one general observation may perhaps usefully be made at this point. It appears that some scholars appear to have taken the term integrative to indicate a desire to become a member of a physically present group of persons who speak the target language natively (e.g. (Oxford & Shearin, 1994)). However, the combined writings of Gardner and associates over many years appear to point to a slightly different interpretation of the notion of integrativeness, one including notions of (a) positive attitudes to the people, culture and language of another language community, (b) openness to and interest in other languages in general and (c) a wish to communicate with people of the target language community. In fact, Gardner has indicated that Lambert and he never intended integrativeness to mean a wish to become a member of another group, but rather to connote an openness towards taking on certain characteristics of a target speaker community (Gardner, 2006, p. 247). From this perspective, many of the criticisms of integrativeness lose much of their force, since they are based on an understanding of integrativeness which does not quite align with the one proposed by Gardner.

1.8 Recent studies

In a field as active as language learning motivation, it would of course be impossible to cover the entire territory. However, this section aims to provide an impression of the state of the field and clarify the need for the current study from a theoretical angle. It deals briefly with international research before focusing on Malaysian research.

An influential recent publication affecting Gardnerian research, *L2 Motivation Research 2005-2014: Understanding a publication surge and a changing landscape* (Boo, Dornyei, & Ryan, 2015), is a wide-ranging article which covers much ground. Although the article has to date received little critical attention, the present analysis will center on the last phrase of the title, '*a changing landscape'*. It could be argued that, whether intentionally or not, this article not only chronicled but also hastened and expanded changes which had been taking place in the field, to such an extent, in fact, that numerous high profile (internationally recognized) research articles published since appear to take the Boo et al. article itself as a watershed of sorts marking a decisive turn away from quantitative, large-scale, Gardnerian-type studies and towards qualitative, small-scale studies underpinned by a variety of other theoretical assumptions. Indeed, whether partly because of *Boo et al.* or not, few high-profile authors appear to have published Gardnerian material in the period 2015-2019, with some notable very recent exceptions which will be dealt with more fully elsewhere in this thesis.

Despite the lack of high-profile studies, however, research by lower profile (not internationally recognized) authors working in the Gardnerian tradition or at least using elements of the socio-educational model continued in the period 2015-2019. For example, a recent Thailand-based study using the socio-educational model used an adapted AMTB to examine the motivation and attitudes of non-Thai school students towards learning Thai (Wiriyanusorn & Lynch, 2019). A Mexican study (Albarracin et al., 2019) examined factors shaping the English language acquisition of adult Mexican immigrants in Illinois in the USA using concepts proposed by Noels, Clement, and Pelletier (2001), one of which was an interpretation of integrativeness, a Gardnerian concept. Another Mexican study focused on the motivation and attitudes of 242 university learners learning English in Mexico using Pineda's (2011) Mexican version of the AMTB and concluded that it demonstrates strong internal validity and has an

appropriate factor structure (Cocca, Perez Garcia, Zamarripa, Demetriou, & Cocca, 2017). A Pakistani study analyzed the motivation of 70 leaners learning English at a university in Pakistan using a 30-item adaptation of the 2004 AMTB (Lashari, Mashori, Abbasi, & Talpur, 2018). Another Pakistani study studied the instrumental and integrative orientations of 100 students of English at ten language institutes in Pakistan (Nazir, Bashir, & Bashir, 2017). Finally, a Turkish study focused on the attitudes and motivation of 793 pre-university students of English in Turkey using an adapted (Turkish) version of the 2004 AMTB (Tuyan & Serindag, 2019).

In the Malaysian context too, studies using the socio-educational model and its measures have continued to be published. One study explored the motivation of 31 Afghani post-graduate students at UiTM towards learning English using a 27-item version of the AMTB adapted from Saheb (2014), which was in turn based on the 2004 AMTB (Othman, Manap, Ramli, & Kassim, 2019). Another studied the motivation and attitudes of 34 East Malaysian sports students learning English using a 48-item Malay language version of the 1985 AMTB prepared by Thang et al. (2011) (Isa, Abidin, Malek, Sidik, & Bakar, 2018). A third centered on the motivation and attitudes of 150 foreign students at five universities in Malaysia (UKM, UM, UPM, USM and UTM) towards learning Malay, basing their analysis on Gardner's concepts of integrativeness and instrumentality (Kamaruddin, Ahmad, Saad, Kamaruddin, & Seruji, 2018). A fourth examined the motivational orientations of 207 non-Muslim Malaysian learners of Arabic at a Malaysian university, UKM, using a 21-item scale based partly on the AMTB and basing the study in part on Gardner's notion of integrativeness (Aladdin, 2017). A fifth investigated the motivation and achievement of 213 Malaysian undergraduates learning French at a Malaysian university, UNIMAS, using an adapted version of the 1985 AMTB (Bodian, 2017). A final study inspected, among other things, the motivation of 448 Malaysian students towards learning Spanish at the University of

Kuala Lumpur's Spanish Institute using a self-report motivation questionnaire based on Johnson's (2012) scale which was itself based on Gardner's socio-educational model (Khong, Hassan, & Ramli, 2017). Thus, numerous studies have been done in both the Malaysian and international contexts using constructs, methods and measures derived either directly or indirectly from Gardner's model and instruments, even since 2015, and even though *Boo et al.* implied that the language motivation field had decisively turned away from the model.

The international and Malaysian studies referenced above, while by no means constituting a unified research effort, and while exhibiting numerous shortcomings, allow several conclusions to be drawn. First, the notions of integrativeness and instrumentality popularized by Gardner and associates would appear to have continuing currency and relevance among researchers of language motivation, both internationally and in Malaysia. Second, integrativeness and instrumentality, although sometimes apparently conflated with Deci and Ryan's concepts of extrinsic and intrinsic motivation, appear to be often interpreted as supporting motivation for second language learning in modern Malaysia. Third, while lip service is often paid by researchers to concerns regarding potential problems with integrativeness as a theoretical foundation for language motivation studies in the modern world due to the changing position of English in the world, the concept, either in its original form or in a modified one, along with modified versions of the AMTB and/or other elements of the socio-educational model, continues to be used as a foundation for conducting research and interpreting findings. In other words, scholarship involving the model and its instrument has continued unabated, and in considerable volume. Certainly, not all attention has been uncritical. Overviews critical of the model and its elements have continued to be published during the past five years. One particularly critical work by a modern Indonesian writer, for example (Subekti, 2017), will be analyzed in some depth in

Chapter 2. However, the point for the moment is that the model and its instrument continue to enjoy vigorous scholarly use internationally despite claims of its declining popularity and appropriateness and of the purported rejection of the model by the field.

1.9 Theoretical framework

Many alternative theoretical approaches to understanding the role of individual differences in the learning of second languages have been developed in applied linguistics, such as the acculturation model (Schumann, 1986), the willingness to communicate model (MacIntyre, Baker, Clement, & Donovan, 2002), and the second language motivational self system (L2MSS) (Dornyei, 2005). Concepts from other academic disciplines have also been used or advocated by SLL scholars, such as self-determination, intrinsic motivation and extrinsic motivation from educational psychology (Noels et al., 2001), dynamic systems theory from mathematics, physics and chemistry (Larsen-Freeman, 2012), and the role of emotion in language learning from positive psychology (Gregersen, MacIntyre, & Ross, 2020).

In terms of currently prominent approaches to the analysis and understanding of the psychology of language learning, the recently-published *Palgrave Handbook of Motivation for Language Learning* (Lamb, Csizér, Henry, & Ryan, 2019) contains chapters on (a) the socio-educational model, which proposes that integrative motivation may be defined as integrativeness, attitudes to the learning situation, motivation and anxiety and is related to language achievement (Gardner, 2019, p. 30); (b) the L2 Motivational Self System (L2MSS), which proposes that intended behavior is influenced by the ought-to L2 self, the ideal L2 self and the L2 learning experience (Csizér, 2019, p. 73); (c) self-determination theory, which is proposed as a potential way to support language learners who already find language learning enjoyable, encourage those who are disheartened, and possibly assist those who may view it as

merely a means to an end to view it in a more meaningful way (Noels et al., 2019, pp. 95-96); (d) directed motivational currents, which may be described as energetic states characterized by deep and persistent motivation to achieve highly valued goals involving a sense of effortlessness, joy and fulfilment and which may, subject to further research, be amenable to being produced at a group level by means of focused interventions (Henry, 2019, pp. 139, 157); and (e) willingness to communicate, which conceives of an individual's openness to communicating as an important goal of language teaching and analyses the individual decision to cross 'from silence to speech' in terms of the L2 WTC model (MacIntyre, Clement, Dornyei, & Noels, 1998) with a view to helping teachers, perhaps, effect practical changes in classroom activities and dynamics to entice students to communicate (Yashima, 2019, pp. 203, 216). Beyond acknowledging their existence and potential utility and providing the sketches above, however, an in-depth discussion of such approaches is not within the scope of this thesis, and readers interested in such approaches are encouraged to refer to the referenced handbook.

The focus of this research is not on the merits and demerits of other theories, which are acknowledged as potentially valuable, but on the continued applicability or otherwise of Gardner's socio-educational model (Gardner, 1985a) and AMTB (Gardner, 2004), as indicated by data generated by this study. That is, this research makes use of the theoretical proposals, constructs, definitions and measures of the socio-educational model; no claims are made as to the suitability or otherwise of other models and theoretical approaches, since such claims are beyond the scope of this thesis.

1.10 Research gap

Available studies do not provide satisfactory answers to several basic questions one might ask regarding integrativeness in Malaysia today. The international studies,

while supporting the ongoing relevance of this line of research and providing interesting findings, may or may not have direct relevance for the Malaysian context. Social factors differ from location to location, and this is particularly important with a model like the socio-educational model, which highlights the importance of (local) social expectations, values and norms as well as of school, familial, class and individual factors. Generalizability from one international context to another cannot be assumed. As for the Malaysian studies, many of these, even when perhaps appearing to address research questions similar to those posed by the current research (i.e., the level of and relations between Gardnerian constructs), suffer from conceptual and methodological difficulties to such a degree that their conclusions must be regarded as severely compromised. The methodological difficulties include a tendency to, for example, use non-Gardnerian or substantially modified Gardnerian items to measure Gardnerian constructs without providing adequate justification for these key research decisions, while the conceptual difficulties include a tendency to conflate, misrepresent, misattribute or even fail to attribute well-known theoretical approaches to the analysis of language learning motivation.

One example of an article exhibiting both methodological and conceptual difficulties and failing to provide evidence of rigor in the measurement of either the levels of the constructs of interest or the relations between them, and beginning with methodological difficulties, is a highly cited Malaysian study (Ming, Ling, & Jaafar, 2011). For example, it is stated in that publication that Gardner's 1985 AMTB was adapted and translated for the study (p. 45), but no details are given as to (a) the reasons for or process used in the adaptation; (b) the steps taken during translation to ensure equivalence of meaning; or (c) the reason for using the 1985 AMTB for the investigation rather than the 2004 AMTB, which would arguably have been more suitable due to its greater recency and the fact that it is expressly designed to measure

attitudinal levels of English learners in international contexts. As for conceptual difficulties, in the introductory section of that study, for example, it is stated that motivation is considered important in L2 learning and is classified as either intrinsic or extrinsic (p. 42); mention is made of Bandura (1977). However, (a) the concepts of intrinsic and extrinsic motivation are primarily associated with Deci and Ryan's (1985a) self-determination theory, not with Bandura, whose 1977 article, as even a cursory glance would have indicated to the authors, is concerned with self-efficacy, a totally different construct; (b) even if the concepts of intrinsic and extrinsic motivation and their link with self-determination had been correctly attributed and were relevant to the authors' discussion at that point, it should have been stated that although these concepts originated outside the field of second language motivation, they have been used by prominent SLM scholars such as Noels and associates (e.g. (Noels et al., 2001). Either way, such concepts should be clearly distinguished from Gardner's concepts of integrative and instrumental motivation, which (i) are mentioned in the passage under consideration without being adequately distinguished from the other constructs mentioned and (ii) are represented as being in opposition to one another, an interpretation which has repeatedly been problematized in the literature; see for example Ely (1986), Hernandez (2006), and Rock et al. (2021). The conceptual and methodological difficulties of this study have been analyzed in some detail to illustrate some of the problems which appear, based on a review by the present writer of studies purporting to investigate levels of integrativeness and/or its relation to motivation and/or achievement, to be common in studies of this nature.

Muftah and Rafik-Galea (2013), much like Ming et al. (2011), exhibits numerous conceptual and methodological problems. For example, it is stated on p.92 that language teachers and researchers have started to realize the importance of motivation in language learning, while in fact, the importance of motivation in language

learning has been the focus of a flourishing research area for at least 60 years. To take another example, it is stated in the article (p.92) that Gardner's particular, quite narrow definition of motivation in 1985 required clarification and that such clarification was provided in 2003 in Masgoret and Gardner, but in fact, (a) Gardner's operational definition, which it seems from the context that the authors mean, was adequately explained in his 1985 book and has remained relatively unchanged since then, and (b) Masgoret and Gardner 2003 did not clarify this definition, focusing rather on very different matters. As for methodological differences, to take just one example, in the present study, the adaptation of the AMTB was carried out in a highly systematic way, as seen elsewhere in this thesis, and the process was reported in detail, whereas in Muftah and Rafik-Galea, while a few reasons for the adaptation are given on pp.95 -96, no details at all are provided about the adaptation process or the adaptations made, and an examination of the list of adapted items, for example for instrumentality (p.97), will confirm to those familiar with the theory underlying instrumentality that while some of the items seem reasonable, many of them seem to have very little connection to Gardner's items or theory. In what way, for example, does the item 'University lecturers are good in [sic] teaching English' (p.97) relate to instrumentality, which in Gardner's conception is a desire to learn a language for the practical benefits it will bring? These are just a few of the differences between the current study and existing studies.

Further ways in which the present research may be distinguished from existing research could be mentioned. Ming, Ling and Jaafar (2011), for example, indicate in their abstract that the stated goal of the research is to understand the reasons for the relatively unsatisfactory level of English proficiency of Malaysian students (p.40); the goal of the present study is very different, i.e., to test the ongoing relevance and utility of the socio-educational model in a modern, non-SLL, English-learning context. In

addition, many studies in this area are simple correlational studies, whereas the present study makes use of SEM and explores proposed causal relationships.

Naturally, context alone is not enough to justify a study. In this case, the justification includes not only a lack of studies in the research context, but the fact that very few studies, according to the literature reviewed by the author and as supported by the analysis presented in this thesis, focus directly on the questions of the presence or otherwise of integrativeness, rigorously defined, in populations of interest, or the relation or non-relation, rigorously measured, of integrativeness to achievement. That is, few local or international studies focusing specifically on the questions of interest to this research appear to have been conducted; the lack of studies focusing on the questions of interest to the present study is not restricted to the Malaysian context. Due to the highly contextually influenced nature of attitudes as measured in the socio-educational model, Gardnerian studies in multiple research locations could arguably be worthwhile, and such studies could justify their existence by providing evidence of a lack of relevant research in that context. However in the present case, there is no need to make this argument, since as amply shown and argued throughout this thesis, the constructs and relationships of interest to this model do not appear to have been adequately examined in recent times, whether in the present research context or elsewhere. That is, in this case it is not necessary to argue that the context alone is sufficient to establish a research gap, since an examination of the literature indicates that little empirical research appears to have been done specifically with the purpose of exploring the ongoing relevance of integrativeness, the AMTB and the socio-educational model to language learning outcomes of upper secondary students studying English in instructed settings in recent times, whether in modern Malaysia or in other locations.

To conclude this section, it may be stated that available studies do not appear to provide convincing answers to the questions of (a) whether integrativeness is still

present in learner populations in Malaysia today despite rapid and extensive changes in Malaysian society, English itself and the global community or (b) whether integrativeness is significantly associated with achievement among high school students in national schools in Malaysia today, as predicted by the socio-educational model. Such research should be carried out urgently to allow decisions regarding the usefulness or otherwise of additional integrativeness-based studies in the modern Malaysian context to be made in a principled manner. Further, the relation or non-relation of other model elements such as motivation, attitudes to the learning situation, and language anxiety to achievement in language learning should be investigated. Even if integrativeness is found to be inapplicable in the modern Malaysian context, other elements of the model may continue to be useful. Finally, the appropriateness of the latest official international version of the AMTB (Gardner, 2004) should be investigated. If theoretical difficulties relating to for example question wording, question length or overall length are identified, principled modifications should be carried out and the modified AMTB tested in order to examine whether a modified AMTB may facilitate continued research in this line.

1.11 Research problem

The concept of integrativeness has been much criticized over the years. Consider, for example, the suggestions that learners would like to use English as a way to understand and cope with modern life rather than as a way of entering a group (Lukmani, 1972, p. 271); that prior achievement may be more important than prior attitudes in later achievement (Burstall, 1975, p. 17); or that self-reported attitudes and motivation may in fact be covert measures of language proficiency and/or verbal intelligence (Oller & Perkins, 1978, p. 85). Such early objections, in combination with others raised in the 1980s (Au, 1988); the 1990s (Crookes & Schmidt, 1991); (Oxford & Shearin, 1994); (Dornyei, 1994); the 2000s (Lamb, 2004); (Dornyei, 2005); (Coetzee van Rooy, 2006);

and the 2010s (Boo et al., 2015); have resulted in the continued utility of the socio-educational model and integrativeness being in doubt.

There is thus an urgent need for clarification as to the status of the socio-educational model and its key construct integrativeness in terms of its continued applicability, both in the modern world in general and in complex linguistic contexts like Malaysia. If through rigorous empirical testing integrativeness is found to be lacking in the members of the target population, the finding would fail to support the ongoing utility of the model, since integrativeness is integral to the model. If, however, integrativeness is found, this would appear to support the conclusion that the model may continue to be used in appropriate cases, naturally assuming its use is based on a sound understanding of the theoretical basis and the research is carried out rigorously.

The problem investigated in this research, then, is whether the socio-educational model, and its key construct, integrativeness, continue to be appropriate theoretical lenses through which the achievement levels of modern language learners may be investigated. The answer to this question is highly relevant because insights provided by the model, if it is found to be of continued utility, may be of use in providing educational assistance to English learners.

It is evident from the above review that the status of integrativeness and the socio-educational model is currently unclear. On one hand, integrativeness has been widely acknowledged over many years to be a useful theoretical construct for gaining insight into second language learning success. It has been used for many years and is still in use today. On the other hand, a vigorous and sustained challenge to its applicability in the modern world has been mounted, and has, despite relying (as will be argued elsewhere in this thesis) at least partly on questionable interpretations of key aspects, persisted so strongly in characterizing integrativeness as no longer applicable in the field that many

writers simply appear to assume that its inapplicability has been demonstrated and is now generally accepted; see for example Prasangani (2014). However, this supposed inapplicability has not been empirically shown. The wide acceptance among language motivation researchers of a set of criticisms the validity of which has not been adequately supported by empirical study is, of course, problematic.

The problem of the unclear status of the model is both important and far-reaching. It is important in that if integrativeness is indeed still a useful theoretical tool for analyzing language learning success, then the scholarly community would surely be ill-advised to consign it to the status of an interesting relic. It is far-reaching in that its exclusion from the theoretical arsenal would presumably lead to its non-use in many cases in which its use may in fact be appropriate, with the result, presumably, that numerous insights of potential usefulness to the research, educational and learner communities may never come to light. The population most affected by the uncertain status of the concept is the one which is arguably least able to defend itself, i.e., the global learner population, if it is assumed that the non-adoption by practitioners of theoretical insights flowing from the socio-educational model may lead to learners being deprived of access to those insights. Despite numerous comments in the literature to the effect that theoretical and practical work tend to proceed in a parallel but somewhat unconnected manner, theories do unquestionably affect practice, as can be seen by the wide acceptance by practitioners of notions such as Krashen's affective filter (Lin, 2008), a communicative approach to language teaching (Dornyei, 2003); Savignon (2018), and indeed, perhaps, of integrativeness. Thus, to argue that the acceptance or non-acceptance of the concept of integrativeness by researchers has little impact on language learning would be inadvisable, since notions held by researchers do arguably affect practitioners, and notions held by practitioners do arguably affect learners.

Any research effort, of course, must of its nature be focused, and cannot hope to address situations beyond its scope. However, by addressing one small clearly defined area, they can add to the overall body of knowledge and thereby contribute to knowledge about the phenomenon being studied. This process, which incrementally builds a more and more accurate picture of the world, is tremendously important because it is through accurate conceptualization that practice can be improved. Thus, the current effort seeks to constitute one small step in the slow march of progress by studying the possible causes of language learning success of upper high school learners in national schools in Malaysia towards learning English. It does so via the lens of the socio-educational model, a model based on powerful and well-supported insights into the effect of psychological factors such as integrativeness and social influences on motivation to learn target languages. The research may either support or fail to support the theory; either way, it will, it is hoped, contribute to the overall understanding of student outcomes in language learning.

1.12 Research objectives

This research aims to evaluate whether it is theoretically possible that integrativeness might be found in the sample despite criticisms of the construct in the literature; determine the level of constructs of interest; assess the degree to which the subscales of the AMTB contribute to the constructs they are supposed to contribute to; determine the degree to which the relationships proposed by the model are present in the sample; and reach a conclusion as to whether, in view of the study data and the theoretical analysis, the socio-educational model and its key construct may still be considered relevant to language motivation studies. To do this, since it became clear during the early part of the research project that the International AMTB in its existing form would be unsuitable, it was decided to systematically and in a principled manner develop, test and deploy a new shorter form of the AMTB designed specifically for Malaysia.

1.13 Research questions

In line with the research background, research problem and research objectives stated above, the research questions (RQs) of the present study may be expressed as follows. These questions will be answered via theoretical analysis, descriptive statistics and inferential statistics.

Table 1.1: Research questions

No.	Research question
RQ 1	Is it theoretically possible that integrativeness might be observed in this sample?
RQ 2	What are the levels of the constructs of interest in this sample? (a) What is the level of integrativeness (INT)? (b) What is the level of attitudes to the learning situation (ALS)? (c) What is the level of motivation (MOT)? (d) What is the level of language anxiety (LAN)? (e) What is the level of achievement (ACH)?
RQ 3	Do the subscales proposed by the socio-educational model contribute significantly to the constructs they are supposed to contribute to in this sample? (a) What are the contributions of INO, ALC and IFL to INT? (b) What are the contributions of EVT and EVC to ALS? (c) What are the contributions of MIN, ALL and DLL to MOT? (d) What are the contributions of LCA and LUA to LAN?
RQ 4	What is the strength and direction of the relationships proposed by the socio-educational model in this sample? (a) What is the strength and direction of the correlation between INT and MOT? (b) What is the strength and direction of the correlation between ALS and MOT? (c) What is the strength and direction of the correlation between MOT and ACH? (d) What is the strength and direction of the correlation between LAN and ACH?
RQ 5	Based on the theoretical analysis and evidence, does it appear that the socio-educational model and its key construct, integrativeness, are still relevant to modern SLA?

1.14 Statistical hypotheses

This section presents the statistical hypotheses. Statistical hypotheses may be defined as formal claims regarding statistical relationships in observed data (Kitchin, 1994, p. 179). Essentially, they are testable statements regarding the existence of significant patterns or associations in data. Such statements are useful in exploring proposed patterns in data (McPherson, 2001, p. 242). RQs (3) and (4) enquire into relationships of interest and therefore statistical hypotheses were formulated to explore them. As per

convention, the hypotheses were formulated in the negative (i.e., null hypotheses). This study does not involve research hypotheses, which are propositions seeking to account for observed patterns (Kalaian & Kasim, 2008) or 'candidate explanations for observed patterns' (McPherson, 2001, p. 242). It explores the existence and level of variables and relationships of interest but does not seek to formally account for their existence. Accordingly, the study involves research questions (Table 1.1), statistical hypotheses (Table 1.2) and alternative statistical hypotheses (Table 5.4).

Table 1.2: Statistical hypotheses

H	RQ	Wording
1	3 (a)	The relationship between INO and INT is not significant
2	3 (a)	The relationship between ALC and INT is not significant
3	3 (a)	The relationship between IFL and INT is not significant
4	3 (b)	The relationship between EVT and ALS is not significant
5	3 (b)	The relationship between EVC and ALS is not significant
6	3 (c)	The relationship between MIN and MOT is not significant
7	3 (c)	The relationship between ALL and MOT is not significant
8	3 (c)	The relationship between DLL and MOT is not significant
9	3 (d)	The relationship between LCA and LAN is not significant
10	3 (d)	The relationship between LUA and LAN is not significant
11	4 (a)	The relationship between INT and MOT is not significant
12	4 (b)	The relationship between ALS and MOT is not significant
13	4 (c)	The relationship between MOT and ACH is not significant
14	4 (d)	The relationship between LAN and ACH is not significant

1.15 Research design

A cross-sectional design involving collection of attitudinal and motivational data using a modified version of the 2004 AMTB (Gardner, 2004) was employed. After screening, data were analyzed using descriptive and inferential methods using SPSS Version 25 and SmartPLS (Version 3.9.2). A structural model was created to test the key relationships predicted by the socio-educational model (Gardner, 1985a). Thus, this is a quantitative study based on Gardner's socio-educational model. The study tested the applicability of the socio-educational model in modern Malaysia via a positivist approach. Briefly, positivist approaches assume that reality is knowable, that theoretical

and practical considerations can lead to the formulation of testable research hypotheses, and that the collection, analysis and interpretation of data can help in understanding real-world phenomena, such as, in this case, possible causes of language learning success. The study sample was drawn from upper secondary school students in national high schools in Kuala Lumpur and Petaling Jaya, Malaysia. Since an instrument specifically designed for this research was used, the instrument had to be piloted before being used in the main data collection and analysis phase. More information regarding the design may be found in Chapter 3.

1.16 Research location

The research location was selected for both practical and theoretical reasons. From a theoretical perspective, the investigation could have been carried out in many modern instructed English learning environments. The lack of recent, rigorous studies in Malaysia made it an ideal location. From a practical perspective, the location was appropriate because it offered relatively straightforward access to adequate samples of the population of interest and because the educational authorities were expected to be receptive to the study. Acknowledging the significance of proficiency in English and stating that the multicultural character of Malaysia makes it suitable for engendering multilingual proficiency, the government-authored Blueprint referenced above states that ‘operational proficiency’ in English is ‘much lower’ than proficiency in Bahasa Malaysia, with just 28% of candidates passing the 2011 SPM exam in English, as compared to 75% passing the 2011 SPM Bahasa Malaysia exam (p. E12). Low English proficiency is said to be of concern to employers, and has been ranked since 2006 as one of the top five concerns of employers (p. E12). The Blueprint states that improving English proficiency should be an immediate priority, with 100% basic English literacy by the end of Year 3 and a mandatory pass in the English SPM (Year 11 leaving exam) proposed from 2016 onwards (p. E13). References to the importance of English

proficiency are scattered throughout the document and support the sections discussed above. Stating that English is the international language of communication, the document mandates multiple measures to improve English proficiency levels (p. 2.7). The above may be taken as documentary evidence demonstrating that the English language level of high school graduates in Malaysia is inadequate as assessed by the Ministry (Ministry of Education Malaysia, 2013). That this situation is seen as problematic by the Ministry is evidenced by the fact that multiple strategies to boost English language proficiency are detailed in the document. Thus, the research site appeared highly suitable.

1.17 Local community benefits

The study requirements were straightforward: convenient physical access to an appropriate student sample, and permissions from relevant educational authorities to collect data from that sample. However, one goal of the study was to provide benefits to the community in which the research was sited. This was considered important due to a desire that the results of the research be useful for the community in which the research was conducted. Because of the under-researched nature of Southeast Asia in terms of the socio-educational model, as well as for other practical considerations such as the potential for the research to provide benefits to communities in that region, Southeast Asia emerged as the preferred location for the study. After considering several potential research sites, the location was finalized by selecting West Malaysia as the site for the study. One reason for this choice was that it was a relatively convenient location, since the researcher was based nearby. Another reason was that it appeared there was a reasonable possibility of making a meaningful contribution to the host community, since the need for English language competence in the community is relatively high, and yet the level of such competence, according to a relatively recent government publication (Ministry of Education Malaysia, 2013), has been characterized as relatively

low. As such, it appeared that there was a need for such research in Malaysia and that such research may be beneficial to the host community. Little research into this problem (as framed here) has been done in Malaysia in recent times. Thus, it was appropriate to conduct research into this issue in the Malaysian context both to advance scholarly understanding of the factors contributing to language learning success but also (potentially) to develop insights of practical value to the local community. The offered insights may support the making of educational decisions which may enhance student success.

1.18 English in Southeast Asia

English language learning has long been recognized as a national imperative by nations in Southeast Asia. One commentator notes that the 'great interest' in English language learning in the region reflects its importance for intra-regional communication (Kam, 1998, p. 6). Another claims that the characterization of English as the world language and the regional language of choice for communication between peoples of different linguistic, ethnic, and cultural backgrounds is 'uncontroversial' (Hu & McKay, 2012, p. 345). Another classifies English as the prime 'foreign' language in East and Southeast Asia (Kirkpatrick & Liddicoat, 2017, p. 156). Interest in English, linked with a desire for economic development and a drive towards internationalization and modernization (Kirkpatrick & Liddicoat, 2017, p. 157), may be seen in the 'wild geese' families of South Korea (Koo & Lee, 2006), the cram schools of Japan (Lowe, 2015) and the Speak Good English campaigns of Singapore (Hiramoto, 2019). In Malaysia, informal evidence of the importance of English is not hard to find. Local newspapers host a vigorous and ongoing debate about English, both in society and in education (Chonghui). The Malaysia Education Blueprint 2013-2025 (Ministry of Education Malaysia, 2013), expanding on the notion of bilingual proficiency which it claims to be one of six important attributes required by all students to ensure global competitiveness,

states “Every child will be … operationally proficient in Bahasa Malaysia as the national language and language of unity, and … English as the international language of communication” (2013, p. E10). Graduates should be able to work in English language environments (p. E10), since proficiency in English and Bahasa Malaysia is part of the vision of the Ministry for a “balanced education” (p. 2.5).

1.19 Significance of the findings

The findings of this research are significant because they provide empirical evidence for both a continued presence of integrativeness among young people in modern Malaysia and a continued relationship between integrativeness and achievement. This has implications for the study of the causes of success in language learning, since if integrativeness is still associated with success in language learning, further research along similar lines should be carried out as a matter of priority to test the strength of the association in other samples. It also has implications for course and curriculum design, in that if integrativeness is truly as strongly associated with success in language learning as the present results suggest, Malaysian education might benefit from the introduction of cultural modules to stimulate greater cultural interest and openness among students. Elements designed to foster integrativeness could be built into courses, and curricula could explicitly acknowledge the importance of such elements. Finally, it has implication for the socio-educational model and integrativeness since if the proposal that the model is less relevant in modern learning contexts is difficult to sustain in view of the evidence, it may continue be used in appropriate, theoretically sound, rigorous studies going forward.

1.20 Relationship of this study to existing literature

This study adopts a contrarian stance vis-à-vis much of the existing literature in the field. A major goal of this study was to problematize the assumption that the socio-

educational model is less relevant in the modern world generally and in Asia particularly. As such, a critical stance is adopted with respect to much of the argumentation advanced in the field. Naturally, this stance is not intended to imply any disrespect to the scholarship of others in the field; indeed, without their contributions, the field would not exist. Rather, the goal is to suggest that despite the widespread acceptance by prominent researchers of major recent narratives surrounding the socio-educational model, alternative ways of viewing the literature and the evidence are possible, and such views envisage the ongoing applicability of the socio-educational model.

1.21 Related fields

The academic discipline most directly concerned with the theoretical and practical issues of second language learning is known as second language acquisition (SLA). Hulstijn (2007, p. 191), in characterizing the objectives of SLA, focuses on efforts to understand how learners' minds and brains process and represent linguistic information. Other issues seen as central to SLA, according to Hulstijn, include the 'poverty of the stimulus' problem, the critical period hypothesis, learning mechanisms, learning sequences, and outcome variability, which is theorized to depend on learner variables (individual differences) such as attitudes towards native speakers, attitudes towards countries and cultures, and motivation to learn the target language (Hulstijn, 2007, p. 195). It is outcome variability, analyzed in terms of individual differences such as motivation and integrativeness, which is the central focus of this thesis. The key expressions in the previous sentence are 'outcome variability' and 'individual differences', and it is the relation of individual differences to achievement which is the focus of the field of second language motivation (SLM) and of this thesis. This thesis, then, is conceptually located in the field of SLM, a subfield of SLA.

1.22 Original contribution

In essence, this thesis develops a new perspective on the existing literature by (a) undertaking a detailed analysis of selected influential publications from a critical perspective, (b) problematizing and questioning certain highly influential and often-repeated but not (in the view of this research) entirely justified assertions regarding the utility of the socio-educational model, and (c) proposing a new way of viewing the model. The original contribution of the research to sociolinguistics derives from the fact that no other research, according to the literature reviewed, has focused on the precise issue of interest to the present research, i.e., the ongoing utility or otherwise of the socio-educational model in view of its present uncertain status.

1.23 Expert involvement

Experts were involved in the preparation of this thesis in various ways. Experts in the language learning field assisted by giving feedback used in the adaptation of Gardner's International AMTB (2004) to the Malaysian context. A local expert with experience in instrument design and formatting assisted by sharing expertise on the most important aspects of questionnaire design and formatting and reviewed the proposed questionnaire from the point of view of user friendliness, adequacy of the instructions and other design elements, and overall fitness for purpose. Bilingual academics with experience in instrument translation assisted in the creation of a Malay language representation of the adapted AMTB used in this study and the validation of that translation (i.e., assessing equivalence of meaning and cultural appropriateness). Experts in research and statistical analysis assisted in guiding the overall development, the statistical parts of this study and the interpretation and analysis of the data. Finally, experts in sociolinguistics, second language acquisition, research methodology and thesis development and presentation reviewed the work and gave feedback before finalization. The input of these experts is gratefully acknowledged.

1.24 Structure

The following chapters are structured as follows. The second chapter reviews selected relevant literature; the third chapter indicates the methodology; the fourth chapter 4 indicates the results; the fifth chapter discusses and interprets the findings; and the sixth chapter presents the conclusions and recommendations. The references section includes details of works referred to in the thesis. The Appendices present information pertinent to the discussion but too bulky to include in the body.

1.25 Definitions

Many terms used in this thesis are technical in nature or theoretically involved. Providing brief definitions for such terms is perhaps not quite as straightforward as it may seem due to the subtleties surrounding them. For example, the theoretical complexity of terms such as integrativeness suggests that attempts at brief, non-contextualized definitions may be less useful. Discussion, and ideally contextualization, is required for a reasonable appreciation of such terms. As such, for the most part, terms used in this thesis are defined in the context in which they are introduced. This approach aims to minimize ambiguity and enable readers to grasp the meaning of the terms more easily, since the context helps clarify the meaning they are intended to convey in the context of the discussion. However, the operational definitions of constructs are straightforward (Gardner, 2006, p. 246) and are shown in Table 1.3, along with abbreviations.

Table 1.3: Operational definitions

Term	Abbrev.	Operational definition
Achievement	ACH	PT3O + PT3W + SEO + SEW
Attitudes to learning the language	ALL	ALL1 + ALL2 + ALL3 + ALL4 + ALL5
Attitudes to the language community	ALC	ALC1 + ALC2 + ALC3 + ALC4 + ALC5
Attitudes to the learning situation	ALS	EVT + EVC
Desire to learn the language	DLL	DLL1 + DLL2 + DLL3 + DLL4 + DLL5
Evaluation of the course	EVC	EVC1 + EVC2 + EVC3 +EVC4 + EVC5
Evaluation of the teacher	EVT	EVT1 + EVT2 + EVT3 + EVT$ + EVT5
Integrative orientation	INO	INO1 + INO2 + INO3 + INO4 + INO5

Integrativeness	INT	INO + ALC + IFL
Interest in foreign languages	IFL	IFL1 + IFL2 + IFL3 + IFL4 + IFL5
Language anxiety	LAN	LCA + LUA
Language class anxiety	LCA	LCA1 + LCA2 + LCA3 + LCA4 + LCA5
Language use anxiety	LUA	LUA1 + LUA2 + LUA3 + LUA4 + LUA5
Motivation	MOT	MIN + ALL + DLL
Motivational intensity	MIN	MIN1 + MIN2 + MIN3 + MIN4 + MIN5
Progress test 3 (oral)	PT3O	Score in standardized assessment
Progress test 3 (written)	PT3W	Score in standardized assessment
Self-evaluation (oral)	SEO	Self-rating score (oral English ability)
Self-evaluation (written)	SEW	Self-rating score (written English ability)

1.26 Scope of thesis

This research focuses on factors affecting second language learning among upper secondary students in Malaysian high schools in the Klang Valley, Malaysia, and is based on a Gardnerian perspective. Structural equation modeling, descriptive statistics and inferential statistics were used in combination with theoretical discussion to achieve the research goals. The research is thus constrained by the goals, theoretical framework, methods and instruments adopted. In addition, since purposive rather than probabilistic sampling was used, the results cannot be generalized to the population of interest. Within those limitations, it is hoped that the research makes a valuable scholarly contribution to knowledge in the field.

CHAPTER 2: LITERATURE REVIEW

This chapter situates the research in the context of previous research and scholarly material and presents a critical synthesis of the literature. It attempts to add to available knowledge by offering new perspectives. To do this, it critically analyzes selected influential and representative publications. No single study can hope to address and analyze all the available scholarship in this line of research, since it includes sixty years' worth of studies and theoretical argument. Therefore, only selected studies from the past thirty years have been included. This was done to emphasize the modern focus of the thesis and to highlight certain publications which are highly relevant to the research aims. While not a systematic review, it is hoped that this review covers some of the key scholarship in the area and identifies and traces the major developments of interest to the current research.

To impose a framework on the vast literature base and make it more manageable, a dual approach was adopted. First, a linear approach critically traces the development of the field since 1990, focusing on resources considered most relevant due to their impact or representativeness. Such an approach is considered appropriate since coverage of earlier developments provides the background knowledge necessary to appreciate the arguments advanced in respect of later developments. Second, a critical and synthetical approach is adopted concurrently with the linear one. Thus, while analysis proceeds in a linear manner, commentary is also offered to draw together the disparate strands in the literature and make sense of the developments. Such synthesis occurs throughout the text and before and after each major period reviewed.

To locate relevant material, the preferred approach would have been to begin with premium databases in the language motivation field such as PsychINFO, the Linguistics and Language Behavior Abstracts (LLBA), and the MLA International Bibliography.

However, such databases were unavailable to the researcher. As such, a thorough and focused literature search was conducted using available methods. First, search terms such as 'language learning motivation', 'socio-educational model', 'Gardner', 'AMTB', 'integrativeness', 'integrative motivation', 'language learning theories', 'second language acquisition' and permutations and combinations thereof were entered directly into search boxes on web pages of high profile (internationally recognized) journals such as *TESOL Quarterly, Modern Language Journal, Language Learning, Applied Linguistics* and *System.* Details of articles of interest were noted and the articles were followed up. Second, relevant content in regional or country-specific journals such as *RELC Journal, 3L, Pertanika* and *JALT* was searched. To gain a broad appreciation of the field, searches of resources in related journals such as *Journal of Multilingual and Multicultural Development* were also conducted. Chapters from second language acquisition, second language learning, psychology and educational psychology textbooks were perused. Works referenced in high profile articles were followed up, and references in referenced works were sometimes followed up in their turn. Conference proceedings were critically perused where the material was thought highly relevant. To gain an understanding of the ways in which similar studies are currently being conducted globally and locally, online university repositories were searched and relevant materials such as theses on related topics were perused where possible. Finally, the search terms described above (and combinations and permutations thereof) were entered into Google Scholar and the results were carefully analyzed for articles of interest. In all cases, sources were scrutinized, and decisions were made as to relevance. The philosophy adopted was that all sources are potentially useful when treated with care. Empirical reports published in prominent journals were preferred, but other resources were also perused. Given the research topic, it was thought important to include resources of a theoretical nature rather than restrict the pool to empirical

resources. Thus, a mixture of empirical reports and theoretical discussions from a variety of sources were used to build a broad appreciation of the research area.

As a result of this search, an embarrassment of riches was uncovered. A veritable cornucopia, in fact, consisting of over one thousand resources of varying quality, format and type was assembled. Some appreciation of the vibrancy of the field may perhaps be gained by considering that when Gardner in 2005 googled the term “integrative motivation” he obtained 591 hits (p. 4), while a google of the same term by the present author in 2019 obtained more than 10,000 hits. To say that an abundance of resources on this topic is available is rather to understate the matter. The challenge for the present study, therefore, was to select for inclusion in the review a mix of resources which would (a) provide enough depth for the issues at stake to be well appreciated, (b) fairly represent the arguments of the various schools of thought and (c) supply a clear picture of the trajectory and status of research in the area to contextualize the study and allow argumentation to be advanced in a comprehensive manner. The goals were to provide adequate depth as well as adequate breadth and identify a range of perspectives.

The solution adopted, as noted, was to pursue a combined chronological and synthetical approach. Resources of interest are organized chronologically, with commentary spread at appropriate locations throughout the text. The linear treatment is intended to assist readers to form a mental map of the overall trajectory of the field, while the interspersed commentary allows findings and theoretical argumentation to be synthesized and critically analyzed and reviewed. The reader is thus guided, in a focused manner, through relevant aspects of the entire development of the field, from 1990 to 2019, by means of carefully selected resources which are analyzed in depth for relevance, impact, and in some cases representativeness. By this means it is hoped that

through a balanced critical analysis and synthesis, an interpretation of some of the important perspectives and developments of the period under review will be presented.

2.1 Highlights

An earlier version of this literature review ran to well over 100 pages, which attests to the abundance of relevant resources available. Indeed, there are a great many publications which could claim the right to inclusion in even a highly focused review of this nature. For example, the year 1994 alone saw the publication of no fewer than six high-impact articles, all of which were highly relevant to the development of the field and could as such warrant inclusion in a review. However, after consideration, a decision was made to limit the number of publications included in the review to allow for a deeper and more nuanced engagement with those which were included. As such, beginning with Gardner and Lambert (1959), just a handful of works per decade were selected for review, with the goal of engaging deeply with these works to enable the position argued in this thesis to be illuminated and carried forward in a systematic manner.

No claim is made that the selected publications are definitive. However, in view of their impact or representativeness, and based on the need to present a focused account which engages closely with high-profile or highly representative material and allows the case central to this thesis to be systematically developed, the coverage appears suitable. That is, all analysis presented in this chapter is intended to present or build on the analytical perspective taken by this research in addressing the research issues. As such, twelve publications important from the perspective of this research, all relating in various ways to Gardner & Lambert (1959) and limiting the selection to just a few of the many important publications in each decade, are listed in the table below. These

subsections should be read in conjunction with the introductory and concluding commentary for each decade.

Table 2.1: Highlights

Author and year	Section	Importance
Crookes & Schmidt (1991)	2.4.1	Heralded as the beginning of the 'revolution' against the socio-educational model. Provided support for later articles such as Dornyei's highly influential (1994) article.
Dornyei (1994)	2.4.2	Argues for greater recognition of the role of classroom and cognitive factors. Calls for a more educational perspective on motivation and an expanded perspective on the study of language learning.
MacIntyre, Clement, Dornyei & Noels (1998)	2.4.3	Supports an ongoing role for integrativeness, though as one of many factors. An important early example of an inclusive approach to the theorization of second language motivation.
Masgoret & Gardner (2003)	2.5.1	Meta-analysis which offers strong evidence-based support for the ongoing utility the socio-educational model and integrativeness. Data from various studies is analyzed and interpreted.
Dornyei (2005)	2.5.2	Response to Masgoret and Gardner (2003) by the new leader of the field. Claims a reconceptualization of integrativeness is needed. Proposes a new model of language learning, the L2MSS.
Coetzee van Rooy (2006)	2.5.3	Highly influential, along with Lamb (2004), in carrying forward the argument that aspects of modernity and multilingualism reduce the relevance of integrativeness in the modern world.
Gardner (2007)	2.5.4	Highly suggestive study providing evidence of the continuing relevance of integrativeness, even in FLL situations, and thus of the continuing relevance of the socio-educational model.
MacIntyre, MacKinnon & Clement (2009)	2.5.5	Important attempt to find conceptual similarities between the socio-educational model and the L2MSS. Argues that the two approaches can co-exist, and cautions against abandoning the earlier one.
McKeown, Noels & Chaffee (2014)	2.6.1	Wide-ranging and sophisticated theoretical discussion which contrasts and contextualizes three important motivation frameworks and highlights their applicability in research.
Boo, Dornyei & Ryan (2015)	2.6.2	Highly problematic recent high-profile article which appears to suggest that the ongoing relevance of the socio-educational model and integrativeness is limited.
Subekti (2017)	2.6.3	Highly problematic recent lower-profile article exemplifying the way in which comments critical of the socio-educational model and integrativeness tend to be advanced without adequate analysis.
Claro (2019)	2.6.4	Interesting recent theoretical article demonstrating continued scholarly engagement with the socio-educational model and its potential for continued relevance to the field.

2.2 Gardner & Lambert (1959)

The field in its modern form is widely considered as dating from the late 1950s, and in particular from Gardner and Lambert's 1959 paper reporting on a study of 75

English-speaking high school students in a French language course (Al Hoorie, 2017, p. 1). The goal of the study was to investigate the impact, if any, of motivation on attainment in second language learning. The researchers found two independent factors connected to French attainment. Those factors, Factor I and Factor II, were described as linguistic aptitude and a motivational measure which denoted '*willingness to be like valued members of the language community'* (Gardner & Lambert, 1959, p. 271). The authors claimed that the study showed that not one but two factors were linked to second language attainment (p. 271). In other words, the researchers were presenting the language motivation community with a new way of looking at second language achievement. Much previous scholarship on language achievement had focused on ability. Now, it was claimed that language achievement depends not only on ability but also on motivation. A very specific type of motivation, one including willingness to acquire behaviors characteristic of the target language community, was implicated.

This study is clearly related to the research questions of the present research. The reader will recall that RQ2 enquires into the levels of integrativeness (among other things) of the Malaysian high school students, while RQ4 relates to the relation (if any) of integrativeness to achievement (through motivation). Gardner and Lambert (1959) deals with similar questions. While of course not able to answer the RQs of the present study, and while offering only rudimentary guidance for analysts (the model most often referenced today was not published until 1985), the 1959 study does imply that attainment in second language learning may be connected to affective factors, and in particular to integrativeness.

Of course, a single study, however remarkable, can do little more than offer support for a proposition. In addition, the participants in this study were limited (just 75). Also, as noted by the authors themselves (p. 271), correlations alone do not allow

interpretations to be made with certainly. Further, the theoretical and discussion sections of the article are perhaps somewhat underarticulated, a feature which in the present writer's view was to prove somewhat characteristic of Gardner's writing. Moreover, from one point of view the authors were simply carrying out 'normal science' (Kuhn, 1970); that is, they were simply seeking to build on and extend knowledge in the field, in that at the time of the article, numerous writers had already suggested that affective variables (e.g. motivation and interest) may play a significant part in second language acquisition (p. 266). However, the above comments do not take away from the excitement one feels must have been generated by the publication of the article. This study was the first to propose what appeared to be a very promising way of operationalizing motivation. In effect, the article helped make a particular research direction (one conceiving of an important place for affective variables in language learning) researchable by specifying a new and parsimonious way of measuring motivation.

Much important scholarship was carried out in the first thirty years of the field of SLM, and the passage of time does not imply that the work done during that period is of lesser importance. Indeed, much of that work remains highly relevant to the field, in that it built the foundations of an entire field. Important studies were undertaken, important findings were published, and important criticisms were raised and responded to. As such, interested readers are encouraged to investigate the major lines of argument and controversies which moved through the period, since these continue to inform much current thinking. However, for practical reasons such as the word limit and the need to emphasize the relevance of this thesis to the modern age, this thesis must now turn its attention to the more recent period, i.e., 1990 to 2019.

2.3 The 1990s

It was noted in Chapter 1 of this thesis that by 2019, the status of the socio-educational model and its central component, integrativeness, was uncertain. And yet at the beginning of the 1990s, despite much criticism, the position of the model was still very strong; indeed, throughout the 1990s, commentators continued to characterize the model as dominant. This implies that between 1990 and 2019, the model went from being the most prominent model in the field to one whose very relevance, by some accounts, is in question. How did this happen?

The answer to this question is complex. However, the combined chronological / analytical approach proposed at the beginning of this chapter may, it is hoped, allow light to be shed on the complex theoretical developments which occurred in the field. As such, a systematic and analytical approach will be applied to attempt to analyze and understand to some degree the mechanisms by which the extraordinary change noted in the previous paragraph occurred. In line with this approach, the thirty-year period commencing in 1990 will be analyzed in ten-year periods, starting with the 1990s. The aim is to allow the commentary and analysis to flow freely and to enable themes and developments to emerge in an integrated and flexible manner.

If serious but sporadic attacks on the model had occurred prior to the 1990s, mounted for example by Oller and associates (e.g. (Oller, Baca, & Vigil, 1977); (Oller & Perkins, 1978); (Oller, 1981)), Clement and Kruidenier (1983), Ely (1986) and Au (1988), to name a few, the 1990s was to witness what almost amounted to a flood of discontent with the model, as seen for example in articles by Crookes and Schmidt (1991), Oxford and Shearin (1994) and Dornyei and associates (e.g. (Dornyei, 1990); (Dornyei, 1994); (Dornyei, 1998)). Arguments varied, but a common element could be understood as a claim that the model had in a sense been almost too successful for its own good; that is,

that its dominance of the field had somehow stifled debate and retarded the development of alternative approaches, thus depriving the rapidly growing field of the variety of opinion and approach needed to ensure the health of any knowledge ecosystem.

It is unarguable that competition tends to spur refinement and innovation and thus to result in advances which benefit entire fields. However, it is here suggested that new theoretical models and approaches need not render previous models and approaches obsolete, and that, in theory at least, the dominance of one paradigm need not be a barrier to the emergence of others. When new approaches emerge, existing methods may continue to be used where appropriate, i.e., if their use continues to offer advantages. In addition, if new methods and approaches are adopted, they should offer genuine advantages; their novelty or closer alignment with related fields alone cannot be considered sufficient reason for their adoption. The extent to which the new models and approaches which appeared in this field over the course of the 1990s can be said to have conformed with the suggestions above will be considered in the subsections below.

2.3.1 Crookes & Schmidt (1991)

This article by Crookes and Schmidt (1991) draws attention to what are described as limitations in the Gardnerian approach and argues for an ‘opening up’ the field to new ideas and approaches. It is certainly a well-known and highly cited article, and appears sometimes to be taken as demonstrating conclusively a need to turn away from social psychological approaches to language motivation theorizing towards more teacher- or classroom-centered approaches. The key argument involves a claim that the socio-educational model’s emphasis on the social psychological elements of language learning is both limited and limiting because it fails to reflect the meaning of motivation as used by second language teachers and other areas of enquiry such as educational psychology

(p. 469). The claims are made that teachers' definitions of motivation are more aligned with definitions of motivation 'outside social psychology' such as education, and that definitions from psychological and educational research should influence second language motivation studies. Such definitions are said to include 'everyday, non-technical concepts' such as engagement, which, it is suggested, is a 'teacher-validated' term closely aligned with 'the concept of motivation which has been … explored outside SLA' (p. 480). An example of an educational approach to motivation (pp. 481-482) is that suggested by educational psychologist John Keller, who analyzes motivation into four components; interest, relevance, expectancy and outcomes (1983, p. 396). In conclusion, after proposing some highly relevant (Gardner, 2010, p. 58) principles for future research, Crookes and Schmidt reiterate that a social psychological approach has limited second language learning research and failed to adequately discriminate between attitude to the target language culture and motivation.

While many useful observations are made in this article, and while it sparked welcome and vigorous debate (e.g. Brown (1990), Cheng (1993), Dornyei (1994), Dornyei (1997), Dornyei and Csizer (1998) etc.), not all the argumentation presented is compelling. For example, no evidence is presented in support of the claim that previous second language learning motivation researchers had failed to do justice to the ways in which second language teachers had used the term. One might ask which language teachers, sampled from which population, at which time, used or tended to use the term motivation in which ways, and in which ways did researchers fail to do justice to such usage? The claim is not supported. In addition, even if persuasive evidence of the ways in which the presumably rather large population of language teachers had tended to use the term motivation had been presented, and it had been shown that this use did not align with that of language motivation researchers, it does not automatically follow that this is problematic. For a problem to exist in this hypothetical situation, it would have

had to have been argued that it is important for the understanding of teachers and researchers as regards the topic of language learning motivation to align, and that differences in interpretation tend to produce specific, documented problems. However, no such argumentation is presented.

Another problem with the article is what appears to be an attempt to problematize the fact that the fields of second language motivation, second language acquisition and 'mainstream education' have different concerns, take different approaches, foreground different aspects of phenomena and adopt different definitions. Although the observation is presumably accurate to some degree, differences between fields are surely entirely natural and are not automatically problematic. They certainly could be problematic, for example if it were argued and demonstrated that differences in terminology and focus led to miscommunication within or between fields, wasted scholarly effort due to duplication or misdirected energy, or to negative outcomes for students, teachers or societies. However, since these outcomes are not suggested, the mere assertion that the terminologies and preoccupations of the fields differ is insufficient to establish a problem.

A final observation which may be made here is that it is not clear that the authors fully grasped some aspects of the socio-educational model or its operationalization. This is reflected in numerous statements throughout the article. For example, the statement that "Motivation is identified primarily with positive attitudes towards the target language group and the potential for integrating into that group …" (Crookes & Schmidt, 1991, pp. 471-472) is not quite accurate. Motivation in the structural representation of the model (Appendix C) is fed by three to five distinct constructs, of which arguably the most important are attitudes to the learning situation, integrativeness and the motivational subconstruct. The components of integrativeness are attitudes to

the language community, integrative orientation and interest in foreign languages; the components of attitudes to the learning situation are evaluation of the course and evaluation of the teacher; and the components of the motivational subconstruct are attitudes to learning the language, motivational intensity and desire to learn the language (Table 1.3). There is no requirement for a desire to integrate (Gardner, 2010, p. 233). Thus, while positive attitudes to the language community are presumed to be helpful, many other elements also contribute to motivation according to the model, such as evaluation of the learning situation, interest in interaction with members of the target community or its culture, and effort. All of these must be acknowledged for discussion of the model to be useful. Lastly, while the suggestions as to the desirable characteristics of a research program should evidence appear reasonable, it is not shown that prior research failed to evidence such characteristics.

2.3.2 Dornyei (1994)

This article was destined to become Dornyei's most highly cited article (Google Scholar Citations, n.d.). Proposing that what was needed was nothing short of a significant reconsideration of second language learning motivation (Dornyei, 2016, p. 123), the article constituted a nudge which, in combination with other articles by Dornyei and others, was in the view of the present writer to change the direction of the entire field. Thus, to say that it is important to discuss the article is something of an understatement. Space limitations preclude a comprehensive discussion, but an attempt is made below to identify and analyze the most important elements of the article as they relate to the socio-educational model and the research questions of this thesis.

Dornyei here argues that a notable change in attitude towards Gardnerian-based research emerged in the early 1990s, as evidenced by papers by Brown (1990), Crookes and Schmidt (1991), Skehan (1991), and Oxford and Shearin (1994), the overall thrust

of which was that the Gardnerian approach was limited and limiting (Dornyei, 1994, p. 273). Summarizing the concerns and adding his own, Dornyei called for a more education-centered, pragmatic approach; one which more closely aligned with teacher perceptions and educational psychology; one acknowledging the role of cognition and the classroom situation, and one which would lead to the development of more practical guidelines for teachers based on research findings. He states that his purpose in the article is to facilitate a transition to a more educational perspective towards language learning motivation by describing selected (then largely unexplored by the field) motivational components, presenting the theoretical basis for a new multilevel language learning motivational construct, and suggesting ways to apply research results to language teaching (pp. 273-274). In summary, then, the article articulates a number of interesting proposals for future research (p. 273), discusses a number of 'further' components of potential interest to language motivation researchers (pp. 275-277), enumerates a set of 'situation specific' motivational components (pp. 277-279), introduces a new (untested) 'motivation construct' (pp. 279-280), sets out a number of suggestions for language teachers, and calls for further research.

The status of this article as one of the most highly cited articles in the field indicates, perhaps, that many researchers and teachers have been interested in its contents. Although citations may be critical as well as approving, there is a tendency to assume that a high citation count indicates at the very least that the issues raised are worthy of attention. Indeed, the articles already reviewed in this section, as well as the Skehan articles referenced by Dornyei, do indicate that at least some researchers were interested in expanding research in some of the ways mentioned; i.e. in using more 'teacher-friendly' definitions of motivation, paying more attention to what goes on in classrooms, focusing more on student cognitions and forging closer links with other research areas, such as perhaps SLA or educational psychology.

However, not all aspects of the article are unproblematic. Concerns could be expressed regarding the sweeping nature, for example, of some of the generalizations. The proposition that language motivation 'should' align more closely with teacher views and educational psychology must be argued for, not simply assumed. The fact that some researchers would like to see more research into classroom elements using teacher-friendly definitions and/or a more cognition-focused or educational psychology-like approach to analyzing motivation is by no means conclusive. The need for such approaches must be established and should not be accepted without considering arguments on both sides, and yet no argumentation establishing such a need is presented in the article. In addition, some aspects of Gardner's model are not represented accurately. For example, when referencing the AMTB (Gardner, 1985b), which contains no fewer than 50 semantic differential items intended to assess student reactions to their course and teacher as well as at least five Likert scale items focusing on the same things, Dornyei states that the 1985 AMTB contains just a few items focusing on classroom elements (p. 273). However, neither teachers nor the educational context or curriculum are sidelined in the AMTB. The 55 items (including the semantic differential ones) aimed at assessing student reactions to the teacher and the course support the view that there was a substantial educational component to the battery; data gathered by the instrument could, presumably, have formed the basis of analysis and discussion of these issues by interested researchers. Further, while acknowledging that Gardner's model does contain an educational aspect, Dornyei states that the focus of the model is on social rather than classroom factors (p. 273). This statement is debatable. While many researchers discussing Gardner's model may have focused on integrativeness or components thereof (such as integrative orientation or attitudes to the target language group), and while the notion of integrativeness is certainly a central feature of the model, the model also directs attention to educational as well as cultural settings, to

formal as well as informal contexts, and to linguistic as well as non-linguistic outcomes (Appendix B). In addition, even if it were argued that the model pays insufficient attention to classroom factors, and that theoretical and empirical evidence suggests that it would be beneficial to focus more sharply on such factors, researchers interested in such factors are free to study them. This does not necessarily indicate a problem with the model, but simply indicates that other approaches are possible. Finally, Dornyei states that the data generated by the education-related section of the model is insufficient for the development of practical guidelines (p. 273), and that the construct is not aligned with (then-recent) changes in psychology (i.e., the cognitive revolution) (p. 273). Again, it could be said that those wishing to develop teacher guidelines or models aligned with theoretical developments in other fields are free to do so; again, this does not indicate a weakness in the model but rather a diversity of research interests and theoretical positions. The fact that the socio-educational model does not focus on student cognitions reflects a belief in the importance of affective, as well as cognitive, reactions in language learning, which is in turn based on a view that language learning involves much more than cognition.

2.3.3 MacIntyre, Clement, Dornyei & Noels (1998)

This theoretical (1998) article presents ideas of MacIntyre and associates seeking to account for willingness to communicate in a second language. The title of the article flags the three components of interest: situational factors, affiliation, and linguistic self-confidence. The arguments are that (a) focusing on willingness to communicate (WTC) opens up ways to connect linguistic, social psychological and communicative variables and thus integrate lines of enquiry which are often pursued separately; (b) L2 communication can be explained, described and predicted by means of the model presented in the article; and (c) WTC is the primary goal of language education (p. 545). Twelve variables on six levels are proposed as a heuristic for accounting for L2 WTC

(p. 547). Each level and its constituents are discussed in detail in the article and will not be rehearsed here, but readers are encouraged to read this interesting theoretical discussion (pp. 547-558). Attention here will focus on integrativeness.

Integrativeness is strongly represented in the lower part of the WTC model, which focuses on 'enduring' influences such as the affective-cognitive context, motivational propensities, and the social context. Affiliative motives are also seen in the upper part of the model, which deals with 'situational' influences, but the bulk of the integrativeness-related discussion appears in the context of the 'enduring' influences. The discussion touches on control and affiliation motives which arise from similarity, proximity, exposure and attractiveness and are affected by both personality and situational factors (p. 550), group membership, intergroup climate, intergroup attitudes, (p. 550), fear of assimilation, integrativeness, motivation to learn the language, ethnolinguistic vitality, prestige (relative socioeconomic power) (p. 555), prejudice, intergroup tension and desire for harmony (p. 556). The conclusions are first, that pedagogy should focus on WTC rather than grammatical knowledge or communicative competence (since neither grammar nor competence automatically lead to language use) (p. 558), and second, that since the model integrates numerous variables thought to affect WTC, it suggests multiple lines of potentially useful research (p. 558).

This article represents an attempt by four of the most influential researchers in the field at the time to present an integrated model accounting for willingness to engage in communication in an L2. The model is clear, well-articulated and well-connected to previous research, and suggests multiple new lines of research of potential benefit to the field. In addition, the discussion of subtopics such as intergroup attitudes and affiliative motives in communication (and by extension in language learning generally) offer much of value. As such, the article constitutes a laudable attempt to develop and extend theory

in the area. In carrying forward and building on the scholarly discussion of integrativeness and its elements, it constitutes additional support for the concept of integrativeness and as such for at least some parts of the socio-educational model.

However, several shortcomings of the model and the discussion may be noted. First, as acknowledged by the authors themselves (p. 546), the model is heuristic in nature; that is, not all elements are expected to be applicable in all contexts and for all learners. This may limit its applicability to the theoretical level, or at the very least, imply that much work remains in terms of clarification of its applicability. Second, its comprehensiveness may, paradoxically, limit its utility, in that directing attention to so many elements on so many levels (remembering that the above review focused only on elements directly relevant to integrativeness and that the full model is even more extensive) may make it challenging to conduct research based on it. Third, again as acknowledged by the authors (p. 558), the model is speculative, and as such lacks empirical support. Fourth, and more substantially, no justification for seeking to integrate 'psychological, linguistic and communicative approaches' (p. 545) is presented. Fifth, it is not clear that WTC is an inherently more valuable goal of language instruction than grammatical or communicative competence, and arguments in support of that proposition are not clearly made in the earlier part of the article (p. 547). It is stated later that WTC would bring nations together by bringing cultures into contact (p. 558), but this is not elaborated on. It is also stated that the aim of language learning is communication between people of different cultures and languages (p. 559), but there is little elaboration.

2.3.4 Review: the 1990s

This brief overview of the 1990s has, it is hoped, provided glimpses into a field in transition. The researcher with the greatest influence on research in the field during this

decade was arguably Dornyei, as judged by the number of relevant articles and chapters authored or co-authored by him in this decade and the frequency with which his claims are cited and attended to by others, including the then leader of the field and his associates. Dornyei's influence on the field may have been partly increased by a tendency to repetition, rhetoric and generalization, and many of his contentions and suggestions may be questioned, as indeed has been done here. However, it remains the fact that his views found support, which does appear to attest to a sort of groundswell of opinion characterized by a desire to broaden the scope of topics studied and methods used. What was the longer-term result of this groundswell of opinion? To attempt to answer that question, the attention of this critical literature review of the most influential and relevant research in this field will now turn to the first part of the 21st century.

2.4 The 2000s

By the dawn of the new millennium, second language motivation studies had well and truly broken free of the Gardnerian mold by which, according to several influential articles (e.g. (Crookes & Schmidt, 1991); (Oxford & Shearin, 1994); (Dornyei, 1994)), they had been constrained for several decades. And yet a new dominant paradigm had not emerged. Williams and Burden's (1997) framework, Dornyei's (1994) extended model and indeed Tremblay and Gardner's (1995) expanded model had been referenced favorably in the literature (e.g. (Dornyei, 1998), as had MacIntyre and colleagues' (1998) heuristic model and Dornyei's (1998) process model (e.g. (Noels et al., 2001)), but it is probably reasonable to say that none of these had gained wide enough support to give new direction to the field. Thus, while the field had not yet decisively turned away from Gardner's (1985) model, the rumbles of rebellion heard throughout the previous decade showed no sign of abating in the new century. The field was thus in a curious position at this time: not precisely post-paradigmatic, yet not unified either. Would a new paradigm emerge? Would decisive criticism be leveled at the previously

dominant paradigm? The answers to these questions are, of course, complex, and it is to them that the following commentary addresses itself. As before, in order to give a sense of progression to this review and to gradually unfold and analyze the most influential arguments and debates of the decade, a mixed chronological and analytical approach will be adopted in order to fluidly yet systematically address the complex unfolding situation.

2.4.1 Masgoret & Gardner (2003)

This (Masgoret & Gardner, 2003) meta-analysis involving 75 studies by Gardner and associates was performed to attempt to estimate the size of the contributions made by integrative orientation, instrumental orientation, attitudes to the learning situation, integrativeness and motivation to language achievement. The authors attempted, first, to estimate the extent of the correlations between the variables listed above and achievement, and second, to assess whether variables such as prevalence of the language in the learning environment and learner age influence the size of the associations. The study made use of data relating to 10,489 students. Lengthy commentary (pp. 175-182) accompanies the presentation of the research hypotheses, which may be expressed as stating that (a) the relationships between achievement and the five listed variables are consistently positive, and (b) the correlations between motivation and achievement are consistently higher than the correlations between the other four measures and achievement (p. 177) (Hypothesis 1); the relationships between achievement and the five listed variables are more robust in second language than in foreign language contexts (p. 181) (Hypothesis 2); and the relationships between achievement and the five listed variables vary depending on the age of the students (i.e. primary, secondary or tertiary) (p. 182) (Hypothesis 3). Hypothesis 1 reflects the views of the authors, while Hypotheses 2 and 3 are based on claims found in the literature. The tables presenting the data which address the hypotheses are found on pages 187-191.

Table 2 (p. 187) indicates that the mean corrected *r* levels for correlations between measures of achievement and the five study variables ranged from .04 to .39 and that all confidence intervals are positive at the 95% level, which provides support for Hypothesis 1(a) by implying that the study variables are indeed related to achievement (pp. 192-197). Figures 1 and 2 (pp. 195-196) present correlation data for the relationships between grades and the five study measures and indicate that the correlations between motivation and the outcomes measures are stronger than the correlations between the other four measures and motivation, providing support Hypothesis 1(b) (p. 197). For Hypothesis 2, Table 3 (pp. 188-189) indicates that although the correlations among the attitude and motivation measures and the achievement measures are stronger for grades in second rather than foreign language settings, they are lower for self-rating measures and objective measures, which is interpreted as failing to support Hypothesis 2; that is, the level of availability of the language in the environment is not positively related to the strength of the correlation between the study variables and achievement (pp. 198-199). For Hypothesis 3, the authors state that the support for age-related differences in correlations between the study variables and outcome criteria is minor, and that in any case, the data indicates that correlations are consistently positive across ages. The conclusions are that (a) the variables of interest do correlate with achievement and (b) motivation is the most important correlate.

This study is highly relevant to the present investigation. Since it is rigorously conceived and well reported, and focuses on questions central to the applicability or otherwise of the main claims of the socio-educational model to second and foreign language learning in contexts where the level of availability of the target language is open to debate, its findings are naturally of considerable interest to any researcher

interested in the notion of integrativeness and its relation to motivation and achievement.

However, certain aspects of the article may have reduced its impact on the field. For example, its length (44 pages including references), its level of detail (the abstract alone runs to two pages, and the discussion of the hypotheses to six or seven) and its sophistication (there are six pages of tables) may have tended to make it less accessible for some research consumers, although some of the introductory and concluding passages are perfectly readable for even readers without statistical knowledge. Further, one could perhaps note that since the meta-analysis covered only research by Gardner and associates, it cannot claim to have covered the full spectrum of research which has been done using the measures and concepts of the model, although admittedly the explanation for this approach, i.e., that it would be difficult to analyze the non-Gardnerian studies in a meaningful manner given their disparate methods and measures, appears reasonable. Finally, although this may be a matter of interpretation, examination of Table 4 (pp. 190-191) indicates that the mean corrected *r* levels for elementary students appear to be consistently and significantly higher than those for secondary and tertiary students, a difference which could be interpreted as relatively substantial, rather than minor.

2.4.2 Dornyei (2005)

No selective review of the 2000s focusing on sources most relevant to the ongoing discussion in the literature of topics such as integrativeness and the socio-educational model could fail to refer to Dornyei's (2005) volume. As one of the most highly cited works in the field (according to Google Scholar, it had been cited 5,957 times by May, 2020), its propositions cannot be ignored, and its influence on researchers, particularly perhaps on those new to the field, should not be underestimated. However, it will be

argued here that aspects of that influence were problematic to the extent that they tended to widely disseminate and indeed claim as standard certain views and interpretations which are in fact debatable. The following discussion focuses on Chapter 4, which is most pertinent to the current research. Due to the length of the chapter (55 pages), the amount of ground covered and the necessity to problematize much of what is said, rather than first presenting an overview and then commenting on the text, as is done with other resources in this review, commentary will be presented immediately after issues are noted. This should make the discussion more manageable.

Stating that much of the chapter will focus on his own research, Dornyei notes that the goals of his chapter are first, to outline the history of the area and second, to introduce a theory, the L2 Motivational Self System (L2MSS). In terms of the first goal, he states that the coverage will be inevitably subjective (p. 66). However, such subjectivity is neither inevitable nor desirable. All scholars must form their own views, certainly, but surely there is a requirement for an attempt, at the very least, at objectivity. To the present researcher, it seems that it would be beneficial for scholars to be constantly attempting to align themselves with what seems objectively reasonable. The issue of objectivity in science cannot be dealt with in a few lines, clearly, but it seems important to draw attention to Dornyei's self-confessed subjectivity, a subjectivity which appears to have blurred the line between opinion and fact in parts of his commentary. This, due to his influence, has arguably had unfortunate results for the field.

Claiming that research in second language motivation can be viewed in three phases (p. 66), without specifically acknowledging that this is merely his own view and serves his own agenda, Dornyei characterizes the period 1959-1990 as the social psychological phase, the 1990s as the cognitive-situated phase, and the first part of the 2000s as the

process-oriented phase. This characterization of periods is questionable for several reasons. For example, as argued in the present thesis, it is highly inaccurate to imply that a social psychological approach to second language motivation has no place in the modern world. A social psychological approach suggests that identity, social influences and intergroup relations are important in second and foreign language learning, and it is not easy to see how the passage of a few decades could make such considerations irrelevant. Indeed, it could be argued that globalization has made identity and intergroup relations more, not less, relevant, since it has tended to bring people into more, not less, contact with people of other cultures and languages, and thus has propelled such issues to greater salience, rather than thrusting them away. Dornyei's attempt to characterize social psychological approaches as less relevant since 1990, then, appears highly questionable. As the present review makes abundantly clear, Gardner's approach cannot be relegated to a pre-1990 period.

Emphasizing that the initial research was conducted by social psychologists in Canada, and stating that they were interested in examining the unique social situation in that country, Dornyei refers slightly derogatorily to 'the Canadian *assertion*' (p. 67) (italics not in original) that language learning is not the same as other school subjects because it is affected by numerous socio-cultural factors (p. 67). The facts presented by Dornyei here are not in question, but the rhetorical elements are. The discourse distances Gardner's thinking in time, by emphasizing that Gardner's thinking dates from 1959, thus implying that it may not be relevant today; in space, by emphasizing that the thinking took place in Canada, thus implying that it may not be relevant in other contexts; and in logic, by characterizing one of Gardner's key insights as an *assertion*, thus tending to somewhat question that insight, a stance which is somewhat undercut by his immediately demonstrating his acceptance of parts of it in subsequent passages (pp. 67-68). One can perhaps conjecture that the distancing was intended to set up the gist of

the overall argument, which may be expressed as claiming, in essence, that since conditions have changed and time has moved on, the *Canadian* theory (which has been so thoroughly distanced) is no longer relevant in many contexts to research into language motivation. The rhetorical style of argumentation, coupled with an apparent failure (further discussed elsewhere) to acknowledge the possible continued applicability of the socio-educational model and associated thinking to modern international contexts, is regrettable, although a very recent comment (Dornyei, 2020, p. xxi) may signal a change of stance on this issue.

The discussion on pages 68-70 centers on the socio-educational model and its elements, and it is by and large a fair representation. Indeed, it is highly insightful in places, calling attention to issues with the model which the present literature review has also noted, such as those relating to the terms ‘integrate’ and ‘motivation’. However, the accuracy of the claim that researchers have mainly attended only to two elements of the model, i.e. integrative and instrumental orientation (p. 69), is unclear. Certainly, some researchers appear to have misinterpreted Gardner’s propositions as focused on whether instrumental or integrative orientation is more effective, and have highlighted orientations than rather than integrativeness or integrative motivation. However, an examination of the literature will confirm that not all researchers have taken the approach suggested by Dornyei. In addition, Dornyei’s characterization of integrative and instrumental orientations as motivational components (pp. 69-70) is unexpected. In Gardner’s model, as noted elsewhere in this thesis, orientations do contribute to motivation, but it seems more accurate to refer to them antecedents, not as components. This distinction may appear minor but can be of some importance, since failure to grasp it may lead some readers to believe that Gardner proposes that reasons are the crucial contributors to success in language learning, whereas in fact it is motivation, not reasons, which affects achievement in Gardner’s model.

The next aspect of Dornyei's discussion of Gardner's model which appears problematic is the observation that Gardner's model has stayed relatively unchanged over time despite changes prompted by the 'cognitive revolution' in 'mainstream' motivation research, and that this lack of change, coupled with the failure of motivational theorizing in second language learning research to align with motivational theorizing in educational psychology, meant that it was appropriate for a new phase to begin (p. 71). The idea that a new phase may begin is of course unexceptionable: any researcher may, at any time, propose new directions for a field. However, there appears to be no reason to believe that lack of change of itself indicates error. It is certainly possible that models could fail to change in the face of evidence or argument, which would be undesirable. However, models could also remain largely unchanged because they are grounded in ideas about human beings and languages which continue to be relevant and useful. In this case, it would be the utility of the model rather than a failure to keep up with the times which would account for the lack of change. Further, no justification appears to be offered by Dornyei for the suggestion that theorizing in one field should follow theorizing in another. Certainly, there could be situations where this would be desirable, but in each case the merits and demerits should presumably be fully debated. The position taken here is that the debate on this issue has been inadequate. Repetition cannot be regarded as a reasonable substitute for discussion based on theory and evidence.

Comments which could be made in relation to the rest of the historical account given by Dornyei (pp. 72-88) include the following: (a) there is no acknowledgement of the numerous attempts by Gardner and colleagues to respond to the concerns of other researchers; (b) the label 'cognitive-situated period' (p. 74) to refer to the 1990s appears not to have been taken up by other researchers, and can be problematized on the basis that numerous studies were still being done throughout the 1990s based on models other

than cognitive or situated ones; (c) the claimed need to 'catch up with advances in motivational psychology' (p. 74) could be questioned on the same basis as many of the other propositions in the chapter, i.e. it cannot be said that a field should 'catch up' with another; what is presumably meant is that a field should be cognizant of developments in related fields and incorporate new methods and theorizing as appropriate; however, if this is the argument, the merits and demerits of any proposed changes should be debated (d); a research interest in a 'more finely tuned and situated analysis of … actual learning situations (p. 74) is, evidently, a valid one; again however it cannot be argued that a whole field 'should' turn in a particular direction when other directions are equally valid (which, surprisingly perhaps, is what Dornyei appears to argue here and throughout the 1990s); (e) the proposition that motivation is not static (p. 75) appears true but trite; an interest in motivational fluctuations is again a perfectly reasonable research interest but not one that other researchers should necessarily share; (f) the suggestion that studies by researchers adopting new paradigms may have value (pp. 76-82) is of course unexceptionable, but this does not constitute evidence there are necessarily problems with established ones; (g) the use of the label 'process-oriented period' for the 2000s (p. 83) appears somewhat of an over-reach; certainly some researchers have shown an interest in conceptualizing motivation from a process perspective since 2000, but others have continued to work in established paradigms.

The next section of Dornyei's chapter is devoted to presenting the L2MSS (pp. 93-119). Dornyei claims (a) that languages are more than mere codes, so language learning motivation needs to be understood from a 'whole person' perspective; (b) that integrativeness, which implies a desire to integrate, makes less sense in contests where learners lack meaningful contact with target language speakers; and (c) that based on these premises, integrativeness needs to be reinterpreted or reconceptualized. However, in relation to claim (a), while analyzing language learning motivation from a whole

person perspective is certainly valid, this would not appear to invalidate a more focused model such as the socio-educational model. In relation to claim (b), as noted elsewhere in this thesis, Gardner has clearly stated that he never intended integrativeness to be interpreted as indicating a desire to integrate into a target community (Gardner, 2006, p. 247). Since the conclusion that integrativeness needs to be reinterpreted is based on (a) and (b), the problematization of claims (a) and (b) indicates that the conclusion (c) is not persuasive. An extended response to claim (c) has also been provided by Gardner (Gardner, 2010, pp. 222-226). Thus, although the ideal self is said to be based on integrativeness and to be a broader concept with greater explanatory power than integrativeness (p. 104), the need to reinterpret integrativeness as an ideal language self is not clearly established. Granted that there is some level of confusion as regards integrativeness, perhaps those intrigued (p. 94) by the concept might seek to clarify, broaden or refine it, rather than reconceptualize or reinterpret it. The correspondence between these rather disparate concepts is not clear. It may well be the case that the L2MSS offers great practical benefits such as the promotion of student motivation by increasing the vividness and elaboration of students' language-related imagery (p. 116), and that to be effective, possible selves need to exist, be primed, be linked to procedural knowledge and be counterbalanced by feared selves (pp. 116-117), but such claims do not appear to relate directly to the socio-educational model or integrativeness.

This chapter was reviewed at some length because it covers much ground directly relevant to this thesis and because it has presumably been very influential, with thousands of citations. Dissent is ideally, of course, of great value in academic discussion, since it may spark new ideas, correct errors and contribute to the advancement of knowledge and understanding. As such, the chapter constitutes a valuable contribution to the field. However, it was thought important to engage closely

with the reasoning and point out what appear to be certain flaws and weaknesses in some of the propositions and claims as they relate to integrativeness.

2.4.3 Coetzee Van Rooy (2006)

The aim of this (2006) paper said to be to expand on insights of Kachru calling into question the relevance of certain SLA theories (p. 437). Stating that the label 'integrative orientation' was coined by Lambert in 1972 to indicate a personal, sincere interest in the culture and people of another group (p. 438), the paper cites a definition of 'orientation' from Ellis (1994, p. 509) to the effect that an orientation is about the underlying reason for studying a language. It goes on to discuss 'strong' versus 'weak' forms of integrativeness, 'simplex' versus 'complex' conceptualizations of identity and 'incorrect' assumptions regarding sociolinguistic contexts, claiming that strong forms of integrativeness, simplex concepts of identity and incorrect assumptions regarding sociolinguistic contexts are not applicable in World Englishes contexts (pp. 440-442). The paper then cites Norton, who claims that debates on this issue generally fail to appreciate the importance of power and identity in language learning and that the notion of investment may better capture the realities of learners' often ambivalent positions (p. 444); Ngugi, who argues that the culture associated with language leads learners to feel alienated from their own culture and language (p. 445); post-colonial theorists, who argue that integrativeness implies that local identities are a hinderance from which learners must distance themselves in order to succeed (p. 445); and an earlier (2002) study by the author which found that English was learnt by Africans for communication with those who speak other African languages (i.e. as a lingua franca) (p. 446). The conclusion is that the multidimensional identities and contextual features of African English learners imply that the concept of integrativeness is untenable in World Englishes environments, and that the concept should at least be interrogated by researchers in light of learner environments and identities (p. 447).

There are many valuable points raised in this article. For example, the attempt to identify differences in the ways in which integrativeness is conceptualized in various second language motivation (SLM) models is useful in that it highlights the fact that the concept is first, not limited to the socio-educational model, and second, not theorized equivalently in the different models which make use of it. The attempt to broaden SLM discourse by proposing closer attention to issues of learner identity, investment, resistance, alienation, and bi- or multilinguality is worthwhile, and indeed readers of the article could hardly fail to sympathize with the reported plight of some of the learners mentioned. In addition, the adjuration that researchers should at least interrogate integrativeness in their research contexts, i.e., that researchers should question and seek to carefully understand the definition, implications and assumptions of integrativeness in their context, is well noted.

However, several difficulties with the article could be noted. To begin, one could note that the piece, despite promising in the abstract to problematize integrativeness from an empirical as well as a theoretical perspective, contains very little that is empirical, and consists mainly of theoretical discussion. In addition, several factual errors detract from the impact of the piece and lower its credibility. For example, throughout the article reference is made to SLA (p. 437), when the reference should clearly be to second language motivation (SLM); despite the similarity of the terms, the fields are quite distinct, and have quite different concerns. Further, several misattributions are found in the article. For example, the claim is made that Lambert was the originator of the term ‘integrative orientation’ (p. 438), which is curious given that Gardner and Lambert’s seminal (1959) article and its reference to integrative orientation (Gardner & Lambert, 1959) is well-known. A further issue is the reference to ‘strong’ and ‘weak’ forms of integrativeness. While one could indeed perhaps argue for stronger or weaker forms of integrativeness, it would be important to be clear as to

which theoretical concept of integrativeness (i.e., to use examples from the article, Gardner's, Giles and Byrne's, or Schumann's) is in question. A further difficulty is that in the discussion of integrativeness in the lengthy passage headed *Critique of the notion of integrativeness* (pp. 441-447) it is not clear which particular model of integrativeness is being discussed, even though it has been stated that there are versions of integrativeness in at least five theoretical models (p. 438). Three criticisms of the concept are that (a) it does not adequately acknowledge the complexity and importance of identity in language acquisition (pp. 441-443); (b) it may tend to lead to alienation of individuals from their own language and/or culture (pp. 444-445); and (c) it fails to account for possible differences in the learning mechanisms when multilingual as opposed to monolingual learners are considered (pp. 446-447). To the extent that these criticisms refer to Gardnerian integrativeness, it could be said that (a) there appears to be no reason to believe that integrativeness denies the complexity and importance of identity in language learning, but further research into this issue would of course be useful; (b) there appears no reason to conclude that a concept (integrativeness) seeking to contribute to the understanding of a psychological mechanism (language learning) would contribute to an increase in an individual's level of alienation, but research into a possible role for alienation in language acquisition could certainly be carried out; and (c) the model is silent as to the effects of bi- or multilinguality; studies attempting to gain insight into the motivational profiles of such learners and identify insights for their language learning could certainly be undertaken.

2.4.4 Gardner (2007)

In this (2007) article, Gardner proposes that (1) since it is not truly essential for students to master languages they are taught in schools, *motivation* (a complex phenomenon with many facets) can play an important part in school language learning; (2) two types of motivation, i.e. *language learning motivation* (motivation to acquire a

second language and *classroom learning motivation* (situational motivation, impacted by the class atmosphere, the teacher and the course content) are relevant in language learning; (3) learners go through four stages, an elemental stage, a consolidation stage, a conscious expression stage, and an automaticity and thought stage; (4) motivation can be affected by *stage of acquisition* (elemental, consolidation, conscious expression and automaticity and thought), *cultural context* (elements of the culture) and *educational context* (the education system, as represented by the program, teacher, materials, curriculum and atmosphere (pp. 9-15); (5) the cultural context affects a student characteristic labeled *integrativeness* (an openness to cultural other cultures) (p. 15); (6) the educational context affects an important student characteristic labeled *attitudes toward the learning situation* (the education system and the educational environment (p. 15); and (7) attitudes towards the learning situation and integrativeness may have an effect on motivation (2007, pp. 9-15).

In the second part of the article, Gardner presents results of a test of the model conducted with two cohorts, ESO 2 and 4 (Forms 2 and 4) of high school students in Spain. Since the ESO 4 students are presumably comparable in age to the students studied in this thesis (i.e., aged 15 or 16), the discussion here will focus on them. The results for the ESO 4 students in Table 1 of the article (p. 16) show statistically significant correlations between integrativeness, motivation, attitudes to the learning situation and language anxiety on the one hand and grades on the other. The variable correlated most strongly with grades was motivation (.49**), while the variable correlated least strongly with grades was attitudes to the learning situation (.18**) (2007:16). A path analysis was conducted to test the proposed causal relations between the variables (path analysis can be used to estimate the significance and magnitude of hypothesized relationships). Figure 3 of the article (p. 17) shows that the model had excellent goodness of fit (GFI = .959; CFI = .960), confirmed the expected

directionality and positivity or negativity of the relationships (i.e. attitudes to the learning situation and integrativeness positively affected motivation, while language anxiety affected both motivation and grades negatively) and correlations between model variables (see Figure 2.1).

The discussion and empirical results presented in this article are highly relevant to the continuing relevance of the socio-educational model and integrativeness to SLM research in modern times. In terms of the continuing theoretical relevance of the model, especially in light of calls in the literature for more attention to classroom-level motivation, one could note, for example, that as argued by Gardner here and as shown in Table 2.1 of the article, classroom factors, far from being omitted, are richly represented, with extensive reference to such factors in no fewer than three of the definitions presented (i.e. classroom motivation, educational context and attitudes to the learning situation). As for the continuing relevance of the model in foreign language learning contexts, the empirical data presented in this article provides strong support for such relevance. The data supports both the basic predictions of the model and the proposed correlations between integrativeness and other model variables to such an extent that Gardner remarked that he was amazed to see the consistency of the findings (with the predictions of the model) and the similarity between these findings and the Canadian findings (2007, p. 16).

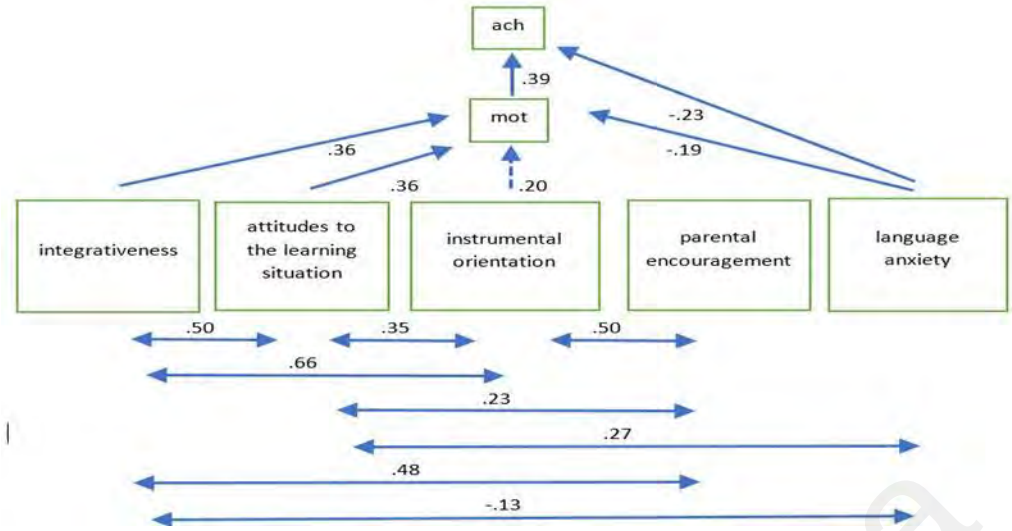

Figure 2-1: Path analysis for ESO4 students. Based on Gardner (2007), p.18

However, not all aspects of the article are equally helpful. For example, the propositions listed in this review are presented in a somewhat haphazard manner in the article. In addition, while the inclusivity of the conceptualization of the components of classroom motivation was highlighted above, the discussion of such components in the article itself is perhaps insufficiently detailed. Careful analysis by researchers familiar with Gardner's corpus and thinking will reveal that what may appear at first glance to be almost overly general characterizations of important aspects of theory are in fact careful, self-consistent and useful, but more precise formulations of key ideas may have encouraged greater numbers of researchers to engage with or maintain engagement with the model and its tenets. The discussion of the components of integrativeness may have benefited from an additional diagram (p. 19), while the diagram which is in fact included, while relevant and useful in context, could appear to contradict previous versions (p. 14) and may have created or increased confusion among some researchers.

2.4.5 MacIntyre, MacKinnon & Clement (2009)

This theoretical (2009) article opens by stating that the socio-educational model is not conflict with Dornyei's (2005) L2MSS model and claiming that the two models are in fact complementary concepts mapping similar phenomenological territory (p. 43).

The article discusses aspects of the socio-educational model (pp. 43-45), notes criticisms of the socio-educational model (p. 45), comments on the possibility of the return of the SLM field to a pre-paradigmatic state (p. 45), cautions against throwing away the conceptual 'baby' with the bathwater (pp. 45-46), reviews possible selves (pp. 46-48), reviews Dornyei's reconceptualization of integrativeness (pp. 48-50), considers future conceptual developments (pp. 50-51), lists some benefits of the possible selves approach (pp. 51-52), suggests some challenges to be kept in mind when using it (pp. 53-58), and concludes by urging researchers to build on existing integrative motivation literature and seek to truly advance understanding rather than merely rephrasing (p. 58).

This article contains much of value. It dedicates several pages to discussing aspects of the socio-educational model and integrativeness (pp. 43-46); cautions researchers against 'the often-made mistake' of making integrativeness into a straw man which means no more than assimilation into a target language community (p. 50); and warns researchers against creating new problems by adopting new paradigms simply as a response to the criticisms of the socio-educational model and thus throwing out the baby with the bathwater (p. 49). The article reminds researchers to adopt a methodical, cautious stance towards theories, and to avoid haste in rejecting highly productive models to embrace new, untested ones which may prove problematic. The article outlines, in six pages, no fewer than six potential problems which rushing to embrace the new model (the L2MSS) and jettison the old model (the socio-educational model) could cause (pp. 53-58). Potential problems noted with the L2MSS include measurement difficulties (since the model lacks standard measures, comparing results and drawing conclusions may be challenging) (p. 53); terminological problems (the many overlapping concepts in theoretical discussions of the self are more confusing than integrativeness) (p. 54); cultural variations in the internal representation of self (cultures differ widely in the ways they think about, talk about and internally represent

'self') (p. 54); the questionable efficacy of possible selves as goals (goals are thought to be of doubtful efficacy as motivators) (p. 55); the inconstancy of possible selves (which may change in salience in response to important deadlines) (p. 56) and difficulties with identity (individual self-categorization varies in response to circumstances) (p. 57).

However, some of the commentary relating to the socio-educational model could be questioned. Indeed, a close examination of the statements made in relation to that model in the first few pages of the article by the present author yielded no fewer than ten statements which appear problematic. It was thought useful to point these out since they constitute further evidence of difficulties in the literature as regards the representation and communication of the model. The inaccuracies are surprising, since the lead author of the article is a long-standing associate and co-author of Gardner, and his familiarity with the details of the model could be assumed. Perhaps it was desired to 'tone down' or simplify aspects of the model to make it more accessible or more easily communicated. At any rate, the statements, along with the present author's responses based on familiarity with the model and its elements, are presented in Table 2.2.

Table 2.2: Statements by MacIntyre et al. (2009)

No.	Statement	Response
1.	The socio-educational model complements the L2MSS (p.43)	It is not clear that the possible selves model complements the socio-educational model. This could be accurate, but such a proposition should be supported by argument
2.	The socio-educational model proposes that three main factors affect language learning: integrativeness, attitudes to the learning situation, and motivation (p.44)	This description omits language anxiety and instrumentality; while the latter is often not tested, the former, in current conceptualizations, is important
3.	The socio-educational model assumes that motivation is the 'engine' that drives the system (p.44)	No reference to motivation as an engine is noted in Gardner's works. Such a characterization would be unexpected given that Gardner is generally careful to define motivation in terms of effort, desire and attitudes
4.	The socio-educational model centers on relations between attitudes to the learning situation, integrativeness and motivation (p.44)	This description omits the interplay between motivation, anxiety and achievement. The link between Integrativeness and attitudes to the learning situation on one side and achievement on the other, mediated by motivation, is crucial
5.	Motivation supports the behaviors required for language learning (p.44)	In the model, motivational intensity (behavior) is part of the motivation construct, not a result of it
6.	The relationships between learners and members of the target language group are the principal preoccupation of integrative motivation (p.44)	There is no requirement for a relationship with members of the target language group. Integrativeness implies interest in or communicate with members of the target group, but not necessarily relationships with them. Attitudes to the target language community and foreign languages are key too
7.	Gardner (2001) noted that an essential motive [of integrative motivation] is to create 'real bonds of communication' with another people (p.44)	Gardner was quoting Whyte and Holmberg (1956). The phrase is attributable to them
8.	The importance of communication with a target language group … has been confirmed repeatedly in SLA (p.44)	There is no requirement for communication with a target language group, only for a positively disposition towards it. Also, the model addresses issues in SLM, not SLA
9.	An expanded theoretical framework should include 'elements of the integrative motive' (p.45)	This is an interesting proposition, but it is difficult to assess without more information. Which expanded theoretical framework? Which version of integrativeness? Dornyei's conceptualization of integrativeness differs from Gardner's.
10.	If the social psychological aspects of language are drained away, care must be taken not to lose the conceptual 'baby', which is the importance of individual differences in motivation to communicate with target language speakers (p.45-6).	It is not clear that draining away the social psychological aspects of language learning is either possible or desirable. In addition, the conceptual 'baby' is surely made up of rather more than the simple observation that individual differences affect motivation in language learning. The key questions are which individual differences affect it, what their relative importance is, and how they may best be theorized.

2.4.6 Review: the 2000s

This review of works published between 2000 and 2009 has attempted to show a field in transition. The most influential researcher in terms of the general direction of

the field in the decade appears to have been Dornyei, and the influence of his (2005) and (2009) propositions regarding the continued relevance or otherwise of the socio-educational model, as assessed by the number of citations of his publications, appears to have been very considerable. He was not alone in continuing to criticize the model throughout the decade: the arguments of Lamb and Coetzee van Rooy, which were sharply critical of the model and its continuing relevance, may well have influenced a considerable number of researchers, while propositions of for example Yashima, while certainly couched in less oppositional terms, may also have had a considerable impact on researchers, and may indeed have been interpreted as constituting support for a need to retheorize or reconceptualize integrativeness and for the declining relevance of the model. However, despite these publications, a critical evaluation of publications by Gardner (e.g., (2001); (2007)), Bernaus and Gardner (2008) and in particular Masgoret and Gardner (2003), despite some shortcomings as discussed in detail above, would arguably leave an impartial observer with the impression that the relations predicted by the socio-educational model continue to hold, at least to some extent, and that Gardner's notion of integrativeness, intriguing and as yet not fully understood as it is, emerged from this decade if not unscathed at least intact and still arguably relevant. It was noted in Chapter 1 of this thesis that issues such as identity, bilingualism, multilingualism and changing patterns of English use, to name a few, do point to a need for further research and certainly cannot be ignored. The point has been made throughout Chapter 2 that no claim is here made that other lines of research or theorizations lack validity. However, considering the evidence critically examined here, it does not appear reasonable to conclude that the relevance of the socio-educational model or integrativeness has diminished: on the contrary, the evidence appears to support the opposite position, as also argued by MacIntyre et al. (2009).

2.5 The 2010s

The changes in the field's attitude towards the socio-educational model and integrativeness traced above, despite support for the ongoing relevance of the model offered by Gardner and colleagues (e.g. (2001); (2003); (2007); (Bernaus & Gardner, 2008)) and MacIntyre and colleagues (e.g. (MacIntyre et al., 2009)), gathered pace during the 2010s. Indeed, among high profile (internationally recognized) researchers at least, references to the model decreased in number, and despite continued (though diminishing) references to integrativeness, tests of the full model by appear rare. While the reasons for this are no doubt complex, there may have been a desire to explore new conceptualizations, investigate new models and methods, and generally extend the scope of the types of investigation considered to be within the remit of the field. Complex dynamic systems, for example, may have appeared to offer new ways to theorize and account for phenomena of interest; in addition, there may have been an interest in more classroom based, temporally oriented, smaller scale, and generally more varied ways of conceptualizing and studying SLM and its relation to success in language learning. Be that as it may, the decade is by no means devoid of interest from the point of view of the current research, which, as indicated, is focused mainly on the question of whether or not the model and its key construct have indeed lost relevance, in which case there would appear little choice but to abandon them or at least severely restrict their usage, or have on the contrary retained their relevance despite changes in the theoretical landscape, the global use of English and the research interests of the field. This section therefore traces commentary relevant to the model in the analytical-chronological manner used in reviewing the previous two decades.

2.5.1 McEown, Noels & Chaffee (2014)

This theoretical discussion is wide-ranging and sophisticated. It begins by briefly overviewing three widely-used motivation frameworks, the socio-educational model

((Gardner, 1985a); (Gardner, 2010)); self-determination theory (Deci & Ryan, 1985b), and the L2MSS (Dornyei, 2009); (pp. 20-24). It then reflects on the ways in which self and identity are treated in the three frameworks (pp. 24-26) before going on to discuss an unpublished study (pp. 26-33), discuss future research directions (pp. 33-35) and draw general conclusions for the field (pp. 35-36). The following discussion will focus on references to the socio-educational model. The lack of extensive commentary on other theories should not be taken as an indication that other theories are considered unimportant but rather as a function of the focus of this thesis.

Key claims relevant to the current review made in the article include that (1) since the socio-educational model arose in a context of heightened intergroup tensions, it is unsurprising that the focus on intergroup attitudes in the model is prominent (p. 20); (2) integrativeness rests in part on a claim that there is an acculturative aspect to language learning (p. 21); (3) orientations are seen by Gardner as underlying forces directing the choice of reasons (p. 21); (4) interest in foreign languages includes an interest in language learning in general (p. 21); (5) several orientations can 'direct' motivation (p. 21); (6) the term intrinsic-extrinsic and integrative-instrumental should not be seen as synonymous (p. 24); (7) Gardner states that integrative orientation could be classified as a kind of extrinsic motivation (p. 24); (8) integrative motivation has been shown to be associated with both intrinsic and (forms of) extrinsic motivation, as shown by a study by Kimura, Nakata and Okumura (2001) which identified a motivation factor consisting of instrumental, integrative and intrinsic elements (p. 24); (9) integrative orientation tends to predict community and cultural engagement better than learning and classroom engagement, as shown by Noels ((2001); (Noels, 2005)) (p. 24); (10) results of studies seeking in part to determine whether the ideal and ought to selves could replace integrativeness or integrative orientation have been inconsistent (p. 25); (11) data extracted from an in-progress study by the authors indicate that integrative orientation is

associated with a factor reflecting personal goals and values (pp. 28-29); (12) the same data indicates that integrative orientation was not associated with a factor reflecting motivation which involves external or internalized pressures (pp. 28-29); (13) the same data show that integrative orientation is not associated with criterion variables such as engagement, anxiety, continuation intention and self-evaluation (pp. 29-30); (14) the reason that integrative orientation did not predict the mentioned criterion variables could be that integrative orientation tends to better predict engagement with the language community and culture (p. 30); (15) the reviewed models overlap considerably (p. 26); and (16) researchers should select models for studies based on what they are most interested in, taking the research context and target population into account (pp. 33-36).

This article, as will be apparent from the summary above, contains much of value. For example, the decision to focus on self and identity issues in the context of SLM studies is of considerable importance given that two of the three reviewed theories, in what is a theoretically contested domain, explicitly highlight the claimed importance or role of self in language learning (the word 'self' even appears in the labels used to refer to the two 'self' approaches). In addition, by calling on researchers to be mindful of the social context and geographical region (country) in which studies are located, the authors highlight the importance of issues such as language availability and regional norms in internal representations of self. Further, and importantly from the perspective of the current research, the authors not only assume continued researcher engagement with the socio-educational model, but also highlight what they see as its strengths for various kinds of studies.

However, certain aspects of the representation of the socio-educational model and its elements could be questioned. One concern relates to the depth of coverage of what are

said to be matters of central interest, i.e., the representation and role of self and identity in the models. A fuller discussion of the way in which the authors see these issues in the context of the socio-educational model would have been of considerable theoretical interest, but is not presented. Several other reservations in respect of this article, with commentary, are presented below. Page references for discussion points may be found in the discussion above.

Table 2.3: Statements by McEown et al. (2014)

Statement	Comment
Since the socio-educational model arose in a context of heightened intergroup tensions, it is unsurprising that the focus on intergroup attitudes in the model is prominent	This is an insightful comment, but it would appear unwarranted to assume that the model applies only in contexts of intergroup tension. Social attitudes in language learning are relevant in any context
Interest in foreign languages includes an interest in language learning in general	Interest in foreign languages does not automatically imply a desire to learn them, just an openness to them
Several orientations can 'direct' motivation	Only two orientations are proposed by the socio-educational model: integrative and instrumental
Integrative orientation tends to predict community and cultural engagement better than learning and classroom engagement	The concept of community and cultural engagement is an interesting one, but would appear to need further discussion to highlight its utility and relevance
A study by Kim and Kim (2012) found that (1) the ideal L2 self was a better predictor of … motivated behavior than integrativeness, and that (2) the ideal L2 self could replace integrative orientation	(1) Gardner's model does not claim that integrativeness specifically predicts motivated behavior, just that it tends to be associated with motivation (2) Integrative orientation is one of three indicators of integrativeness; it is unclear how an ideal L2 self could replace it
The reason that integrative orientation did not predict the criterion variables (in the work cited by the authors) could be that integrative orientation tends to better predict engagement with the language community	It is not clear that Gardner's model claims that Integrative orientation predicts engagement with a target community; as noted above, the concept of engagement appears to require further discussion

2.5.2 Boo, Dornyei & Ryan (2015)

The main goal of this (2015) article was said to be to account for what the authors describe as a surge in SLM research over the period 2005-2014 (p. 145). Four sub-goals are provided; (a) to examine the extent to which 'the dichotomy of integrative and instrumental motivation' is still seen in 'the current research agenda'; (b) to explore

how notions from psychology such as self-efficacy, self-determination and attributions fit in; (c) to investigate the extent to which concepts relating to the L2 self have been adopted and (d) to determine how changes in practice have reflected changes in theory (p. 146). The steps taken to achieve these goals are described in detail below, and the original wording is given in some places since doing so is relevant to the analysis which follows.

First, terms such as language learning, motivation, motivating, vision, L2 motivational self system, and attitude were searched in leading SLM databases. Searches were restricted to titles only, and working papers and (articles in) 'university-specific' publications were excluded (p. 146). Articles had to be focused on SLM and written in English for established journals (p. 146). Second, chapters from 'motivation-specific anthologies' published between 2005 and 2014 were added (p. 147). Chapters from conference proceedings, encyclopedias (sic), handbooks and anthologies not focusing on SLM were excluded since such resources were thought to generally provide overviews rather than represent 'research proper' (p. 147). Third, the resources were critically screened and a final set of 313 articles and 103 chapters was established (p. 147). Fourth, resources were classified by source, type, focus, paradigm, by participant demographics, target language and research method. Journals were divided into high-profile SLA journals, international applied linguistics journals, lesser known applied linguistics journals published in English-speaking countries, lesser known applied linguistics journal published in non-English speaking countries, and non-applied-linguistics journals (p. 147). Paradigms were (1) Gardner's 'socio-educational theory' (also referred in the article as the integrative / instrumental theory); (2) Dornyei's (2009) L2MSS, (3) Bandura's ((1977); (1997)) self-efficacy theory, (4) Deci and Ryan's (1985a) self-determination theory, (5) Weiner's ((1972); (2010)) attribution theory, (6) MacIntyre, Clement, Dornyei and Noels' (1998) willingness to communicate

model, and (7) Dornyei, Henry and MacIntyre's (2014) motivational dynamics (complex dynamics systems theory) approach (p. 147). Fifth, data was entered into appropriate software and descriptive statistics were produced (p. 148). Years were grouped into two-year blocks since these were thought more 'robust' and able to reliably reflect trajectories (p. 148). The authors state that, first, the number of studies based on the socio-educational model rose steadily between 2005/06 and 2011/12 then fell sharply between 2011/12 and 2013/14, while the number of studies based on the L2MSS rose gradually between 2005/06 and 2011/12 then rose sharply between 2011/12 and 2013/14. This is said to indicate that the field shifted from one concept to the other (p. 153). Second, 41 of the 52 publications based on multiple theories included the L2MSS; in 22 cases the L2MSS was combined with 'the integrative / instrumental' theory, which is said to indicate that researchers were trying to find the similarities and differences between the 'traditional' and 'incoming' paradigms. Third, it is speculated that the research boom and theoretical shift are connected to the 'versatility of the L2MSS framework' (p. 153).

The first main issue with the article relates to the precision and objectivity of the language and terminology. This relates to the research problem, the design, the execution, the results presentation and the discussion. Instances of vague and grandiose language, unsupported statements and failure to use standard terminology pervade the article. For example, there is reference to an 'unprecedented boom' in SLM studies. However, the existence of this 'boom' is not established. The number of publications in SLM in 1995-2004 could have been estimated, then compared to work in SLM in 2005-2014. This was not done. Another claim is that work in SLM exceeds work done in 'most strands within the whole of SLA research'. The reader is here forced to wonder why work in SLM is being compared to work done in SLA. As noted elsewhere in this thesis, SLA is quite distinct to SLM, and the utility of comparing research output in the

two fields is not apparent; while it could of course be useful, reasons for the comparison should be offered. Another problem is that although it is stated that the study aims to investigate the nature, origins and composition of the research 'surge', only the third of these issues (the composition) is addressed. The origins of the surge, 'fascinating' (p. 145) as they may be, are not explored in this article, nor is the fact of the surge established. Finally, references throughout the article to 'the integrative / instrumental theory' rather than the socio-educational model, which is clearly indicated, is problematic on at least three counts: (1) it is not a theory; (2) its name is 'the socio-educational model' and (3) the term 'integrative / instrumental' does not appear anywhere in the correct name of the model. The characterization is absurdly reductionist, as it directs attention to just part of the model rather than its overall thrust.

The second main issue with this article relates to the dataset. First, the failure to use Google Scholar (GS) in combination with other methods to source material is puzzling. The usual argument advanced here is that GS results are uncurated; that is, they are not sifted for quality and relevance. However, inclusion of resources in academic databases by no means ensures quality or relevance to a given research goal; the researcher still has to peruse returns and make appropriate decisions. Thus, there seems no reason to avoid using GS; when used with care it can be very useful. Failing to use GS in this case may have led the publication pool on which this article was based being relatively unrepresentative, in that the curated results returned by the prominent academic databases were (necessarily) shaped by decisions made by curators, whose goals may not have necessarily been aligned with the goals of the writers of the article. Second, the search terms (p. 146) could be questioned. For example, the term 'L2 motivational self system' will, naturally, have tended to return results related to that model; this of itself is not problematic, but since one of the stated goals of the article was to determine the extent to which tenets of the socio-educational model were still being used by

researchers (p. 146), terms such as ‘socio-educational model’, ‘integrative motivation’ and ‘instrumental motivation’ should surely have been used as well. Third, some of the decisions regarding the exclusion of publications are puzzling. For example, it is not clear why papers from conference proceedings were excluded; such chapters are generally research-focused, and as such appear to meet the stated criteria. The reason usually given for excluding conference papers relates to quality; however, since articles in lesser-known applied linguistics journals published in both English-speaking and non-English-speaking countries were included (p. 150) , the quality criterion does not appear to have been applied consistently. A final point regarding the publication pool relates to the distinction between motivation and motivating. It is stated that only 67% of the publications focus on motivation, while the remainder focus on motivating (p. 149). However, few if any publications dealing with motivating would be likely to use Gardner’s work as a theoretical basis, since his model does not deal with that topic. If the goal of the study was to estimate the usage of the different theoretical models, the resource pool should have been restricted to publications which could have used those models but chose not to. A third of the publications were thus, arguably, not relevant.

The third main issue relates to the interpretation of the findings. In referring to Figure 8 (p. 154), it is stated that ‘… Integrative / Instrumental theory enjoyed a steady growth from 2005/06 before it experienced a steep decline from 2011/12. In sharp contrast, L2MSS saw a spike from 2011/12.’ However, the figure could be interpreted differently. Since reliance on the socio-educational model rose significantly over the first four periods and declined in only one period, the decline could be interpreted as a dip, not necessarily indicative of a long-term decline. The fact that reliance on the L2MSS rose only slightly over the first four periods before rising rapidly in the last period could be interpreted as merely a spike, not necessarily indicating a long-term increase. It would have been interesting to see the one-year periods; the argument that

two-year periods were considered more ‘solid’ than one-year periods (p. 148) is not particularly convincing. Further, it is stated that the use of elements of both the L2MSS and the socio-educational model by researchers ‘can be attributed to … scholars … trying to find both common and contrasting ground between the traditional and the incoming paradigm’ (p. 153). However, this is, evidently, by no means certain. These writers could have been trying to find ways in which the two paradigms could be fruitfully combined. Finally, the tone pervading the interpretation seems almost triumphant in places, which appears somewhat unseemly in a scholarly discussion.

Boo et al. has been analyzed in some detail because it is highly relevant to the present research and because it may have had considerable influence on the field. A careful analysis has indicated that this article may be considered problematic in several respects due to aspects of the design, the execution, the publication pool, the interpretations and the conclusions. Problems with the precision and appropriateness of the language, the characterization of the socio-educational model, the search terms, the attributions of motives to researchers and more suggest that this article should be treated with care and cannot be considered authoritative.

2.5.3 Subekti (2017)

In this (2017) paper, Subekti claims that the notions of integrative and instrumental orientation give rise to misinterpretations by researchers since they are frequently used as synonyms for motivation, and that the increasing significance of a global English perspective adds to what is characterized as the irrelevance of integrative orientation among researchers. She adds that researchers should acknowledge the complexity and dynamic nature of second language motivation and avoid the tendency to generalize and oversimplify the motivations of learners, who are social beings ‘with all the complexity and dynamics’ (p. 1). She argues that (1) the field of ELT is changing, which may

suggest the need for a reevaluation of the relevance of the notions of integrative and instrumental orientations (p. 2); (2) Gardner's ideas fail to capture 'dynamic situations of learning process' (p. 2); (3) orientations are not automatically converted into motivations (p. 4); (4) researchers should consider using qualitative methods such as observation and interviews before administering tests designed to determine levels of orientations (p. 5); (5) Gardner himself, in Gardner and MacIntyre (1991) 'seemed to interchange orientation and motivation with a very subtle difference' (p. 5); (6) Gardner has claimed that an integrative orientation is more important than an instrumental one in SLL ((Gardner & Lambert, 1959); (Gardner & Lambert, 1972); (Gardner & MacIntyre, 1991)) (p. 5); (7) Gardner treated integrative and instrumental orientations as a 'pure dichotomy' in at least two works (Gardner & MacIntyre, 1991); (Gardner, Masgoret, Tennant, & Mihic, 2004)), which exacerbated researcher confusion (p. 6); (8) the same two works just referenced ((Gardner & MacIntyre, 1991); (Gardner et al., 2004)) 'contradict to Dornyei's … idea … that motivation is influenced by numerous socio-cultural factors' (p. 6); (9) a global Englishes perspective suggests that it is unnecessary to compare the English of L2 English speakers with the English of L1 English speakers in terms of correctness, and that the notion of a target language community is beginning to lose its reference and meaning since English is seen as a basic skill (p. 6); (10) Gardner's concepts of integrativeness and instrumentality dominated research prior to 1990 (p. 6), (11) some studies still 'regrettably' use these 'linear concepts' (integrativeness and instrumentality) (pp. 6-7); (12) the concepts are now 'out of favor with motivational researchers' (p. 7); (12) researchers now (a) focus on learners' complexity 'as social beings' whose motivation changes and fluctuates over time and (b) 'resist the temptation' to generalize too broadly, since this might lead to an oversimplification of the complexity of motivation (p. 7); (13) researchers should analyze motivation from a qualitative perspective in order to better capture the views of

learners and the 'dynamics of their motivation', while acknowledging that each learner's motivation is different.

Language problems, repetition and insufficient differentiation between the views of Subekti and those of the authors she references make the claims of this article difficult to specify. However, every effort has been made to present these views as clearly as possible above, since claims such as these are frequently found in the literature on this topic and such views are highly relevant to the present research project. The claims will be dealt with in order.

First, in relation to claim (1), it is true that the field of ELT is changing, and this may indeed imply a need to reevaluate the notions of integrative and instrumental orientation. Such reevaluation is common in research and applies to all notions, not just to well-established ones. *Second*, in relation to claim (2), it is true that the focus of the socio-educational model is not on changes in the motivation levels of individual learners. If that is of interest, certainly other approaches would appear more appropriate. However, stating that certain models are not suitable to certain research purposes is not to invalidate those models, clearly. *Third*, in relation to claim (3), it is true that orientations are not automatically converted into motivations; however, this is not claimed or implied by the socio-educational model. *Fourth*, in relation to claim (4), while qualitative methods are certainly appropriate at times, to imply that such methods are always preferable or that quantitative methods are generally unsuitable appears unfounded and profoundly unpersuasive. Clearly, both quantitative and qualitative methods have their place. *Fifth*, in relation to claims (5), (6), (7) and (8), while it is true that Gardner's arguments are at times sophisticated and rely on subtle distinctions, this in and of itself does not invalidate them. Further, examination by the present researcher of the works cited in these claims was unable to verify the claims. To take just one

example, although Subekti claims that orientation and motivation are treated as being almost equivalent in Gardner and MacIntyre (1991), the distinction between those constructs is discussed at some length in that article and it is concluded by the authors that 'There is, therefore, a major distinction between orientations and motivation' (p. 58). *Sixth*, in relation to claim (9), there appears to be some confusion here. First, the World Englishes field is entirely distinct from SLM; and second, no claim that English learners should compare their standard of language with that of native English speakers is made by the socio-educational model, which claims instead (among other things) that the achievement of language learners tends to be influenced by their feelings towards the target language community. It could be noted in passing that versions of World Englishes arguments have been circulating since at least 1981, when Strevens (1981, pp. 1-2) proposed that Standard English (a) does indeed exist (b) is of very considerable utility (c) is not associated with any particular group of speakers (even if it happens to be more prevalent among some groups than others) and (d) may be defined as a '*non-localized dialect of global currency* without significant variation, universally accepted as the appropriate educational target in teaching English, which may be spoken with an unrestricted choice of accent' (italics not in original). Strevens' views, particularly as reflected in points (c) and (d), would presumably be of interest to Subekti. *Seventh*, in relation to claim (10), the present literature review has attempted to show that rather than being restricted to the period prior to 1990, Gardner's concepts continue to enjoy considerable currency to the present day. *Eighth*, in relation to claim (11), Subekti is certainly free to characterize the continued use of Gardnerian concepts as regrettable, but without presenting arguments in support of this view it is difficult to assess it; the same may be said in relation to her characterization of such concepts as linear. *Ninth*, in relation to claim (12), while some researchers may certainly behave as suggested by Subekti, by no means all do, as the present research demonstrates. *Tenth*, in relation to

claim (13), as noted above, while researchers are naturally free to subscribe to whichever research methodology they choose, it seems unwarranted to imply that quantitative methods are inappropriate in SLM. Methodological appropriateness depends a variety of issues, including the goals of study. Finally, no attempt to deny that SLM is complex or that individuals vary in respect of their motivational profile has been noted in the Gardnerian literature reviewed by the present author.

2.5.4 Claro (2019)

Claro (2020) argues that, as suggested by MacIntyre et al. (2009, p. 43), integrative motivation and ideal selves map complementary aspects of the same territory in that they both emphasize the importance of role models in language learning (pp. 248-249). Exploring this idea, she suggests that second language learning may involve both looking out and looking in; that is, that learners may first look out (to identify external role models) and then look in (to create internal representations of such models (p. 251). The key psychological process proposed is identification, which she maintains has been a fundamental, even the fundamental, ingredient in Gardner's long-sustained theorizing of integrativeness (e.g. (p. 235). In short, Claro's suggestion is that integrativeness proposes identification with an external referent, while the ideal L2 self proposes identification with an internal referent (p. 233), which implies that, far from being mutually exclusive, the two processes are in fact part of a single process which begins with identification with an external referent (the target community), goes through a process of internalization, and ends with identification with an internal referent (the ideal L2 self) (p. 250). One goal of her chapter, then, is to propose that the work of Gardner and Dornyei can be incorporated into a single theory of identification (p. 253). Another important claim of the chapter is that the ideal L2 self cannot replace integrativeness: this, she maintains, is simply not possible, since the former proposes an external referent while the latter proposes an internal one (p. 253). Of further interest is

discussion stating that Dornyei and Csizer's (2002, p. 458) integrativeness scale, which tries to measure a construct measured in the AMTB by 24 items in just 3 items, is oversimplified, and has much lower reliability (pp. 240-248).

This work contains much of value. First, the argumentation in support of the proposition that the L2 self cannot replace integrativeness since the identification process referred to by the two models differs in focus (p. 234) is appealing; so appealing, in fact, that it is accepted by Dornyei himself, who quotes Claro's suggestion with approval (Dornyei, 2020, p. xxi). Second, the claim that since Dornyei and Csizer's (Dornyei & Csizer, 2002) three-item scale (a) fails to adequately cover the conceptual territory proposed by Gardner and associates, (b) is (due to inadequate coverage) unable to produce reliable measurements and (c) tends to under-report correlations, unless adjusted for attenuation, which is not typically done, it cannot be considered adequate for measuring integrativeness (p. 264) is convincingly argued and of considerable value in that it tends to suggest, insightfully, that Gardner's integrativeness cannot be reduced to the simplistic construct proposed by Dornyei and Csizer. Third, the suggestion that the two leading second language motivation models (the socio-educational model and the L2MSS) share a common focus (identification) and thus might be able to be reconciled is most interesting (Gardner, 2020, p. 5) and appears at the very least worth considering. By identifying a psychological process of fundamental importance common to both models, identification, and by proposing that this seemingly commonplace process could in fact link the two disparate visualizations of language learner motivation (identification with internal referents and identification with external referents) in a single process via the mechanism of active internalization, Claro has suggested a line of enquiry which does not appear to contradict fundamental tenets of either model.

However, as Claro herself acknowledges, the proposal that the models may be able to be linked together is as yet almost completely undeveloped, and much research and theorizing would be required in order to develop it (pp. 250-251). For example, some initial challenges to be overcome if the proposal was to be carried forward might include clarifying the way in which external referents (language models) would be selected, how the process of identification with such referents would unfold, what the link between identification with external referents and active internalization would be, what active internalization would consist of, how active internalization would prompt the formation of new internal referents, and how the process of identification with the internal referents would be effected. A further challenge to the proposed model would be terminology. There may be objections, for example, to the renaming of integrativeness to identification, the renaming of external referents (target speakers) to 'ideal external L2 selves', or the renaming of ideal L2 selves to 'internalized target language speakers'. If the proposed model truly were to involve a unification of the socio-educational model and the L2MSS at a theoretical level, much work would be required in reconceptualizing key components of each model to ensure internal consistency. In fact, a serious difficulty which would appear to present itself immediately is the fact that identification is just one part, albeit a very important part, of the socio-educational model; other components of the model include attitudes to the learning situation, motivation and language anxiety, as well as the (less referenced) components of instrumentality and parental encouragement. It is not clear how these elements would be incorporated in a model claiming to reconcile and contain elements of both models. Further, there is the serious conceptual difficulty of attempting to reconcile at a theoretical level a model which is, and is acknowledged to be (Gardner, 2010, p. 75) based on affective processes (such as attitudes) with one which is claimed to be based on cognitive processes (such as visualization). Having said that, the

proposal is at the very least intriguing and may serve to spark further interest in a possible interplay between the models. Conceptual flexibility and a certain openness to new conceptualizations of familiar territory are arguably highly desirable. As noted earlier in this chapter and as argued by MacIntyre, Noels and Moore (2010), it is through considering new perspectives that existing conceptualizations are refined and new approaches are developed; this in turn may spark innovation and lead to deeper, more useful and more precise insights which may be of benefit to educators and language learners worldwide.

2.5.5 Review: the 2010s

The review above has, through close engagement with both critical and supportive texts, highlighted the fact that despite claims to the contrary, the evidence tends to indicate that the socio-educational model and its key construct, far from being in some way outdated or less relevant in the modern world due to (for example) changes in the use of English globally or lack of access to target language communities, continue to be highly relevant. Criticisms have been closely analyzed and weaknesses in assumptions, interpretations and reasoning have been noted. It has been suggested that although writers such as Subekti appear to take the position that the reduced relevance of the socio-educational model has been conclusively demonstrated, this position is untenable since a close examination of the argumentation and evidence presented indicates at the very least that some level of reasonable doubt remains as to the relevance of the model. In fact, to borrow a phrase from Ruch (see Chapter 1), the ‘sweep of the evidence’ tends to suggest that the ongoing relevance of the socio-educational model is at the very least still an open question. Attention now turns to the methods used in the present investigation.

CHAPTER 3: METHOD

The aim of this chapter is to describe the epistemology, approach, design, ethics, setting, location, population, sample, and instrument, as well as the methods used for instrument adaptation, instrument validation, data collection, sample selection, data preparation, and data analysis employed in this research. The chapter also seeks to briefly indicate the ontological and epistemological position, the nature of the study, the research problem, the research questions and the research tradition. To achieve this, the discussion is presented in sections. A summary is presented at the end of the chapter.

3.1 Epistemology

This research proceeds from a positivist position. While such a position can be difficult to define precisely in a manner acceptable to all, it may be said to be characterized by beliefs that (a) the world is knowable through the senses and measurable through appropriate instruments, (b) effects have causes, and (c) insights can be obtained through careful hypothesis formulation, data gathering, analysis and interpretation (Bryman & Bell, 2011, p. 15). Facts, in the ontological position adopted here, are measurable and verifiable observations which ideally contribute to knowledge. Knowledge, in the epistemological position adopted here, consists of theoretically justified and contextualized interpretations of available evidence.

3.2 Approach

The approach taken in this research is based on the epistemological and ontological assumptions noted above and informs the research design, which encompasses plans and procedures for data collection, data analysis and data interpretation. This research is an investigation of the continuing relevance or otherwise of the socio-educational model and thus falls within the Gardnerian research tradition, which is largely quantitative, a point also made by Ushioda (2009, p. 215). The research questions call for large

amounts of data to be collected, quantified, statistically analyzed and interpreted. As such, a quantitative approach based on descriptive and inferential analysis of questionnaire data interpreted in view of available theory and evidence was thought appropriate for the research and was adopted.

3.3 Design of study

Social science research covers a variety of research problems, purposes, questions and settings, and social scientists have developed a correspondingly wide variety of research designs, including descriptive, correlational, and experimental (Spector, 2016, p. xiv). Correlational research attempts to find associations between variables such that when the level of a predictor variable changes, the level of a target variable changes in a predictable manner; it involves measuring two or more variables and assessing the relations among them (Stangor & Walinga, 2014, p. 90). The current research attempts to determine, among other things, whether there is a tendency for integrativeness to be correlated with language learning achievement, based on data collected at a particular point in time. Since the interest was in the levels of and associations between variables at a particular point in time rather than over a period, a correlational, cross-sectional design appeared suitable for the present research and was selected.

3.4 Ethical considerations

Ethical awareness may be viewed as mandatory for all research (Stangor & Walinga, 2014, p. 77). As such, the ethical implications of this research were considered before the research plans were finalized. After careful consideration, it was concluded that the risks to participants were minimal. While there might be a small risk that filling out a questionnaire and providing personal opinions on matters such as teaching, materials and the importance of English might trigger emotions or thoughts which might have adverse consequences, this risk was considered slight. In addition, although

participating in the survey might cause a slight loss of tuition time, the impact of this was considered negligible. Additional potential risks such as students feeling confused, teachers punishing students for adverse evaluations or students feeling compelled to participate were identified. These risks were mitigated by (a) briefing students on the nature and purpose of the research (b) advising that participation was not mandatory (c) advising students that completed questionnaires would not be seen by English teachers (d) emphasizing that responses would not affect grades (e) indicating that completed questionnaires would be held in a secure storage location accessible only to the researcher and (f) stating that responses would be treated confidentially. In addition, the research was authorized by the Ministry of Education Malaysia (Appendix D), the Kuala Lumpur Department of Education (Appendix E), the Selangor Department of Education (Appendix F), the University of Malaya Faculty of Languages and Linguistics, and the school principals and class teachers involved. Each authorization added a new layer of protection for participants. All parties apparently assessed any risks to students as minor.

3.5 Overview

An overview of the research is provided in Table 3.1, with brief comments beside each step. Details are provided elsewhere in the thesis.

Table 3.1: Research overview

Step	Description	Comment
1.	Obtain permission from educational authorities	Present information regarding the proposed research Attend telephone interviews and agree to conditions Receive permission letters
2.	Select instrument for adaptation	Locate versions of the AMTB Examine each instrument, noting strengths and weaknesses Select most appropriate instrument for adaptation
3.	Exclude irrelevant items	Specify variables relevant to research goals Examine all items to assess their relevance to the research Exclude items not relevant to the study goals
4.	Modify sub-optimal items	Assess items for appropriateness, clarity, and conciseness Specify items requiring modification or exclusion Modify or exclude items as required
5.	Ensure content areas are covered equally	Check number of items relating to each content area Create or exclude items until each variable is covered by 8 items Finalize list of 80 items for expert evaluation
6.	Obtain expert input	Recruit experts and obtain scores for relevance and clarity Perform CVI analysis Correct items based on CVI analysis and expert feedback
7.	Finalize pre-test instrument	Prepare pre-test instrument Consult local expert and modify instrument based on feedback Finalize pre-test instrument
8.	Conduct pre-test	Recruit volunteers similar in relevant characteristics to sample Modify instrument for clarity and layout based on feedback Repeat until no further issues are identified
9.	Finalize pilot study instruments	Prepare draft pilot study instruments (English and Malay) Have draft checked and improved by bilingual university staff Have improved draft back translated. Discuss and finalize.
10.	Conduct pilot study	Collect data with assistance of school personnel Clean and screen data. Check for issues with the data. Perform EFA to identify best 5 items for every construct
11.	Finalize main study instruments	Delete 3 weakest items for every variable based on EFA Adjust layout of instrument in keeping with reduced items Finalize English and Malay main study versions
12.	Conduct main study	Collect data from selected cohorts with assistance of school personnel Enter, screen, clean and check data. Calculate levels of variables Specify, identify, estimate, fit and manipulate the model
13.	Report data	Follow standard practice in reporting statistical results Report critical values, observed values, significance etc. Report descriptive and inferential statistics
14.	Discuss the findings	Discuss findings in light of theory / evidence from other studies Highlight unexpected findings Suggest possible explanations for apparent discrepancies
15.	Offer conclusions / recommendations	State what conclusions are suggested by the study Offer recommendations based on the conclusions Suggest directions for future research

3.6 Setting of study

A research setting may be analyzed from a social, cultural or geographic perspective (Bhattacharya, 2008, p. 787). These aspects of the setting are briefly analyzed below.

The physical location of the research sites in the Klang Valley is described in Section 3.8.

Socially, the Klang Valley may be characterized as a strongly urbanized region marked by a highly diversified society which hosts groups differing significantly in culture, religion, ethnicity and socio-economic status (Dali & Nordin, 2010, p. 267). This social diversity, coupled with strong ethnic identification, makes social integration challenging and leads to a type of "salad bowl" rather than "melting pot" social situation (p. 267). However, since residents "accept each other's differences and respect each other's practices", the social setting may be considered cohesive despite its diversity (p. 271). Intergroup tolerance would presumably be essential for the smooth functioning of such a mixed society.

Culturally, Malaysia is a complex setting. The description of the country as "Asia in miniature" (Watson Andaya & Andaya, 1982, p. xi) hints at significant levels of cultural diversity, and indeed this diversity makes it challenging to present a unified view of the cultural setting due to the diversity of groups, cultures and interests involved (p. xiii). Clearly, the ethnic diversity of modern Malaysian society and the fact that each ethnic group may differ in its view of what constitute acceptable beliefs, attitudes and behaviors make for a rich but complex cultural setting. This complexity cannot be fully explored here due to space constraints. Still, it may be that while ethnocentric forces may tend to move individuals away from an imagined Malaysian cultural center, opposing forces may tend to move them towards such a center. Such forces might be constituted by, for example, government action, social pressures (e.g., the pressure to avoid conflict), political discourses of unity, and a need for cooperation and harmony to achieve the smooth running of society, as noted in the previous paragraph.

Geographically, Peninsular Malaysia is a subtropical mountainous region in Southeast Asia occupying the southern half of the Malay Peninsula. It is bordered by Thailand to the north-west and Singapore to the south-east, and is near the Philippines, Brunei, Vietnam and Indonesia. West Malaysia rather than East Malaysia was selected for the study for several reasons. First, the mixed nature of the population, with good representation of the most prominent ethnic groups (Malays, Chinese and Indians), was considered suitable for the study. Second, the size of the West Malaysian population (22.5 million) as compared to the East Malaysian population (5.72 million) (Wikipedia, 2020b) was expected to improve the probability that the sample would contain a representative range of attitudes and individual characteristics. Third, West Malaysia was considered more convenient since no special permissions apart from an ordinary visa were required to enter and stay in the area.

3.7 Location

This study was conducted in the Klang Valley, Malaysia. This valley, despite occupying just 1.25% of Malaysia's land mass, is home to 17.4% of the nation's population (Dali & Nordin, 2010, p. 267). It is bounded by the Strait of Malacca to the west the Titiwangsa Mountains to the north and east, and is host to both the seat of national government, Putrajaya, and the most active commercial region in Malaysia, Kuala Lumpur (the capital city). The research sites (schools) were in either Kuala Lumpur or Petaling Jaya, a city immediately to the west of Kuala Lumpur. The study area had a diameter of approximately 14 kilometers and stretched from SMK Taman Sea in the west to SMK Puteri Wilayah in the east. The study location is shown by a small dot under the words 'Kuala Lumpur' in Figure 3-1.

Figure 3-1: Location of research site

Adapted from Wikimedia Commons file "West Malaysia Location Map", Creative Commons license 3.0.

The schools involved in the study were all National High Schools and were thus under the control of both the Malaysian Ministry of Education and the relevant Department of Education (Kuala Lumpur or Selangor) according to their location. The location, education authority and distance from Kuala Lumpur Central Station of each school is shown in Table 3.1.

Table 3.2: Location of research sites

School	Location	Education Authority	Distance from Central
SMK Methodist (L)	Kuala Lumpur	Dept. of Education, KL	3.7 km
SMK Puteri Wilaya	Kuala Lumpur	Dept. of Education, KL	6.4 km
SMK Seri Pantai	Kuala Lumpur	Dept. of Education, KL	5.4 km
SMK Sultan Abdul Samad	Petaling Jaya	Dept. of Education, Selangor	7.6 km
SMK Taman Sea	Petaling Jaya	Dept. of Education, Selangor	10.3 km

All schools were large and were located on extensive properties. The facilities were very well utilized, due to the Malaysian practice of running two sessions per day (a morning session and an afternoon session). They appeared well maintained. The

average number of students per secondary school in Malaysia in 2017 was 842 (Ministry of Education Malaysia, 2018, p. 41), and the schools in the study appeared relatively typical as to student numbers. The location of Petaling Jaya and Kuala Lumpur within the state of Selangor, as well as the position of the five schools studied, is shown in Figure 3-2. School selection criteria, along with the URL of the Ministry of Education Malaysia webpage hosting the school list, are listed in Appendix G.

Figure 3-2: Location of schools

Based on Wikimedia Commons file "Location Map of Petaling Jaya, Selangor", Creative Commons license 4.0

3.8 Population

The population for this study initially comprised all upper secondary students studying English in National High Schools (SMKs) in the Klang Valley. Eligibility criteria specified that members of the research population should be enrolled in a National school in that region to be included in this study. However, the population was later restricted to Form 4 students, since students in Forms 5 and 6 were expected to be too busy with their studies according to a conversation with a Ministry of Education Malaysia official in December 2018. Most students were assumed to have completed nine years of English tuition and to be 15 or 16 years of age at the time of the study (Yamat, Fisher, & Rich, 2014). Using a definition of the Klang Valley provided by the

Land Public Transport Commission of Malaysia (2013), as well as information provided by the Ministry of Education Malaysia (e.g. (2021); (2018)) and Wikipedia (2020a), the research population was estimated at approximately 46,646. Appendix H provides details of the research population size estimation process.

3.9 Sample used

It has been said that the reasoning behind (a) polling a sample instead of an entire population, (b) selecting a particular sample method and (c) determining the sample size should be reported by researchers to allow consumers of research to assess the adequacy of the sampling decision, sampling method and sample size (Saunders, Lewis, & Thornhill, 2009, p. 273). This section therefore addresses these issues.

The decision to sample rather than collect information from each member of the population was based on practicability. Polling entire populations may be justifiable when populations are small and well defined since it can eliminate sampling bias, but is generally not considered justified in other cases due to time and expense. Since the population in this study was large, population polling was considered impractical due to the expense, time and difficulty involved. In such cases, use of samples is justifiable (Saunders et al., 2009, p. 272).

Probability sampling assumes that every member of a population has an equal possibility of being selected. A sampling frame (set of all eligible individuals) is described, then a sample is selected from among the members of that set. Methods of probability sampling include systematic sampling, simple random sampling, cluster sampling and stratified sampling. These methods were considered but were rejected due to concerns regarding resource requirements, a possible interaction between the interval selected and population characteristics, the difficulty of adequately defining the strata from which to sample, and the risk of choosing an unrepresentative cluster. It was thus

decided to employ non-probability sampling. Convenience sampling, which involves individuals selected on a purely convenience basis, i.e., available and agreeable individuals form the sample, was rejected since such individuals may not be representative of the population. Snowball sampling, which involves recruiting volunteers who nominate subsequent participants, was also rejected because members of such samples tend to be like one another in important ways and therefore again may not be representative. Purposive sampling, which involves an attempt to recruit participants with characteristics roughly approximating those of the population of interest, was selected because the opportunity to include individuals with a wide range of characteristics made it more attractive than the other methods. An attempt was made to recruit schools containing a representative mix of ethnicities from a dispersed catchment area. Entire cohorts were selected to attempt to minimize class-level effects which might skew the results. Thus, since representativeness is not claimed and efforts were made to mitigate drawbacks, the method appears suitable and can, it is hoped, provide useful insights into the population of interest despite being based on a non-probabilistic sample (Becker, 1998, p. 96).

Cohen (1992) suggests a power analysis approach for determining sample size for quantitative studies and this approach appeared suitable for this research. Since the data was to be analyzed via PLS-SEM using a significance level of $\alpha = 0.05$, a power of $(1-\beta) = 0.8$, and a maximum number of independent variables of three, setting the R^2 (coefficient of determination) value to 10%, the minimum sample size, based on the power analysis approach suggested by Cohen (1992), is $n_0 = 124$. Allowing for a 20% dropout rate, the final sample size was calculated as follows: **$N = n_0 + 20\% \rightarrow N = 124 + 25 \rightarrow N = 149$.**

3.10 Instrument

The instrument used in this research was the result of a multi-stage process and may be considered an important contribution of the research. The instrument is closely based on the International Attitude/Motivation Test Battery (AMTB) (Gardner, 2004). The strengths and weaknesses of the international AMTB from the perspective of this research, the reasons for adapting the instrument and the adaptation process will be described briefly below.

The international AMTB (Gardner, 2004) is the most recent Gardner-authored version of the AMTB. Several other versions of the AMTB have been developed by Gardner and associates, as seen in the literature (e.g. (Gardner, Smythe, Clement, & Gliksman, 1976); (Gliksman, Gardner, & Smythe, 1982); (Gardner, 1985b); (Gardner, Tremblay, & Masgoret, 1997)). However, the 2004 version appeared to be appropriate for the current study because it is a recent full-length instrument intended for use in international contexts. It was therefore selected as the foundation on which to develop an instrument for this study. The 2004 AMTB contains six constructs assessed by twelve scales comprising between four and ten items each. The 104 positively and negatively keyed items are scored by test-takers on a six-point Likert scale with the following values: strongly disagree (1), moderately disagree (2), slightly disagree (3), slightly agree (5), moderately agree (6), and strongly agree (7); the value '4' is not assigned to any of the responses (Gardner, 2010, pp. 114-130). The names of the constructs and scales, as well as other relevant details, are shown in Table 3.3.

Table 3.3: Constructs and scales in the International AMTB

Construct	Scale	Positively keyed	Negatively keyed	Total
Integrativeness	Integrative orientation	4	0	4
	Attitudes to English-speaking people	8	0	8
	Interest in foreign languages	5	5	10
Attitudes to the learning situation	English teacher evaluation	5	5	10
	English course evaluation	5	5	10
Motivation	Motivational intensity	5	5	10
	Desire to learn English	5	5	10
	Attitudes toward learning English	5	5	10
Language Anxiety	Language class anxiety	5	5	10
	Language use anxiety	5	5	10
Instrumentality	Instrumental orientation	4	0	4
Parental involvement	Parental encouragement	8	0	8

The 2004 AMTB (http://publish.uwo.ca/~gardner/docs/englishamtb.pdf) has been used in relatively recent high-profile research in the Gardnerian tradition. Gardner reports that a 'basic English version', which from the context appears to indicate a version based on the 2004 AMTB, was used in Croatia, Poland, Romania and Spain and was found to display good internal consistency, factor structure and predictive validity (Gardner, 2006, p. 253). Given its reported psychometric soundness and its close association with the socio-educational model, it appeared to be suitable as a basis for the instrument used in the present research. The 12-page instrument was modified prior to analysis by removing response options and items not relevant to the study (see Section 3.12) by adjusting the text in line with standard English to produce a 3-page version (see Appendix I). The changes, which were minimal, are shown in Table 3.4.

Table 3.4: Changes to the International AMTB prior to adaptation

Part	Change	Reason
All parts	Changed font and font size	To reduce number of pages
All items	Removed response options	To reduce number of pages
Item 36	Corrected spelling of 'embarrassed'	To conform to standard English
Item 40	Hyphenated English-speaking	To conform to standard English
Item 56	Added the missing word ('my')	To conform to standard English
Item 72	Removed second period from end	To conform to standard English
item 100	Removed second period from end	To conform to standard English

The items are randomized when presented to students for completion. However, for the analysis, the items were arranged in their logical groupings. This made it easier to appreciate which items relate to which variables, see which 'direction' each item is expressed in (i.e., positive or negative), and note the proportion of positive to negative items.

3.11 Adaptation

The international AMTB was adapted to meet the needs of this research. Items relating to 'Social environment' (i.e., parental encouragement) and 'Instrumentality' (i.e., instrumental orientation) were excluded since they did not relate to the research questions of the current study. The remaining 92 items of the 2004 AMTB were evaluated for length, distinctiveness and cultural appropriateness and were either retained without modification, modified, or eliminated. Details of concerns with the International AMTB are shown in Appendix J. The key differences between the items of the 2004 AMTB and the items developed for this study, apart from the changes to the individual items, are as follows. First, due to a request in December 2018 by the same Ministry of Education official referred to in Section 3.9 that items be worded positively since negatively phrased items might upset or confuse the students, all items in the current study are positively worded, in contrast to the 2004 AMTB, where some items are worded positively, and others are worded negatively (see Section 5.6 for further discussion of this). Second, coverage of the variables in the adapted instrument is uniform, whereas coverage of variables in the 2004 AMTB is highly uneven, due to the wide variation in number of items used to assess each variable (between four and ten items per variable). Third, scales relating to parental encouragement and instrumental orientation were excluded from the adapted instrument, since they were not related to the research questions of the current study. Fourth, the names and labels of some scales

were adjusted, sometimes to focus attention on a slightly different aspect of the construct and at other times for greater clarity.

3.12 Content Validity Index (CVI) analysis

When making changes to items in existing instruments, it is recommended to seek the feedback of subject experts as to the degree to which the proposed items adequately cover the domain (content validity) and demonstrate apparent relevance (face validity). The cooperation of content experts was therefore sought. In the pilot phase, eight items were to assess each of the ten constructs. Thus, eighty items were presented to experts for validation. In the discussion below, numbered acronyms (e.g., INO 1) refer to items used in the instrument.

The experts were asked to rate the items referred to in Tables 3.5 to 3.18 (Appendix K) for relevance (a measure of content validity) and clarity (a measure of face validity) with reference to the ten variables assessed in this study (i.e., ALL, ALC, DLL, EVC, EVT, INO, IFL, LCA, LUA, and MIN) (see Table 1.3). They were asked to supply their responses on a four-point I-CVI scale without a neutral option following the recommendations of Lynn (1986) and Polit and Beck (2006). The response options in terms of relevance were (1) = not relevant, (2) = slightly relevant, (3) = quite relevant, and (4) = highly relevant; the response options in terms of clarity were (1) = not clear, (2) = slightly clear, (3) = quite clear, and (4) = very clear. The validity of the instrument from a content perspective was analyzed using CVI analysis. The CVI score of each item was calculated by dividing the number of experts ranking the item at (3) or (4) (i.e., ‘quite’ or ‘highly’ relevant or clear) by the number of experts in the sample (six). The degree of agreement was calculated via a Kappa Modified Coefficient. Seventy-two of the eighty items (90%) demonstrated excellent validity for both relevance and clarity

according to the CVI analysis. Eight items were corrected based on expert feedback. The details are reported below.

3.12.1 CVI - INO

The *Integrative Orientation* (INO) domain contained eight items. Five of the items demonstrated excellent content validity for relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.5). Three items were corrected (Table 3.6).

Table 3.5: CVI and Kappa scores - INO

ITEM	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
INO1	1.00	1.00	0.83	0.82
INO2	1.00	1.00	1.00	1.00
INO3	0.83	0.82	1.00	1.00
INO4*	0.67	0.56	0.67	0.56
INO5*	0.67	0.56	1.00	1.00
INO6	0.83	0.82	0.83	0.82
INO7	0.83	0.82	0.83	0.82
INO8*	0.83	0.82	0.67	0.56

* Corrected based on expert feedback

Table 3.6: Corrections based on expert feedback - INO

Label	Wording before expert feedback	Wording after expert feedback
INO4	Learning English helps me interact socially with English speakers	Learning English helps me interact more easily with English speakers
INO5	Learning English helps me understand how English speakers see the world	Learning English helps me understand the point of view of English speakers
INO8	Learning English helps me understand the attitudes of English speakers	Learning English helps me understand the opinions of English speakers

3.12.2 CVI - ALC

The *Attitudes to the Language Community* (ALC) domain contained eight items. Six items demonstrated excellent content validity for relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.7). Two items were corrected (Table 3.8).

Table 3.7: CVI and Kappa scores - ACL

ITEM	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
ALC1*	0.67	0.56	1.00	1.00
ALC2	0.83	0.82	1.00	1.00
ALC3	1.00	1.00	1.00	1.00
ALC4	0.83	0.82	1.00	1.00
ALC5*	0.67	0.56	0.83	0.82
ALC6	1.00	1.00	1.00	1.00
ALC7	1.00	1.00	1.00	1.00
ALC8	0.83	0.82	1.00	1.00

* Corrected based on expert feedback

Table 3.8: Corrections based on expert feedback - ALC

Label	Wording before expert feedback	Wording after expert feedback
ALC 1	It would be a pity if Malaysia had no contact with English-speaking countries	It would be a pity if Malaysia had no communication with English-speaking countries
ALC 5	I would like to know many English speakers	I would like to know more English speakers

3.12.3 CVI - IFL

The *Interest in Foreign Languages* (IFL) domain contained eight items. Seven items demonstrated excellent content validity for both relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.9). One item was corrected (Table 3.10).

Table 3.9: CVI and Kappa scores - IFL

ITEM	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
IFL1	0.83	0.82	1.00	1.00
IFL2	1.00	1.00	1.00	1.00
IFL3	1.00	1.00	0.83	0.82
IFL4	1.00	1.00	1.00	1.00
IFL5	1.00	1.00	1.00	1.00
IFL6	0.83	0.82	1.00	1.00
IFL7	1.00	1.00	1.00	1.00
IFL8*	0.83	0.82	0.67	0.56

* Corrected based on expert feedback

Table 3.10: Corrections based on expert feedback - IFL

Label	Wording before expert feedback	Wording after expert feedback
IFL 8	It is important for Malaysians to learn many foreign languages	It is important for Malaysians to learn foreign languages

3.12.4 CVI - EVT

The *Evaluation of the Teacher* domain contained eight items. All items demonstrated excellent content validity for both relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.11). No items were corrected.

Table 3.11: CVI and Kappa scores - EVT

Item	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
EVT1	1.00	1.00	1.00	1.00
EVT2	1.00	1.00	1.00	1.00
EVT3	1.00	1.00	1.00	1.00
EVT4	1.00	1.00	1.00	1.00
EVT5	1.00	1.00	1.00	1.00
EVT6	1.00	1.00	1.00	1.00
EVT7	1.00	1.00	0.83	0.82
EVT8	1.00	1.00	1.00	1.00

* Corrected based on expert feedback

3.12.5 CVI - EVC

The *Evaluation of the Course* domain contained eight items. All items demonstrated excellent content validity for both relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.12). No items were corrected.

Table 3.12: CVI and Kappa scores - EVC

ITEM	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
EVC1	1.00	1.00	1.00	1.00
EVC2	1.00	1.00	1.00	1.00
EVC3	1.00	1.00	1.00	1.00
EVC4	1.00	1.00	1.00	1.00
EVC5	0.83	0.82	1.00	1.00
EVC6	1.00	1.00	1.00	1.00
EVC7	1.00	1.00	1.00	1.00
EVC8	1.00	1.00	1.00	1.00

3.12.6 CVI - MIN

The *Motivational Intensity* domain contained eight items. All items demonstrated excellent content validity for both relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.13). No items were corrected.

Table 3.13: CVI and Kappa scores - MIN

ITEM	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
MIN1	1.00	1.00	1.00	1.00
MIN2	1.00	1.00	0.83	0.82
MIN3	1.00	1.00	1.00	1.00
MIN4	1.00	1.00	1.00	1.00
MIN5	1.00	1.00	1.00	1.00
MIN6	1.00	1.00	1.00	1.00
MIN7	1.00	1.00	1.00	1.00
MIN8	1.00	1.00	1.00	1.00

3.12.7 CVI - DLL

The *Desire to Learn the Language* domain contained eight items. Six of the items demonstrated excellent content validity for both relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.14). Two items were corrected (Table 3.15).

Table 3.14: CVI and Kappa scores - DLL

ITEM	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
DLL1	0.83	0.82	1.00	1.00
DLL2	1.00	1.00	1.00	1.00
DLL3	1.00	1.00	1.00	1.00
DLL4	1.00	1.00	1.00	1.00
DLL5*	0.83	0.82	0.67	0.56
DLL6*	0.83	0.82	0.67	0.56
DLL7	0.83	0.82	0.83	0.82
DLL8	1.00	1.00	1.00	1.00

* Corrected based on expert feedback

Table 3.15: Corrections based on expert feedback

Label	Wording before expert feedback	Wording after expert feedback
DLL 5	I want to know English so well that speaking it feels natural	I want to know English so well that it feels like part of me
DLL 6	I want to go even further than course requirements in learning English	I want master English thoroughly, not just learn the basics

3.12.8 CVI - ALL

The *Attitudes to Learning the Language* domain contained eight items. All items demonstrated excellent content validity, with CVI and Kappa scores for relevance and clarity ranging from 0.82 to 1.00 (Table 3.16). No items were corrected.

Table 3.16: CVI and Kappa scores - ALL

Item	RELEVANCE		CLARITY	
	CVI	*Kappa*	*CVI*	*Kappa*
ALL1	1.00	1.00	0.83	0.82
ALL2	1.00	1.00	1.00	1.00
ALL3	1.00	1.00	0.83	0.82
ALL4	1.00	1.00	1.00	1.00
ALL5	0.83	0.82	0.83	0.82
ALL6	1.00	1.00	1.00	1.00
ALL7	1.00	1.00	1.00	1.00
ALL8	1.00	1.00	1.00	1.00

3.12.9 CVI - LCA

The *Language Class Anxiety* domain contained eight items. All items demonstrated excellent content validity for both relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.17). No items were corrected.

Table 3.17: CVI and Kappa scores - LCA

Item	**RELEVANCE**		**CLARITY**	
	CVI	*Kappa*	*CVI*	*Kappa*
LCA1	1.00	1.00	1.00	1.00
LCA2	1.00	1.00	1.00	1.00
LCA3	1.00	1.00	1.00	1.00
LCA4	1.00	1.00	1.00	1.00
LCA5	1.00	1.00	1.00	1.00
LCA6	1.00	1.00	1.00	1.00
LCA7	1.00	1.00	1.00	1.00
LCA8	1.00	1.00	1.00	1.00

3.12.10 CVI - LUA

The *Language Use Anxiety* domain contained eight items. All items demonstrated excellent content validity for both relevance and clarity, with CVI and Kappa scores ranging from 0.82 to 1.00 (Table 3.18). No items were corrected.

Table 3.18: CVI and Kappa scores - LUA

ITEM	**RELEVANCE**		**CLARITY**	
	CVI	*Kappa*	*CVI*	*Kappa*
LUA1	1.00	1.00	1.00	1.00
LUA2	0.83	0.82	0.83	0.82
LUA3	1.00	1.00	1.00	1.00
LUA4	1.00	1.00	1.00	1.00
LUA5	1.00	1.00	1.00	1.00
LUA6	1.00	1.00	1.00	1.00
LUA7	1.00	1.00	1.00	1.00
LUA8	0.83	0.82	1.00	1.00

Following the CVI analysis, the item list for the pilot study (ten constructs, each assessed by eight items) was finalized. In total, eight items were modified based on expert feedback. The corrected items are shown in Appendix L.

3.13 Pre-testing

A small-scale pre-test was carried out using the pre-test instrument which resulted from the instrument adaptation process on 20 persons similar in relevant characteristics to the intended participants to identify any weaknesses in terms of layout, wording, clarity, instructions or understandability. Improvements were made to the instrument using the comment of each participant and continued until no further issues were identified.

3.14 Translation

According to Gardner, when the full International AMTB is used 'in a particular country', a translated version should be offered to improve test-taker comprehension (2010, p. 129). Also, items should be adapted to be suitable to the educational and social environment of the country of use; thus, the full translation process calls for forward translation, back translation and consultation (2010, p. 129).

Gardner's recommendations appear reasonable and are supported by the literature. For example, it is recommended that instruments used in cross-cultural research should be culturally sensitive, that meaning should be as clear as possible, that jargon and idiomatic expressions should be avoided and that the goal should be equivalence of meaning rather than simple word-for-word translation (Hilton & Skrutkowski, 2002, pp. 1-2). The validated English-language instrument was therefore translated, back-translated, adjusted based on discussion with a local academic with experience in translation issues and Malaysian culture, and finalized. That is, (a) a draft was created by the researcher (b) the draft was reviewed by a bilingual academic, who suggested

improvements and discussed them with the researcher; (c) the draft was improved by making small adjustments (d) the improved draft was given to another bilingual academic for back-translation (e) differences between the back-translated version and the improved draft were discussed by the researcher and the first bilingual academic; (f) several final minor adjustments were made.

3.15 Pilot study

Prior to conducting the main study, to reduce the number of items on a principled basis, the instrument was subjected to a scale refining process. A cross-sectional pilot study was conducted using purposive sampling among Fourth Form (Year 10) students studying English in National High Schools in Kuala Lumpur and Petaling Jaya who were similar in relevant respects to the main target group. As noted in Section 3.10.3, the minimum recommended sample size for the pilot study was calculated as 149 participants, which consisted of 124 participants based on Cohen's (1992) Power Analysis approach plus an allowance of 20% (an additional 25 participants) for dropouts. For the pilot study participant profile, please refer to Appendix M.

3.16 Exploratory factor analysis (EFA)

Constructs are generally theorized as being made up of factors, also known as latent variables. However, the existence, content, number and contribution of factors is open to debate. Thus, factors theorized to underlie constructs are tested to explore, confirm, expand or limit existing conceptualizations. This process is known as factor analysis. Measures for in this kind of analysis include Bartlett's test of sphericity, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), and communalities. These will be briefly explained below.

The KMO test measures the level of variance in the variables which could be due to common variance. Higher values indicate a lower likelihood of common variance, while

lower values indicate a higher likelihood of common variance. While there are no universally agreed interpretations of KMO values, a much-quoted source (Kaiser, 1974, p. 35), while acknowledging the subjectivity of the rubric, suggests that KMO values above .5 are acceptable, while values below .5 are unacceptable. That is, KMO values above .5 suggest that factor analysis may be useful, while values below 0.5 suggest the opposite.

Bartlett's sphericity test is another test used to assess the suitability of data for structural analysis. It tests whether the variables are sufficiently distinct from one another. High values (above .5) suggest that factor analysis may not be appropriate since the variables are not sufficiently correlated; lower values (below 0.5) suggest factor analysis could be useful since the variables are sufficiently correlated and thus suitable for data compression.

Prior to testing the research hypotheses by conducting a main study, it was considered necessary to evaluate the reliability and construct validity of the instrument, since it was an adaptation. The most common method used when testing the construct validity of an adapted instrument is known as exploratory factor analysis (EFA). EFA can indicate the structure of factors to be investigated (Ruscio & Roche, 2012). EFA was therefore used to explore the relationships among the items and the factors in the adapted questionnaire. To obtain an eigenvalue for each factor revealed, an initial analysis was run, during which a KMO (Kaiser-Meyer-Olkin) test of sampling adequacy and a Bartlett's test of sphericity were conducted. This was done to assess the construct validity and ensure that the data was suitable for EFA.

3.16.1 EFA - INO

For *Integrative Orientation* (INO) the KMO level was 0.754, and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)} = 151.419$, *p*

<0.05). Communalities after extraction via principal component analysis ranged from 0.416 to 0.767. EFA using principal component analysis indicated that Component 1 accounted for 30.045% of total variance with an eigenvalue of 2.404. The items with the highest loading factors were INO 3 (λ= .738), INO 7 (λ= .674) and INO 5 (λ= .668). The items with the lowest loadings were INO 1 (λ= .479), INO 6 (λ= .322) and INO 4 (λ= <0.3). INO1, INO4 and INO6 were thus excluded from the final item list. Factor loadings are shown in Table 3.19.

Table 3.19: PCA / Varimax factor loadings - INO (N=170)

Item	Component
	1
INO 3	.738
INO 7	.674
INO 5	.668
INO 2	.595
INO 8	.519
INO 1	.479
INO 6	.322
INO 4	<0.3
Eigenvalue	2.404
% of Variance	30.045

Extraction method: PCA

3.16.2 EFA - ALC

For *Attitudes towards the Language Community* (ALC), the KMO level was 0.629 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)}$ = 141.128, p <0.05). Communalities after extraction via principal component analysis ranged from to 0.135 to 0.514. EFA results using principal component analysis indicated that Component 1 accounted for 27.100% of total variance with an eigenvalue of 2.168. The highest loading items were ALC 2 (λ= 0.717), ALC 4 (λ= 0.567) and ALC 7 (λ= 0.551). The lowest loadings were ALC 3 (λ= 0.424), ALC 6 (λ= .421) and ALC 8 (λ= 0.367). Table 3.20 indicates the factor loadings.

Table 3.20: PCA / Varimax factor loadings - ALC (N=170)

Item	Component
	1
ALC 2	.717
ALC 4	.567
ALC 7	.551
ALC 5	.549
ALC 1	.484
ALC 3	.424
ALC 6	.421
ALC 8	.367
Eigenvalue	2.168
% of Variance	27.100

Extraction method: PCA

3.16.3 EFA - IFL

For *Interest in Foreign Languages* (IFL), the KMO measure was 0.713 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)} = 300.783$, $p < 0.05$). Communalities after extraction via principal component analysis ranged from .430 to .767. EFA using principal component analysis indicated that Component 1 accounted for 34.638% of total variance with an eigenvalue of 2.771. The items with the highest loading factors were IFL 4 ($\lambda = 0.741$), IFL 4 ($\lambda = 0.708$) and IFL 8 ($\lambda = 0.658$). The items with the lowest loadings were IFL 3 ($\lambda = 0.580$), IFL 7 ($\lambda = <0.3$) and IFL 5 ($\lambda = <0.3$) (Table 3.21).

Table 3.21: PCA / Varimax factor loadings - IFL (N=170)

Item	Component
	1
IFL 4	.741
IFL 2	.708
IFL 8	.658
IFL 1	.655
IFL 6	.654
IFL 3	.580
IFL 7	.173
IFL 5	.253
Eigenvalue	2.771
% of Variance	34.638

Extraction method: PCA

3.16.4 EFA - EVT

For *Evaluation of the Teacher* (EVT), the KMO measure was 0.915 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)} = 560.026$, $p < 0.05$). Communalities after extraction via principal components analysis ranged from .452 to .614. EFA using principal component analysis indicated that the eigenvalue of Component 1 was 4.416 and it accounted for 55.198 % of the total variance. The items with the highest loading factors were EVT 8 (λ= 0.784), EVT 1 (λ= 0.567) and EVT 7 (λ= 0.772); the items with the lowest loadings were EVT 4 (λ= 0.728), EVT 6 (λ= .680) and EVT 5 (λ= 0.672) (Table 3.22).

Table 3.22: PCA / Varimax factor loadings - EVT (N=170)

Item	Component
	1
EVT 8	.784
EVT 1	.775
EVT 7	.772
EVT 2	.765
EVT 3	.758
EVT 4	.728
EVT 6	.680
EVT 5	.672
Eigenvalue	4.416
% of Variance	55.198

Extraction method: PCA

3.16.5 EFA - EVC

For *Evaluation of the Course* (EVC), the KMO measure was 0.760 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)} = 237.824$, $p < 0.05$). Communalities after extraction by principal component analysis ranged from .319 to .758. EFA using principal component analysis indicated that the eigenvalue of Component 1 was 2.847 and it accounted for 35.585 % of the total variance. The items with the highest loading factors were EVC 8 (λ= 0.707), EVC 6 (λ= 0.673) and EVC 2 (λ= 0.665); the items with the lowest loadings were EVC 7 (λ= 0.553), EVC 4 (λ= .531) and EVC 5 (λ= <0.3) (Table 3.23).

Table 3.23: PCA / Varimax factor loadings - EVC (N=170)

Item	Component
	1
EVC 8	.707
EVC 6	.673
EVC 2	.665
EVC 3	.631
EVC 1	.623
EVC 7	.553
EVC 4	.531
EVC 5	.279
Eigenvalue	2.847
% of Variance	35.585

Extraction method: PCA

3.16.6 EFA - MIN

For *Motivational Intensity* (MIN), the KMO measure was 0.719 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)} = 161.996$, $p < 0.05$). Communalities after extraction by principal component analysis ranged from .373 to .746. EFA using principal component analysis indicated that the eigenvalue of Component was 2.423 and it accounted for 30.292 % of the total variance. The items with the highest loading factors were MIN 7 ($\lambda = 0.652$), MIN 6 ($\lambda = 0.646$) and MIN 1 ($\lambda = 0.613$); the items with the lowest loadings were MIN 2($\lambda = 0.487$), MIN 3 ($\lambda = .478$) and MIN 4 ($\lambda = <0.3$) (Table 3.24).

Table 3.24: PCA / Varimax factor loadings - MIN (N=170)

Item	Component
	1
MIN 7	.652
MIN 6	.646
MIN 1	.613
MIN 5	.606
MIN 8	.594
MIN 2	.487
MIN 3	.478
MIN 4	.141
Eigenvalue	2.423
% of Variance	30.292

Extraction method: PCA

3.16.7 EFA - ALL

For *Attitudes towards Learning the Language* (ALL), the KMO measure was 0.773 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)}$ = 178.706, p <0.05). Communalities after extraction by principal component analysis ranged from .247 to .674. EFA using principal component analysis indicated that the eigenvalue of Component 1 was 2.629 and it accounted for 32.865 % of the total variance. The items with the highest loading factors were ALL 5 (λ= 0.657), ALL 4 (λ= 0.648) and ALL 6 (λ= 0.637); the items with the lowest loadings were ALL 8(λ= 0.535), ALL 1 (λ= .490) and ALL 7 (λ=0.451) (Table 3.25).

Table 3.25: PCA / Varimax factor loadings - ALL (N=170)

Item	Component
	1
ALL 5	.657
ALL 4	.648
ALL 6	.637
ALL 2	.574
ALL 3	.559
ALL 8	.535
ALL 1	.490
ALL 7	.451
Eigen value	2.911
% of Variance	36.388

Extraction method: PCA

3.16.8 EFA - DLL

For *Desire to Learn the Language* (DLL), the KMO measure was 0.784 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)}$ = 251.905, p <0.05). Communalities after extraction by principal component analysis ranged from .326 to .656. EFA using principal component analysis indicated that the eigenvalue of Component 1 was 2.911 and it accounted for 36.388 % of the total variance. The items with the highest loading factors were DLL 1(λ= 0.718), DLL 6 (λ= 0.697) and DLL 8 (λ= 0.681); the items with the lowest loadings were DLL 7(λ= 0.525), DLL 3 (λ= .448) and DLL 4 (λ=0.427) (Table 3.26).

Table 3.26: PCA / Varimax factor loadings - DLL (N=170)

Item	Component
	1
DLL 1	.718
DLL 6	.697
DLL 8	.681
DLL 2	.642
DLL 5	.613
DLL 7	.525
DLL 3	.448
DLL 4	.427
Eigen value	2.911
% of Variance	36.388

Extraction method: PCA

3.16.9 EFA - LCA

For *Language Class Anxiety* (LCA), the KMO measure was 0.886 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)} = 534.957$, $p < 0.05$). Communalities after extraction by principal component analysis ranged from .418 to .655. EFA using principal component analysis indicated that the eigenvalue of Component 1 was 4.198 and it accounted for 52.469 % of the total variance. The items with the highest loading factors were LCA 1 (λ= 0.809), LCA 8 (λ= 0.789) and LCA 6 (λ= 0.784); the items with the lowest loadings were LCA 4(λ= 0.690), LCA 3 (λ= .647) and LCA 7 (λ=0.643) (Table 3.27).

Table 3.27: PCA / Varimax factor loadings - LCA (N=170)

Item	Component
	1
LCA 1	.809
LCA 8	.789
LCA 6	.784
LCA 5	.710
LCA 2	.702
LCA 4	.690
LCA 3	.647
LCA 7	.643
Eigenvalue	4.198
% of Variance	52.469

Extraction method: PCA

3.16.10 EFA - LUA

For *Language Use Anxiety* (LUA), the KMO measure was 0.886 and the level of sphericity as measured by Bartlett's Sphericity Test was significant ($\chi^2_{(28)} = 544.034$, $p < 0.05$). Communalities after extraction by principal component analysis ranged from .233 to .676. EFA using principal component analysis indicated that the eigenvalue of Component 1 was 4.202 and it accounted for 52.525 % of the total variance. The items with the highest loading factors were LUA 8 (λ= 0.822), LUA 8 (λ= 0.816) and LUA 7 (λ= 0.748); the items with the lowest loadings were LUA 1 (λ= 0.703), LUA 6 (λ= .691) and LUA 3 (λ=0.482) (Table 3.28).

Table 3.28: PCA / Varimax factor loadings - LUA (N=170)

Item	Component
	1
LUA 8	.822
LUA 5	.816
LUA 7	.748
LUA 2	.748
LUA 4	.732
LUA 1	.703
LUA 6	.691
LUA 3	.482
Eigenvalue	4.202
% of Variance	52.525

Extraction method: PCA

3.17 Results of EFA

Following the exploratory factor analysis and in line with the goal of producing a shorter instrument which both covered the conceptual territory adequately and reduced the conceptual burden on the respondents, thirty items were excluded from the modified pilot study instrument and a new fifty-item instrument, the English version of the Malaysian AMTB, was finalized. A Malay version of this instrument containing items produced via the translation process described in Section 3.15 was used alongside the English version for the main study. Participants were invited to select whichever instrument they felt more comfortable with. Thus, two instruments were used in the

main study, an English and Malay version. Key differences between the International AMTB and the adapted AMTB are noted in Section 3.11. The item list after EFA is shown in Appendix N. The final English language instrument is shown in Appendix O.

3.18 Data collection

Several data collection techniques were considered for this study. Bryman and Bell discuss methods such as interviews, diary methods and questionnaires (2011, p. 40). However, most methods were considered to have significant drawbacks from the perspective of this research. Interviews, for example, would have required significant additional amounts of time, and may not have been approved by education authorities. Also, interviews are by their nature not anonymous and may involve a certain level of self-censorship. Further, responses may be overly general or relate to issues not central to the investigation, or interviewees may not be particularly responsive or communicative. Diary methods, similarly, would have imposed additional demands on all involved in terms of explaining the requirements, writing the entries, and collecting, reading, coding and interpreting the data. Questionnaires afford a certain level of privacy and anonymity, and allow for precision, since respondents can indicate their exact level of agreement with carefully designed statements. They are associated with reduced interviewer effects and greater overall respondent convenience (Bryman & Bell, 2011, pp. 232-233). They do have drawbacks such as possible misunderstandings, mistakes, carelessness, missing data, the inability to ensure the truthfulness of responses, and lack of opportunity to expand on responses (Bryman & Bell, 2011, pp. 233-234); indeed, all self-report data should be interpreted with care due to such concerns. However, in this research, steps were taken to mitigate drawbacks where possible. For example, instructions were kept as simple and clear as possible, questions were invited and answered, and respondents were encouraged to respond fully, carefully, truthfully and thoughtfully even if they felt certain questions were less

relevant. Items were kept as short as possible within the constraints of clarity. The questionnaire was pre-tested on individuals like the intended respondents in relevant ways, and adjustments were made to the wording, format and overall presentation to mitigate problems such as fatigue and cognitive demands on respondents. Finally, the possibility of bias was kept in mind when interpreting and reporting the results. Since potential problems were anticipated and steps were taken to attempt to mitigate the problems, the use of questionnaires appeared suitable in this research.

Permission was applied for from the Ministry of Education (Malaysia) to conduct research in national schools in Malaysia. The proposed research, the capacity of the researcher to conduct the research in a professional manner, the process, and the expected outcomes were described. The application form and supporting documentation were lodged. A permission letter was received from the Ministry of Education and the relevant State and Territory Departments of Education (Appendices D, E and F). Verbal permission was received from selected schools. During data collection, the researcher introduced himself, the research project and the instrument to the assembled students. The voluntary nature of participation, the confidentiality of the process, and the importance of responding honestly were emphasized. Students were encouraged to select whichever instrument (English or Malay) they preferred. Questions from students were responded to, with the help of bilingual school personnel when necessary. Most students completed the questionnaire within approximately 20 minutes. The completed forms were handed to the researcher and stored in a secure location prior to data processing.

3.19 Data preparation

Prior to analysis, data must be suitably prepared. Data preparation generally includes creating a coding guide, creating and preparing an SPSS file, inputting the data,

screening the data, cleaning the data, and manipulating the data (Dornyei, 2007, p. 199). The steps carried out in the present project are briefly described below. First, a coding guide was created. Creating coding guides involves defining variables and compiling coding specifications for the values each variable is expected to take (Dornyei, 2007, p. 199). Second, SPSS files were created, and the variable names and labels were assigned. Third, the data were entered. As noted by Dornyei (2007, p. 202), care must be taken during this process as mistyped numbers would contaminate the dataset. Thus, care was taken to ensure accuracy of data entry. Fourth, data were screened and cleaned. Screening and cleaning data prior to analysis is essential, since errors in the data can distort empirical results and invalidate findings (Dornyei, 2007, p. 202). Finally, data was manipulated where necessary. In this case, recoding (assigning values to negatively expressed items) was not required since all statements were phrased positively. Records with more than 5% of missing values were excluded. Data from the different subgroups (schools) were standardized to allow for meaningful statistical evaluation of the pooled data.

3.20 Data analysis

Several approaches to data analysis are possible. The choice of an appropriate method depends on the goals of the study, the nature of the data available for analysis and the suitability of the method to the research questions and the data. This study called for an estimation of the levels of research variables and a test of theorized relationships between latent and measured variables. Various approaches were considered, and it was determined that both descriptive and inferential analysis was required. The details of the methods are described below.

3.20.1 Descriptive statistics

Descriptive analysis is useful for creating an overview of a dataset in its entirety. The purpose of performing this step in this study was to summarize the opinions of the respondents and get a clear idea of their views, as a group, about the topics covered. Means, frequencies and standard deviations were calculated for all items to explore the levels and patterns of the research variables. Prior to this, the data was checked for normality. IBM SPSS (Version 25) was employed for the descriptive analysis. The results are reported in Chapter 4.

3.20.2 Structural equation modeling (SEM)

The technique used for the generation of inferential statistics in the current research is known as Structural Equation Modeling (SEM). SEM is a multivariate data analysis technique and is considered an easy-to-use method which produces high quality statistical analysis (Elangovan & Rajendran, 2015, p. 33). It is a useful technique because it involves the use of both factor analysis and multiple regression analysis (Ullman & Bentler, 2003). It creates both a structural model and a measurement model and it involves both endogenous and exogenous constructs. It is a rigorous way to analyze data and can provide a picture of the structure of relationships among dependent and independent variables (Ho, 2006). It calls for data which has been collected in an appropriate manner and appropriately prepared for analysis by screening, cleaning, normality checking and so on. SEM is a combination of multiple regression analysis and factor analysis. It can explore complex relationships among independent and dependent variables and investigate proposed relationships between observed variables and latent constructs (De Carvalho & Chima, 2014). As part of the structural equation modeling process, one validates the measurement model, fits the structural model and creates a final model. Validating the measurement model is done mainly by confirmatory factor analysis, whereas fitting the structural model is achieved by path

analysis (Schumacker & Lomax, 2010). The steps in creating the final model include specifying, identifying, estimating, fitting and manipulating the model. The main goal of SEM is to explore the validity of proposed causal and measurement models and as such it was appropriate for this study. SEM was used in this research for testing the theoretical model and analyzing the relationships between the variables. The approach used for the SEM analysis (PLS-SEM) is described below.

3.20.3 Partial Least Squares Structural Equation Modeling (PLS-SEM)

Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed in this study. PLS-SEM is a useful way to test theories and models because, when correctly used, it offers numerous benefits not offered by covariance-based structural equation modeling approaches which rely on software such as LISREL, Amos and Mplus (Hair, Black, Babin, & Anderson, 2010). For example, its estimations of the structural model may be considered more robust than those obtained through covariance-based approaches in cases where assumptions such as minimum sample size, normality of data and so on are violated. In other words, it can address a wider set of problems, handle a wider array of sample sizes and work efficiently with models of greater complexity than covariance-based approaches. It is also less restrictive in terms of data assumptions. The main goal of PLS-SEM is to account for as much as possible of the variance of the endogenous latent variables in the PLS path model. Measurement and structural model assessments focus on metrics which indicate the predictive capabilities of the models. PLS-SEM analysis involves evaluating the adequacy of the measurement model and evaluating the structural path model. The complex nature of the model and the fact that data normality and sample size adequacy could not be guaranteed in advance meant that PLS-SEM seemed a suitable choice for this research.

3.20.4 Measurement model

Measurement models ('outer models' in PLS-SEM) are the parts of structural equation models which represents the relationships among the latent variables and their measures. When selecting statistical tests used to test the measurement model, researchers must first determine whether the constructs in the model are reflective or formative. A reflective construct is a latent variable which causes its measured variables (for example, intelligence is thought to cause scores on intelligence tests), while a formative construct is a latent variable which is caused by its measured variables (for example, the value of a car is caused by its make, model, condition, etc.). The goal of assessing a measurement model is to confirm that the construct measures are reliable and valid, since validity and reliability support the inclusion of the measures in the structural model. Most of the measurement model measure in this study are reflective, so the measurement model is considered reflective. The evaluation of the reflective measurement model consisted of discriminant and convergent validity assessment. The concepts of discriminant and convergent validity, which are essential in evaluating a measurement model, are briefly discussed below.

3.20.5 Convergent validity

Convergent validity is the extent to which items measuring the same concept are correlated. Assessment of convergent validity in this study involved evaluating internal consistency, item communality, indicator reliability (item loadings), composite reliability and average variance extracted (AVE). A common internal consistency test is Cronbach's alpha, which estimates scale reliability by measuring the intercorrelations of the observed variables of that scale. Communalities are measures of the degree to which items correlate with other items thought to measure the same latent variable. Ideally the communality of an item with other items measuring the same factor should be high, i.e., above 0.4, as this indicates that the item correlates highly with other items

measuring the same factor. It should not be low, i.e., below 0.4, as this may show that the item may fail to load significantly on any factor. Item loadings (indicator reliability measures) measure the strength of the relationship of an item with a construct. The assessment of reflective measurement models involves calculating the outer loadings of indicators. High outer loadings indicate that the items which make up the construct have a strong relationship with the construct, while low outer loadings may indicate the reverse. High outer loadings of constructs show that related indicators have much in common, as captured by the construct to which they belong. Outer loading size may also be considered as indicator of reliability. Average variance extracted (AVE) is a common way of assessing the convergent validity of constructs. AVE is the mean value of the square of the loadings of the indicators of the construct (i.e., the sum of the squared loadings divided by the number of indicators). Composite reliability (CR) assesses the overall reliability of a set of similar but heterogenous items, and was an additional metric used to evaluate the internal consistency. CR, like CA, measures the outer loadings of the indicator variables. The convergent validity results (Cronbach's alpha, communalities, item loadings, AVE and CR) are reported in Chapter 4.

3.20.6 Discriminant validity

Discriminant validity may be defined as the extent to which a construct is distinct from other constructs in the study as assessed by objective measures. It indicates that a construct is unique and suggests that it reflects a phenomenon not captured by model constructs. According to Hair et al. (Hair, Hult, Ringle, & Sarstedt, 2014a), the Fornell-Larcker criterion, cross-loadings and the heterotrait-monotrait (HTMT) ratio of correlations may be used to examine discriminant validity. Cross-loadings discriminant tests measure the degree to which the outer loading of an indicator with its own construct is higher than its correlations with other constructs in the model. To indicate discriminant validity, an indicator should correlate more highly with its own construct

than with another construct. When assessing discriminant validity via the Fornell-Larcker criterion approach, one compares the square root of the AVE values with the correlations of the latent variable. The logic of this approach is that the variable should share greater variance with its connected indicators than it shares with other variables. However, recent research into the performance and efficiency of the Fornell-Larcker criterion and cross-loadings in assessing discriminant validity has indicated that neither approach reliably detected certain discriminant validity issues (Henseler, Ringle, & Sinkovics, 2009). In effect, the Fornell-Larcker criterion may be considered efficient in detecting discriminant validity issues only when the item loadings vary markedly (Voorhees, Brady, Calantone, & Ramirez, 2016). This finding raises concerns as to the suitability of this criterion for empirical research. For this reason, Henseler et al. (2009) and others (Hair et al., 2014a) suggest that correlations additionally be assessed via the heterotrait-monotrait ratio (HTMT ratio). HTMT is a recently proposed technique for evaluating discriminant validity in variance-based SEM (PLS-SEM) which estimates the probable level of correlation between perfectly measured (error free and perfectly reliable) constructs (Henseler, Ringle, & Sarstedt, 2015). HTMT values were calculated in this research to complement the Fornell-Larker and cross-loadings measures of discriminant validity.

3.20.7 Structural model

Once the validity and reliability of the constructs and their indicators is confirmed, the structural model should be assessed. The structural model (inner model or path model in PLS-SEM) is the conceptual component of a theoretical model and consists of the latent variables and their path relationships. The latent variables (constructs) are the unobserved conceptual or theoretical components of the structural model. Latent variables are classified as exogenous or endogenous in respect of specific relationships. Exogenous variables explain other latent variables (i.e., have outgoing paths in the path

model), while endogenous variables are explained by other latent variables (i.e., have incoming paths in the path model). A variable may be exogenous in one relationship and endogenous in another. Before testing a structural model, a test should be carried out to determine whether multicollinearity is present (Hair et al., 2014a). Multicollinearity may be present when independent variables correlate highly. It is undesirable because it affects the measurement of the effect of the variables and makes interpretation more difficult (Hair et al., 2010, p. 23). As such, identifying multicollinearity is vital. To quantify the degree of multicollinearity, the variance inflation factor (VIF) may be calculated. Calculating the VIF (also known as construct tolerance) by inspecting the collinearity of every set of predictors may be regarded as sufficient when checking collinearity.

Based on the above, a systematic evaluation of the structural model was performed following the recommendations of Hair Jr. et al. (2014a). Assessment of the path model in PLS-SEM relies on a bootstrapping approach which aims to estimate the significance of the statistical hypotheses. Bootstrapping is done by re-sampling the dataset in a random way to create new samples identical in size to the original dataset. This approach allows both evaluation of the reliability of the main dataset and measurement of the statistical significance of the coefficients, and allows the error of the estimated path coefficients to be known (Chin, 1998). Through the path model, therefore, the p-values, the standardized path coefficients (β) and path significances were tested. The overall assessment of the path model was done via effect size (f^2), coefficients of determination (R^2) and predictive relevance (Q^2). PLS-SEM was performed using Smart-PLS Ver 3.9.2 in this research. The results of the tests are indicated in Chapter 4.

3.21 Summary

The methods used in the study have been described in this chapter. Background information was provided where relevant, and points of importance relating to the tests and methods used in the study were highlighted. Discussion was provided in relation to the approach, design, ethics, setting, location, population, sample, instrument, pre-test, CVI, translation, pilot study, exploratory factor analysis, data collection, data analysis and data processing.

CHAPTER 4: RESULTS

In this chapter, the outcome of the preliminary analysis, the inferential statistics and the descriptive statistics are presented. Preliminary analysis and descriptive statistics were performed by visual inspection and IBM's Statistical Package for Social Scientists (SPSS) (version 25); inferential statistics were calculated via Smart-PLS (version 3.2.9). For the inferential statistics, a measurement model was created to test construct validity. A structural model was used to test the research hypotheses. This chapter begins by discussing the preliminary analysis and the data checking, then goes on to present the results for the descriptive and inferential statistics.

4.1 Preliminary analysis

Prior to the calculation of descriptive and inferential statistics, data must be suitable for analysis and free of characteristics which would tend to compromise any analysis based on it. No matter how carefully analytical techniques are selected and performed, the value of the results still depends on the appropriateness of the characteristics of the data underlying the analysis. Thus, data must be subject to inspection prior to analysis to ensure its suitability for analysis. Therefore, this section describes the characteristics of the data from several perspectives to indicate its suitability for statistical analysis via the statistical techniques employed.

4.1.1 Response rate

During data collection, based on visual inspection by the researcher, most or all students who were present appeared to be participating in the data collection process (i.e., reading and filling in the forms they had been given). The high level of participation may have been due to social expectations. Whatever the reason, the response rate among students who were present at data collection is estimated to have been close to 100%. Precise data relating to absent students are unavailable since

attendance records were not made available to the researcher. However, teachers typically responded with phrases such as 'Just a few' or 'Not many' when asked how many students were absent. Based on the teachers' responses, it seems reasonable to infer that the percentage of students absent (across all collection groups) may have been approximately 5%. As for the overall response rate, since 298 forms were collected, assuming about 5% of students were absent, it can be indicated that the total number of students in the sample must have been about 313 (298 x 1.05 = 312.9), of whom 15 students (313 - 298) were absent. Therefore, based on the response rate of the students who were present (100% of 298) and the response rate of the students who were absent (0% of 15), the overall response rate may be estimated to have been about 95% (298 students out of a total of 313 students).

4.1.2 Data cleaning and screening

Data cleaning and screening are essential prior to commencing SEM analysis, since data problems may lead to misleading results. Thus, researchers should manually clean data before commencing analysis. Care must be taken during data cleaning to avoid unwarranted data removal, since this too would jeopardize the validity of the results. When empirical data has been collected using questionnaires, it is considered advisable to check for outliers, suspicious response patterns and missing data (Hair et al., 2010). These issues are addressed briefly below.

4.1.3 Suspicious response patterns

Before analyzing data, researchers should inspect completed forms for suspicious response patterns. There are several well-known such patterns. One of them, known as straight lining, occurs when a respondent marks the same response option multiple times in a row. If, for example, a respondent marks the middle, left-most or right-most option on a five-point Likert scale multiple times in a row, the respondent's record may

be considered suspicious and may warrant removal from the dataset. Suspicious response patterns also include alternate extreme responses and diagonal lining. Visual inspection allows such patterns to be identified, then judged as suspicious or plausible. In this study, 20 cases involving suspicious response patterns were identified. To prevent them from contaminating the data, they were removed from the dataset. After removal of suspicious cases, 278 questionnaires remained.

4.1.4 Outliers

Outliers are data points which differ greatly from other data points due to their significant distance from the mean (Hair et al., 2010). Generally, when conducting statistical analysis, outliers are identified and may be deleted when it is thought that their presence might substantially affect the characteristics of the data set. Outliers may be identified by calculating z scores; such scores are expressed in standard deviations and measure how far from the mean individual data points are; standardized z scores less than - 4.00 and greater than + 4.00 may be considered outliers (Kline, 2015). However, outlier analysis is not strictly necessary in PLS-SEM analysis, since this method is non-parametric and is considered to be robust against the effects of outliers (Hair et al., 2010). As such, outliers analysis was not conducted in the present research since it was considered unnecessary.

4.1.5 Normality

Data normality is normally assessed before data analysis such as regression analysis and structural equation modelling since when normality assumptions are violated, alternate methods may be used; skewness and kurtosis values between -2 and +2, two key indicators of normality, are considered acceptable in the social sciences (Henseler et al., 2009). However, multivariate normality can be difficult to establish, and in addition, SmartPLS, which was used in this study, is assumed to be robust against non-normal

data. As such, data normality was not assessed in this study since it was determined not to be necessary based on the fact that SmartPLS is robust in this regard.

4.1.6 Missing data

When collecting data via questionnaire for statistical analysis, it is highly recommended to ensure, as far as possible, that the data is complete and without missing values, since missing data can lead to reduced statistical power, biased estimates and to invalid conclusions (Graham, 2009, p. 553). Therefore, when data was being collected for this study, the questionnaires were checked for completeness before being accepted, and students who had not completed the questionnaires fully were requested to complete all sections before handing in their forms. As such, missing data was not an issue in this study.

4.1.7 Common method variance

When data are collected through a single data collection method, there is a risk of common method variance. Such variance occurs when variance relates to measurement methods instead of to variations in levels of constructs. Variance levels should be checked in cases where models which measure multiple constructs make use of single factor analysis (Podsakoff & Organ, 1986). To check for this issue, the single factor test of Harman (1967) was performed. The test indicated that the first factor accounted for just 23.17% of the overall variance (Table 4.1). Since the value obtained was well below 50%, the results are unlikely to have been affected by this kind of variance (Podsakoff & Organ, 1986).

Table 4.1: Analysis of common method variance

Extraction Sums of Squared Loadings		
Total	Percentage of Variance	Cumulative Percentage
11.584	23.167	23.167

4.1.8 Multicollinearity

Multicollinearity may be indicated by high correlations between predictor variables in a regression model (Silva, De Brito, & Gaspar, 2016, p. 98). Multicollinearity can be a major problem in multiple linear regression analysis, since it makes it hard to estimate the role played by independent variables in causing variance in dependent variables, implies that one or more of the independent variables may be redundant, and skews the results of the regression model ((Bayhan & Bayhan, 1998); (Spanos & McGuirk, 2001, p. 365)). Multicollinearity levels were therefore calculated for the independent variables in this study. The variance inflation factor (VIF) may be used to check for multicollinearity. In this test, a VIF score for all independent variables in a model is calculated to ensure that it is not too high since, as noted by Silva, De Brito and Gaspar, (2016, p. 99), high VIF values indicate higher multicollinearity, with values exceeding 10 considered elevated and indicating that independent variables in the study are strongly collinear with other model variables. The highest VIF amongst the independent variables was 1.721; VIF scores for all other independent variables were below this level (Table 4.2). These values were well under the cut-off point of 10 (Silva et al., 2016), and were also under the conservative cut-off level of 2.5 (Hair et al., 2014a).

Table 4.2: Multicollinearity - VIF analysis

	ACH	INT	MOT
LAN	1.1		
MOT	1.1		
ALC		1.658	
INO		1.721	
IFL		1.322	
ALL			1.478
INT			1.478

Multicollinearity may also be detected by calculating correlation coefficients (Tabachnick, Fidell, & Ullman, 2007). Variables which have bivariate correlation values of 0.80 or above should not be used in the same analysis (Tabachnick et al.,

2007, p. 88). To provide additional evidence for the absence of multicollinearity, correlation coefficients were also determined for independent variables in the study. Table 4.3 shows that all correlation coefficient values were below 0.8, the cut-off point noted above. The highest score for a variable in this study, based on multicollinearity assessment, was 0.788, which is less than 0.8. Therefore, according to the statistical tests performed, multicollinearity was not present among the study variables.

Table 4.3: Multicollinearity values based on correlation coefficients

	INT	AES	IFL	EVT	EVC	MIN	ALL	DLL	ECA	EUA
INT	1									
ALC	0.620	1								
IFL	0.441	0.394	1							
EVT	0.369	0.359	0.176	1						
EVC	0.598	0.536	0.371	0.427	1					
MIN	0.483	0.360	0.273	0.392	0.616	1				
ALL	0.564	0.529	0.442	0.378	0.659	0.544	1			
DLL	0.601	0.513	0.416	0.385	0.638	0.582	0.679	1		
LCA	0.054	0.017	-0.086	-0.085	-0.099	-0.214	-0.207	-0.270	1	
LUA	0.128	-0.032	-0.148	-0.089	-0.112	-0.205	-0.26	-0.327	0.788	1

4.1.9 Demographic characteristics

In social science studies, it is considered appropriate to collect relevant demographic data when investigating research questions to make sure that participants are members of the population of interest and to provide support for the relevance of the research findings. Again, although the sample cannot be claimed to be representative since it is non-parametric, it is considered relevant to the population of interest, in support of which demographic characteristics were collected. Counts (frequency) and percentages (percent) are presented in Table 4.4.

Table 4.4: Demographic characteristics of main study respondents

Variable	Level	Frequency	Percent
Age	15 years	254	91.4
	16 years	24	8.6
Gender	Male	140	50.4
	Female	138	49.6
First language	Malay	156	56.1
	English	72	25.9
	Mandarin	29	10.4
	Tamil	18	6.5
	Other	3	1.1
Ethnic group	Malay	158	56.8
	Chinese	62	22.3
	Indian	47	16.9
	Indigenous	8	2.9
	Other	3	1.1
Self-assessed written English	Very weak	6	2.2
	Weak	21	7.6
	Medium	136	48.9
	Good	92	33.1
	Very good	23	8.3
Self-assessed oral English	Very weak	4	1.4
	Weak	38	13.7
	Medium	125	45
	Good	82	29.5
	Very good	29	10.4
Written PT3 grade	E or F	22	7.9
	D	38	13.7
	C	59	21.2
	B	61	21.9
	A	98	35.3
Oral PT3 grade	E or F	22	7.9
	D	26	9.4
	C	54	19.4
	B	55	19.8
	A	121	43.5

4.2 Descriptive statistics

This section reports the descriptive statistics relating to the variables in the evaluation model. Standard deviations and means were calculated for all constructs in this study, i.e., attitudes to the learning situation, integrativeness, motivation, language achievement and language anxiety, and for their respective subscales. Most research variables were measured by a five-point Likert scale, where values ranged from 1, indicating strongly disagree, to 5, indicating strongly agree. Language achievement was

calculated by summing the scores of four indicators (oral self-evaluation, written self-evaluation, written PT3 and oral PT3) and dividing by four.

4.2.1 Integrativeness

Integrativeness (INT) was measured using three subscales: attitudes to the language community (ALC), integrative orientation (INO) and interest in foreign languages (IFL). The subscale with the highest mean was interest in foreign languages (M = 3.99, SD = 0.66), while the subscale with the lowest mean was integrative orientation (M = 3.71, SD = 0.61). The overall mean for integrativeness was 3.83 and the overall standard deviation was 0.60. The mean level of integrativeness among the sample was higher than the mid-point of this scale, 3.0 (Table 4.5).

Table 4.5: Integrativeness

Subscale	Mean	SD
Integrative orientation	3.71	0.61
Attitudes to the language community	3.78	0.53
Interest in foreign languages	3.99	0.66

4.2.2 Integrative orientation

For INO, the variable with the highest mean was *Learning English helps me understand the feelings of English speakers* (M = 3.83, SD = 0.82), while the variable with the lowest mean was *Learning English helps me understand the way of life of English speakers* (M = 3.60, SD = 0.90). The overall mean for indicators in this subscale was 3.71, which is higher than the mid-point of 3.0 (Table 4.6).

Table 4.6: Integrative orientation

Item	Mean	SD
Learning English helps me meet and chat with English speakers	3.63	0.86
Learning English helps me understand the way of life of English speakers	3.60	0.90
Learning English helps me understand the point of view of English speakers	3.72	0.82
Learning English helps me understand the feelings of English speakers	3.83	0.82
Learning English helps me understand the opinions of English speakers	3.79	0.85

4.2.3 Attitudes to the language community

For ALC, the variable with the highest mean was *It would be a pity if Malaysia had no communication with English-speaking countries* (M = 4.15, SD = 0.77), while the variable with the lowest mean was *Most English speakers can be trusted* (M = 3.36, SD = 0.88). The overall mean for all indicators in this subscale was 3.78 (SD = 0.83), which was higher than the mid-point of this scale, 3.0. The statistical values for the indicators are shown in Table 4.7.

Table 4.7: Attitudes to the language community

Item	Mean	SD
It would be a pity if Malaysia had no communication with English-speaking countries	4.15	0.77
Most English speakers seem friendly	3.87	0.81
The colonial history of Malaysia is an important part of our current Malaysian identity	3.88	0.84
I would like to know more English speakers	3.63	0.86
Most English speakers can be trusted	3.36	0.88

4.2.4 Interest in foreign languages

For IFL, the variable with the highest mean was *I wish I could speak many foreign languages well* (M = 4.25, SD = 0.84), while the variable with the lowest mean was *It is important for Malaysians to learn foreign languages* (M = 3.92, SD = 0.97). The overall mean for indicators in this subscale was 3.99 (SD = 0.90), which was higher than the

mid-point of this scale 3.0. The statistical values for the indicators are presented in Table 4.8.

Table 4.8: Interest in foreign languages

Item	Mean	SD
I wish I could speak many foreign languages well	4.25	0.84
Learning foreign languages is enjoyable	3.97	0.87
I am interested in foreign languages	3.89	0.95
I like the sound of foreign languages	3.93	0.97
It is important for Malaysians to learn foreign languages	3.92	0.86

4.2.5 Attitudes to the learning situation

The ALS construct was measured using two subscales, evaluation of the course (EVC) and evaluation of the teacher (EVT). The subscale with the higher mean was *evaluation of the teacher* (M = 3.98, SD = 0.69), while the subscale with the lower mean was *evaluation of the course* (M = 3.68, SD = 0.63). The overall mean for the subscales was 3.83 (SD = 0.66), which was higher than the mid-point (3.0). The statistical values for the indicators are in Table 4.9.

Table 4.9: Attitudes to the learning situation

Subscale	Mean	SD
Evaluation of the teacher	3.98	0.69
Evaluation of the course	3.68	0.63

4.2.6 Evaluation of the teacher

Evaluation of the teacher was measured by five variables. The item with the highest mean was *My English teacher is a good teacher* (M = 4.21, SD = 0.91), while the item with the lowest mean was *My English teacher has an active teaching style* (M = 3.81, SD = 0.94). The overall mean for indicators of this subscale was 3.97 (SD = 0.90),

which was higher than the mid-point of this scale, 3.0. The statistical values are reported in Table 4.10.

Table 4.10: Evaluation of the teacher

Item	Mean	SD
My English teacher is a good teacher	4.21	0.91
My English teacher is always prepared for the class	3.91	0.84
My English teacher has an active teaching style	3.81	0.94
My English teacher communicates clearly in the class	4.11	0.94
My English teacher presents materials in an interesting way	3.83	0.87

4.2.7 Evaluation of the course

For EVC, the variable with the highest mean was *The English course is a good course* (M = 3.91, SD = 0.86) while the variable with the lowest mean was *The English course is well-organized* (M = 3.54, SD = 0.83). The overall mean for indicators in this subscale was 3.68 (SD = 0.87), which was higher than the mid-point of this scale, 3.0. The statistical values for the indicators are shown in Table 4.11.

Table 4.11: Evaluation of the course

Item	Mean	SD
The grading for the English course is fair	3.58	0.85
The English course is well-organized	3.54	0.83
The English course has increased my interest in English	3.60	0.92
The English course has increased my desire to study more English in future	3.76	0.91
The English course is a good course	3.91	0.86

4.2.8 Motivation

Motivation (MOT) was measured via three subscales: attitudes to learning the language (ALL), motivational intensity (MIN) and desire to learn the language (DLL). The subscale with the highest mean was ALL (M = 3.99, SD = 0.59) while the subscale with the lowest mean was MIN (M = 3.67, SD = 0.53). The overall mean for the

subscales was 3.85 (SD = 0.59). Thus, the mean level of motivation among the sample was higher than the mid-point of the scale (3.0). The statistical values for the subscales are reported in Table 4.12.

Table 4.12: Motivation

Subscale	Mean	SD
Motivational intensity	3.67	0.53
Attitudes to learning the language	3.99	0.59
Desire to learn the language	3.90	0.64

4.2.9 Motivational intensity

Motivational intensity (MIN) was measured by five variables. The variable with the highest mean was *I try to understand even the more complex aspects of English* (M = 3.86, SD = 0.76), while the variable with the lowest mean was *I ask questions when I don't understand something in the English class* (M = 3.51, SD = 1.00). The overall mean for indicators in this subscale was 3.67 (SD = 0.81), which was higher than the mid-point of 3.0. The statistical values for indicators in this subscale are given in Table 4.13.

Table 4.13: Motivational intensity

Item	Mean	SD
I pay close attention to the feedback I get in the English class	3.59	0.76
I ask questions when I don't understand something in the English class	3.51	1.00
I try to understand even the more complex aspects of English	3.86	0.76
I make a strong, sustained and focused effort to learn English	3.83	0.75
When I am studying English, I focus completely on my task	3.56	0.80

4.2.10 Desire to learn the language

Desire to learn the language (DLL) was measured by five variables. The variable with the highest mean was *I want to become fluent in English* (M = 4.16, SD = 0.92),

while the variable with the lowest mean was *I want to know English so well that it feels like part of me* (M = 3.76, SD = 0.89). The overall mean for indicators in this subscale was 3.89 (SD = 0.89), which was higher than the mid-point of 3.0. The statistical values for indicators are shown in Table 4.14.

Table 4.14: Desire to learn the language

Item	Mean	SD
I want to learn as much English as I can	3.77	0.85
Knowing English is an important goal in my life	3.88	0.84
I want to know English so well that it feels like part of me	3.76	0.89
I want to master English thoroughly, not just learn the basics	3.90	0.97
I want to become fluent in English	4.16	0.92

4.2.11 Attitudes to learning the language

Attitudes to learning the language (ALL) was measured by five variables. The variable with the highest mean was *English is one of the most important subjects I take* (M = 4.12, SD = 0.84), while the variable with the lowest mean was *Learning English is stimulating as it helps me gain new knowledge* (M = 3.65, SD = 0.84). The overall mean for indicators in this subscale was 3.99 (SD = 0.85), which was higher than the mid-point of 3. The statistical values are shown in Table 4.15.

Table 4.15: Attitudes to learning the language

Item	Mean	SD
Learning English is fun	4.03	0.90
Learning English is stimulating as it helps me gain new knowledge	3.65	0.84
English is one of the most important subjects I take	4.12	0.84
Learning English makes me feel good	4.05	0.84
I am interested in learning English	4.10	0.85

4.2.12 Language anxiety

Language anxiety (LAN) was measured by two subscales, language class anxiety (LCA) and language use anxiety (LUA). The subscale with the higher mean was

language class anxiety (M = 2.87, SD = 0.91) while the subscale with the lower mean was language use anxiety (M = 2.55, SD = 0.93). The overall mean for the subscale was 2.71 (SD = 0.92), which was lower than the mid-point of 3.0. The values for the subscales are presented in Table 4.16.

Table 4.16: Language anxiety

Subscale	Mean	SD
Language class anxiety	2.87	0.91
Language use anxiety	2.55	0.93

4.2.13 Language class anxiety

Language class anxiety (LCA) was measured by five variables. The variable with the highest mean was *I feel anxious when I am asked a question in English in my English class* (M = 3.24, SD = 1.20), while the variable with the lowest mean was *Being in my English class makes me feel anxious* (M = 2.43, SD = 1.06). The overall mean for indicators in this subscale was 2.87 (SD = 1.24), which was lower than the mid-point of 3.0. The statistical values are in Table 4.17.

Table 4.17: Language class anxiety

Item	Mean	SD
I am too anxious to volunteer answers in my English class	2.90	1.27
Being in my English class makes me feel anxious	2.43	1.06
I feel anxious when I speak English in my English class	2.94	1.30
I feel anxious when I am asked a question in English in my English class	3.24	1.20
I worry that my classmates may laugh at me when I speak English in my English class	2.86	1.36

4.2.14 Language use anxiety

Language use anxiety (LUA) was measured by five variables. The variable with the highest mean was *I would feel anxious speaking English anywhere outside class* (M = 2.71, SD = 1.18), while the variable with the lowest mean was *I would feel anxious*

listening to an announcement in English outside class (M = 2.36, SD = 1.17). The overall mean for indicators in this subscale was 2.55 (SD = 1.20), which is lower than the mid-point of 3.0. The statistical values of indicators in this subscale are presented in Table 4.18.

Table 4.18: Language use anxiety

Item	Mean	SD
I would feel anxious speaking English anywhere outside class	2.71	1.18
I would feel anxious listening to an announcement in English outside class	2.36	1.17
I would feel anxious speaking English in front of an English speaker outside class	2.58	1.24
I would feel anxious reading a notice in English outside class	2.56	1.24
I would feel anxious if I were asked a question in English outside class	2.52	1.17

4.3 Inferential statistics: Structural equation modeling (SEM)

Inferential statistics are a broad category of statistical techniques which have as their goal the production of figures which assist in predicting population relationships. As noted in preceding sections, while in theory inferential statistics are not suitable for use with non-probabilistic samples since such samples cannot be used to infer population relationships, these methods are commonly used in the social sciences even with non-parametric data, perhaps since researchers believe that such methods may illuminate relationships which may generate insights of value and relevance to populations, even if such insights cannot be considered generalizable.

4.3.1 Measurement model

Measurement models examine relationships between latent variables and their measures. They focus on relationships between latent and observed variables. They can test hypotheses regarding relationships among variables (e.g., questionnaire items) and unobserved variables (e.g., motivation). That is, measurement models test the fitness of the observed variables for measuring the latent variables. Measurement models which indicate a poor match between observed and latent variables suggest that some of the

items may be unreliable and hinder researchers from analyzing the structural model. Such models essential in SEM. Results of the measurement model are given below.

4.3.1.1 Convergent validity

Convergent validity refers to how well two measures which are theoretically related are in fact related. It is part of construct validity. Convergent validity is measured to validate the measurement model. It is demonstrated when the relationships among items in the measurement model are found to be statistically significant. It may be assessed by examining the average variance extracted (AVE), which indicates the amount of variance indicated by a construct in proportion to the variance attributable to measurement error. In PLS-SEM, the suggested level of AVE is 0.5 ((Fornell & Larcker, 1981); (Gefen, Straub, & Boudreau, 2000); (Hair et al., 2014a). As noted in Chapter 3, high outer loadings indicate that items which make up the construct have a strong relationship with the construct, while low outer loadings may indicate the reverse. This is known as indicator reliability. A widely accepted 'rule of thumb' suggests that the standardized outer loadings would preferably be measured at 0.70 or higher (Hair et al., 2014a). Indicators whose outer loadings are very low (below 0.40) are excluded from a scale (Hair, Ringle, & Sarstedt, 2011), while indicators whose outer loadings are measured in the range 0.40 to 0.70 may be removed from the scale if removal leads to an appreciable increase in the scale's composite reliability / AVE levels (Henseler et al., 2009). Table 4.21 indicates the outer loadings for items in the initial and modified measurement models. Forty-five of the items contributed meaningfully to the constructs they were measuring and were therefore retained. A very low loading item was removed. Five items in the discretionary zone (0.40 to 0.69) were removed because their removal led to an appreciable increase in scale reliability (Henseler et al., 2009). Specifically, based on the convergent validity analysis, all items measuring INO, IFL, EVT, EVC, DLE, LCA and LUA were retained, while two items

from ALC (ALC 2 and ALC 7), two items from MIN (MIN 1 and MIN 5) and one item from ALL (ALL 3) were deleted. The deletions were made because the low loading factors indicated that the items contributed insufficiently to the constructs.

Table 4.19: Convergent validity analysis

Construct	Item	Outer loadings		Cronbac	CR	AVE
		in	modified			
AES	alc1	0.	0.807	0.712	0.711	0.839
	alc2	0.	deleted			
	alc4	0.	0.813			
	alc5	0.	0.769			
	alc7	0.	deleted			
ALL	all2	0.	0.674	0.701	0.707	0.817
	all3	0.	deleted			
	all4	0.	0.700			
	all5	0.	0.721			
	all6	0.	0.809			
DLL	dll1	0.	0.756	0.767	0.771	0.843
	dll2	0.	0.730			
	dll5	0.	0.753			
	dll6	0.	0.639			
	dll8	0.	0.716			
EVC	evc1	0.	0.567	0.768	0.776	0.845
	evc2	0.	0.700			
	evc3	0.	0.764			
	evc6	0.	0.787			
	evc8	0.	0.782			
EVT	evt1	0.	0.773	0.818	0.823	0.874
	evt2	0.	0.665			
	evt3	0.	0.816			
	evt7	0.	0.768			
	evt8	0.	0.782			
INO	ino2	0.	0.708	0.770	0.782	0.845
	ino3	0.	0.747			
	ino5	0.	0.820			
	ino7	0.	0.701			
	ino8	0.	0.629			
IFL	ifl1	0.	0.677	0.784	0.789	0.853
	ifl2	0.	0.815			
	ifl4	0.	0.691			
	ifl6	0.	0.768			
	ifl8	0.	0.706			
LCA	lca1	0.	0.795	0.783	0.812	0.853
	lca2	0.	0.602			
	lca5	0.	0.800			
	lca6	0.	0.589			
	lca8	0.	0.858			
LUA	lua2	0.	0.783	0.833	0.836	0.882
	lua4	0.	0.804			
	lua5	0.	0.792			
	lua7	0.	0.808			
	lua8	0.	0.681			
MIN	min1	0.	deleted	0.699	0.699	0.833
	min5	0.	deleted			
	min6	0.	0.794			
	min7	0.	0.801			
	min8	0.	0.775			
ACH*	ach	1	1	1	1	1

* ACH was a single item construct based on four objective /two self-assessed scores.

4.3.1.2 Discriminant validity

Discriminant validity, which is also part of construct validity, indicates that a construct is genuinely different from other constructs according to statistical analysis. It shows that a construct is distinctive and captures meanings which are not captured by other variables in the model (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014b). It can be measured by the (1981) Fornell Larcker criterion, the cross-loading criterion and the HTMT (heterotrait-monotrait) ratio of correlations criterion. Given the importance of establishing discriminant validity, all three methods were used in assessing the discriminant validity of the constructs in this research. The results are reported below.

Assessing discriminant validity using the Fornell-Larcker method implies comparing the square root of the AVE of each construct with the correlation coefficient of the latent constructs. A square root of the AVE which is larger than the correlation coefficient of the constructs of interest indicates the presence of discriminant validity. The logic behind this is that latent constructs should better explain the variance of their own indicators than the average variance of other latent constructs (Fornell & Larcker, 1981). Table 4.22 shows that the correlations of the constructs were smaller than the square roots of the corresponding AVE estimates. This indicates that the constructs were closer to their measurement items than to other model constructs. According to this test, the measures have adequate discriminant validity.

Table 4.20: Discriminant validity analysis (Fornell-Larcker)

	AES	ALE	ACH	DLE	EVC	EVT	INO	IFL	ECA	EUA	MIN
ALC	**0.797**										
ALL	0.469	**0.728**									
ACH	0.110	0.211	**1**								
DLL	0.518	0.647	0.298	**0.720**							
EVC	0.437	0.619	0.162	0.640	**0.725**						
EVT	0.341	0.390	0.100	0.394	0.427	**0.763**					
INO	0.608	0.506	0.099	0.604	0.601	0.367	**0.724**				
IFL	0.424	0.424	0.146	0.415	0.375	0.186	0.458	**0.733**			
LCA	-0.018	-0.139	-0.630	-0.285	-0.101	-0.092	-0.057	-0.072	**0.737**		
LUA	-0.085	-0.209	-0.661	-0.333	-0.113	-0.089	-0.125	-0.14	**0.795**	**0.775**	
MIN	0.271	0.510	0.262	0.612	0.621	0.376	0.487	0.256	-0.203	-0.235	**0.790**

Not all researchers consider the Fornell-Larcker approach sufficient on its own for distinguishing discriminant validity, and therefore an alternative method, the heterotrait-monotrait ratio of criterion (HTMT), was used in addition (Hair et al., 2014a). HTMT is a recently proposed technique for evaluating discriminant validity in variance-based SEM (PLS-SEM) and, as noted earlier, involves estimating correlations between perfectly reliable and error free constructs (Henseler et al., 2015). HTMT values were calculated to complement the Fornell-Larker measure. Hair et al. (2010) state that to indicate that the constructs are distinct, the HTMT values should not be greater than 0.90. Table 4.21 shows HTMT values for constructs in this model. Most of the constructs show sufficient discriminant validity since their HTMT values were less than 0.90. However, two constructs, LCA and LUA, were found to be highly correlated in the present sample. This indicates that these two constructs could be identical or very similar. Therefore, these two constructs were combined. Table 4.22 indicates that after merging LCA and LUA there were no issues regarding discriminant analysis.

Table 4.21: Discriminant validity analysis (HTMT)

	AES	ALE	ACH	DLE	EVC	EVT	INO	IFL	ECA	EUA	MIN
ALC											
ALL	0.662										
ACH	0.129	0.249									
DLL	0.699	0.878	0.333								
EVC	0.593	0.847	0.188	0.830							
EVT	0.443	0.512	0.163	0.487	0.543						
INO	0.821	0.688	0.146	0.784	0.779	0.463					
IFL	0.561	0.568	0.170	0.537	0.476	0.246	0.570				
LCA	0.129	0.258	0.703	0.362	0.156	0.163	0.235	0.142			
LUA	0.132	0.294	0.726	0.412	0.151	0.141	0.230	0.181	0.971		
MIN	0.382	0.729	0.314	0.836	0.845	0.495	0.667	0.344	0.281	0.309	

Table 4.22: Discriminant validity analysis (HTMT) after merging LCA / LUA

	ACH	ALC	ALL	DLL	LLA	EVC	EVT	IFL	INO	MIN
ACH										
AES	0.129									
ALE	0.249	0.662								
DLE	0.333	0.699	0.878							
LCA	0.720	0.132	0.279	0.391						
EVC	0.188	0.593	0.847	0.830	0.155					
EVT	0.163	0.443	0.512	0.487	0.153	0.543				
IFL	0.170	0.561	0.568	0.537	0.164	0.476	0.246			
INO	0.146	0.821	0.688	0.784	0.234	0.779	0.463	0.570		
MIN	0.314	0.382	0.729	0.836	0.298	0.845	0.495	0.344	0.667	

A third method of assessing discriminant validity is the cross-loading method. The aim of this method is determine the loadings of indicators on latent constructs. In this method, discriminant validity is considered adequate if the indicators' loadings in relation to their own construct surpass their loadings in relation to other constructs. In the data examined, the construct loadings were higher than their cross-loadings on other constructs. This indicates a reasonable level of unidimensionality for each construct. The details are presented in Table 4.23.

Table 4.23: Discriminant validity analysis (cross-loading method)

	INO	IFL	AL	EV	EV	MI	DL	AL	LL	AC
INO2	**0.71**	0.37	0.38	0.25	0.45	0.36	0.48	0.41	-	0.21
INO3	**0.75**	0.37	0.43	0.28	0.44	0.30	0.42	0.34	-	0.04
INO5	**0.82**	0.40	0.52	0.31	0.49	0.41	0.53	0.42	-	0.00
INO7	**0.70**	0.28	0.44	0.18	0.38	0.35	0.35	0.36	0.12	-
INO8	**0.63**	0.20	0.43	0.32	0.42	0.34	0.41	0.29	-	0.18
IFL1	0.33	**0.68**	0.30	0.25	0.25	0.14	0.30	0.37	-	0.10
IFL2	0.33	**0.82**	0.29	0.12	0.30	0.21	0.32	0.36	-	0.09
IFL4	0.20	**0.69**	0.24	0.02	0.25	0.18	0.25	0.22	-	0.18
IFL6	0.38	**0.77**	0.31	0.09	0.29	0.16	0.27	0.28	-	0.13
IFL8	0.41	**0.71**	0.40	0.19	0.28	0.23	0.38	0.32	-	0.06
ALC1	0.47	0.37	**0.81**	0.35	0.37	0.25	0.43	0.38	-	0.17
ALC4	0.45	0.33	**0.81**	0.29	0.30	0.17	0.38	0.30	-	0.02
ALC5	0.54	0.31	**0.77**	0.17	0.38	0.23	0.43	0.44	-	0.08
EVT1	0.34	0.13	0.31	**0.77**	0.34	0.28	0.31	0.42	-	0.05
EVT2	0.21	0.11	0.16	**0.67**	0.31	0.25	0.21	0.19	0.04	-
EVT3	0.30	0.18	0.29	**0.82**	0.36	0.39	0.36	0.28	-	0.17
EVT7	0.25	0.17	0.28	**0.77**	0.30	0.22	0.30	0.32	-	0.13
EVT8	0.30	0.11	0.24	**0.78**	0.32	0.30	0.30	0.27	-	0.12
EVC1	0.27	0.15	0.31	0.34	**0.57**	0.32	0.32	0.34	-	0.14
EVC2	0.48	0.20	0.26	0.38	**0.70**	0.45	0.39	0.38	-	0.06
EVC3	0.46	0.25	0.33	0.27	**0.76**	0.42	0.49	0.49	-	0.14
EVC6	0.45	0.39	0.33	0.30	**0.79**	0.54	0.56	0.50	-	0.09
EVC8	0.50	0.35	0.36	0.26	**0.78**	0.51	0.54	0.52	-	0.17
MIN6	0.40	0.21	0.25	0.29	0.45	**0.79**	0.48	0.41	-	0.18
MIN7	0.37	0.13	0.22	0.27	0.50	**0.80**	0.50	0.38	-	0.26
MIN8	0.39	0.27	0.17	0.33	0.52	**0.78**	0.48	0.41	-	0.19
DLL1	0.49	0.24	0.38	0.28	0.48	0.45	**0.76**	0.45	-	0.22
DLL2	0.42	0.35	0.30	0.26	0.48	0.49	**0.73**	0.49	-	0.32
DLL5	0.48	0.19	0.44	0.42	0.51	0.46	**0.75**	0.48	-	0.08
DLL6	0.40	0.36	0.31	0.13	0.41	0.39	**0.64**	0.37	-	0.03
DLL8	0.39	0.37	0.43	0.30	0.41	0.41	**0.72**	0.53	-	0.40
ALL2	0.35	0.29	0.31	0.24	0.48	0.39	0.42	**0.67**	-	0.24
ALL4	0.37	0.29	0.33	0.32	0.46	0.32	0.44	**0.70**	0.01	0.02
ALL5	0.36	0.34	0.37	0.20	0.39	0.39	0.51	**0.72**	-	0.12
ALL6	0.39	0.32	0.36	0.37	0.48	0.38	0.50	**0.81**	-	0.23
LCA1	-	-	-	-	-	-	-	-	**0.74**	-
LCA2	-	-	-	-	-	-	-	-	**0.55**	-
LCA5	-	-	0.01	-	-	-	-	-	**0.79**	-
LCA6	0.08	-	0.10	0.05	-	-	-	-	**0.51**	-
LCA8	-	0.01	-	-	-	-	-	-	**0.80**	-
LUA2	-	-	0.00	-	-	-	-	-	**0.75**	-
LUA4	-	-	-	-	-	-	-	-	**0.74**	-
LUA5	-	-	-	-	-	-	-	-	**0.79**	-
LUA7	-	-	-	-	-	-	-	-	**0.76**	-
LUA8	-	-	-	-	-	-	-	-	**0.66**	-
ACH	0.10	0.15	0.11	0.10	0.16	0.26	0.30	0.21	-	**1.00**

4.3.2 Second order model

In structural equation modeling, first order variables (indicators) are used to measure the level of agreement with specific proposals, while second order variables (constructs)

are assumed to indicate generalized beliefs based on the indicators (Potter, 1991, p. 92). It is generally considered appropriate, therefore, to measure the contribution of the first order variables to the second order variables, to ensure that only indicators which contribute significantly to the constructs of interest are retained and to establish the level of contribution of each indicator to its associated construct.

A technique called bootstrapping, which involves random sampling with replacement to create simulated datasets which retain the characteristics of samples while being numerically more suited to the calculation of measures of interest, was therefore performed. The goal was to allow the contribution levels to be more reliably estimated. Outer loadings (for reflective constructs), outer weights (for formative constructs), and p values (probabilities of obtaining the observed results if the null hypothesis is correct) are reported for each second order construct. For integrativeness, all subscales were formative. The outer weights for integrative orientation ($\beta = 0.495$, $p < 0.001$), attitudes to English speakers ($\beta = 0.313$, $p < 0.001$) and interest in foreign languages ($\beta = 0.414$, $p < 0.001$) were significant. Both subscales of attitudes to the learning situation were reflective. The outer loadings for evaluation of the teacher ($\beta = 0.849$, $p < 0.001$) and evaluation of the course ($\beta = 0.849$, $p < 0.001$) were significant and were substantially higher than the recommended value of 0.7. Finally, all subscales of motivation were reflective. The outer loadings for motivational intensity ($\beta = 0.797$, $p < 0.001$), attitudes to learning the language ($\beta = 0.841$, $p < 0.001$) and desire to learn the language ($\beta = 0.912$, $p < 0.001$) were significant and were above the preferred level of 0.7. The results are shown in Table 4.26.

Table 4.24: Second order model test using bootstrapping

Construct	Path	Subscale	Outer weight	Outer loading	SD	T Value	P Value
INT	←	INO	0.495		0.026	18.861	<0.001
	←	ALC	0.313		0.020	15.390	<0.001
	←	IFL	0.414		0.028	14.897	<0.001
ALS	→	EVT		0.840	0.023	35.214	<0.001
	→	EVC		0.849	0.017	50.292	<0.001
MOT	→	MIN		0.797	0.035	22.584	<0.001
	→	ALL		0.841	0.021	40.060	<0.001
	→	DLL		0.912	0.014	67.241	<0.001

4.3.3 Structural model

SEM, a statistical approach relying on linear regression, is popular in analytical social science investigations, particularly where the goal is to concurrently inspect complex relationships among several latent variables (Tabachnick et al., 2007). Path analysis involves the use of structural equation models, which can be created by evaluating relationships between constructs. creating structural equation models is part of SEM analysis and occurs after the measurement model is fitted. The structural model investigates the relationships among the variables and provides details regarding those relationships, offering specific information regarding relationships between dependent (endogenous) variables and independent (exogenous) variables (Ho, 2006). Once the model fit had been evaluated, the size, significance and direction of the hypothesized parameter estimates were calculated.

4.3.3.1 Statistical hypotheses

The most important statistical hypotheses of this study relate to proposed relationships between attitudes to the learning situation (ALS), integrativeness (INT), motivation (MOT), language anxiety (LAN) and achievement (ACH) (Table 1.1). For the convenience of readers, the relevant hypotheses are re-presented in Table 4.25 along with their predicted paths.

Table 4.25: Statistical hypotheses with predicted paths

Label	Statistical hypothesis	Path
H11	The relationship between INT and MOT is not significant	INT→MOT
H12	The relationship between ALS and MOT is not significant	ALS→MOT
H13	The relationship between MOT and ACH is not significant	MOT→ACH
H14	The relationship between LAN and ACH is not significant	LAN→ACH

Structural equation modeling (PLS-SEM) was used to evaluate the statistical hypotheses. The path model evaluated the effect of the exogenous constructs on the endogenous constructs in each pair. As noted above, the path model was modified by merging LUA into LCA. The modified path model is shown in Figure 4-1. A larger version of the final model may be found in Appendix P.

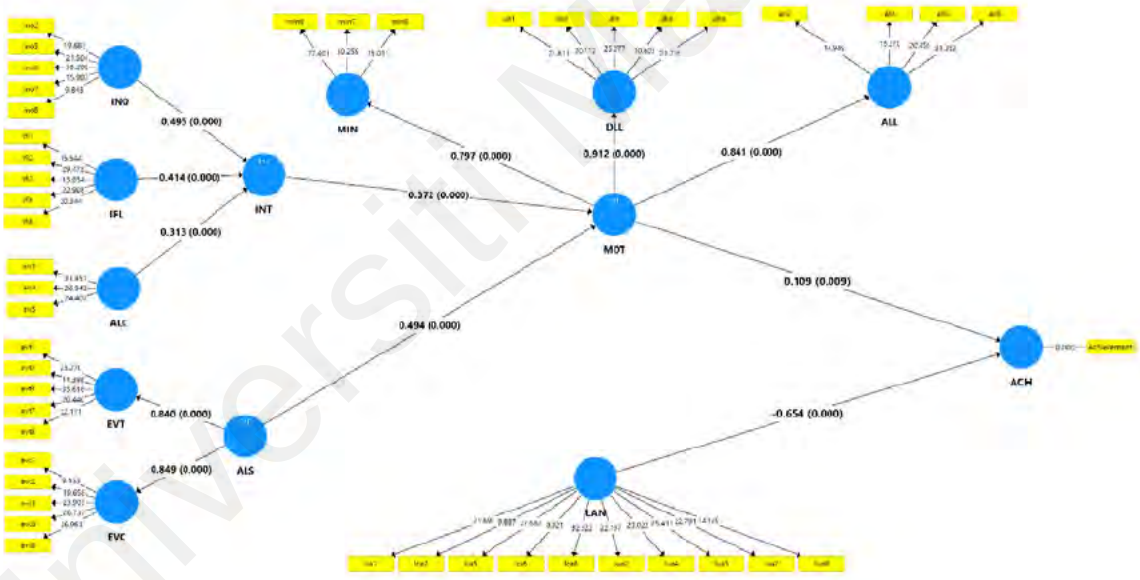

Figure 4-1: Modified path model (bootstrapped)

Values for predicted and actual paths with β, SE, T and P values are in Table 4.26.

Table 4.26: Predicted and actual paths for model, with beta, SE, T and P values

Path	β	SE	T value	P Value
INT→MOT	.372	.066	5.599*	<0.001
ALS →MOT	.494	.063	7.828*	<0.001
MOT →ACH	.110	.047	2.350*	0.009
LAN → ACH	-.650	.037	17.783*	<0.001

* Statistically significant at the 0.05 level

4.3.3.2 Coefficient of determination (r^2)

The coefficient of determination (r^2) is a key output of regression analysis and is calculated for endogenous latent variables only. As explained above, latent variables are those whose presence is hypothesized but which cannot be observed directly; an attempt is made to estimate their level by measuring observable variables. Endogenous variables are variables affected by other variables in the model. In this model, there are only two endogenous variables, motivation and achievement. The other variables, i.e., attitudes to the learning situation, integrativeness and language anxiety, while latent, are affected by factors outside the model such as social attitudes and are not considered endogenous in the model. Thus, coefficients of determination were calculated only for MOT and ACH.

R^2 values are generally interpreted as indicating the amount of variance in the dependent variables which is predicted by the independent variables. In other words, the larger the r^2 values, the greater the model's predictive ability. In this research, SmartPLS was employed to calculate the r^2 values, which were then adjusted for statistical reasons. The adjusted r^2 value for motivation was 0.588, which indicates that 58.8% of the motivation score for the sample was accounted for by scores for INT and ALS. The adjusted r^2 value for achievement was .474, which indicates that 47.4% of the achievement score for the sample was accounted for by the MOT and LCA scores. The coefficient of determination values are presented in Table 4.27.

Table 4.27: Coefficients of determination

Endogenous Latent Variable	R^2	Adj. R^2
ACH	0.477	0.474
MOT	0.591	0.588

4.3.3.3 Effect size (f^2)

The change in the r^2 value on removal of a given independent construct from the model may be used to estimate whether or not the construct in question has an influence

on the dependent construct. This is known as the f^2 or effect size. The effect size (f^2) is generally investigated via the following formula: $f^2 = r^2_{included} - r^2_{excluded} / 1 - r^2_{included}$.

Effect sizes for the exogenous variables in the model, i.e., INT, ALS, MOT and LAN, were calculated. Effect sizes for exogenous constructs of $f^2 \geq 0.02$ are generally considered small, effect sizes of $f^2 \geq 0.15$ are considered moderate, and $f^2 \geq 0.35$ are considered large (Cohen, 1988). Based on these guidelines, effect sizes for INT and ALS were calculated in terms of their effect on MOT. The effect of INT on MOT (.229) was moderate, while the effect of ALS on MOT (.403) was large. Similar calculations were done in respect of the effects of MOT and LAN on ACH. The effect of MOT on ACH (.011) was small, while the effect of LAN on ACH was .735 (large). Thus, three of the four exogenous variables had a moderate to large effect on their endogenous counterparts, while one had a small effect on its counterpart. The effect sizes are presented in Table 4.28.

Table 4.28: Effect size (f^2) for exogenous variables

Exogenous variable	**Endogenous variable**	
	MOT	ACH
INT	.229	
ALS	.403	
MOT		.021
LLA		.735

4.3.3.4 Predictive relevance (q^2) of structural model

A notable characteristic of a SEM-PLS model is its ability to provide estimations of the predictive relevance of endogenous latent variables in the model. A technique known as blindfolding was used to establish cross-validated redundancy measures of the endogenous latent variables in the model, MOT and ACH. As shown in Table 4.31, the Q^2 values for both MOT (.233) and ACH (.467) were greater than zero, indicating that

exogenous constructs in this model have adequate predictive relevance in respect of the endogenous constructs (Hair et al., 2011).

Table 4.29: Predictive relevance (q^2)

Endogenous Latent Variable	Q^2
MOT	.233
ACH	.467

The results of the statistical analysis in respect of whether the path model supports the key hypotheses, as well as the β and p values, are reported in Table 4.30.

Table 4.30: Results of statistical analysis for key hypotheses, with key values

Hypothesis	Description	β	P value	Result
H11	There is a significant relationship btwn. INT & MOT	.372	<0.001	Supported
H12	There is a significant relationship btwn. ALS & MOT	.494	<0.001	Supported
H13	There is a significant relationship btwn. MOT & ACH	.110	0.009	Supported
H14	There is a significant negative rel. btwn. LAN & ACH	-.650	<0.001	Supported

4.4 Summary of results

The first major result relates to the levels of the constructs, i.e., attitudes to the learning situation, integrativeness, motivation and language anxiety. The overall mean levels of those constructs were measured via statistical analysis. Levels for all model constructs were moderately high, except for language anxiety, which was moderately low. Specifically, the overall mean for integrativeness in the study sample was 3.83; the overall mean for attitudes to the learning situation in the sample was 3.83; the overall mean for motivation in the sample was 3.85; and the overall mean for language anxiety in the sample was 2.71.

The second major result relates to the relationships between the constructs, i.e., the relationship between integrativeness and motivation, the relationship between motivation and attitudes to the learning situation, the relationship between motivation and achievement, and the relationship between achievement and language anxiety. In

structural equation modeling, such relationships are examined by calculating standardized regression coefficients and by checking for statistical significance. The regression analysis yielded the standardized regression coefficients shown in Figure 4-2. The standardized regression coefficient indicating the association between integrativeness and motivation was 0.372 (0.000); the standardized regression coefficient representing the association between attitudes to the learning situation and motivation was 0.494 (0.000); the standardized regression coefficient indicating the association between motivation and achievement was 0.109 (0.011); and the standardized regression coefficient indicating the association between language anxiety and achievement was -0.654 (0.000). As indicated by the numbers in brackets immediately after the standardized regression coefficients, all relationships were statistically significant. Analysis in this study, as noted, was performed using Smart-PLS (Version 3.2.9).

While the function of the present chapter is simply to report the results, since discussion of the results is presented in Chapter 6, several observations can be made at this point based on the analysis of the measurement and structural model. First, the measurement model indicated that the validity and reliability of the instrument was satisfactory. The internal consistency was acceptable, as shown by the fact that all constructs had composite reliability values of more than 0.7. Loadings for all items were greater than 0.7 and were significant at the 0.001 level, which demonstrates indicator reliability. Second, the structural model showed acceptable convergent and discriminant validity, with AVE values greater than 0.50 and HTMT values less than 0.85. The bootstrapping analysis indicated that attitudes to the learning situation and integrativeness positively influenced student motivation, that student motivation affected achievement positively, and that anxiety affected achievement negatively.

CHAPTER 5: DISCUSSION

This chapter discusses the study findings in view of the research questions and hypotheses. Reference is made to previous studies, expectations and theory. The goal of the chapter is to interpret the results and attempt to uncover their underlying meaning. The discussion is structured in the order in which the research questions were presented. In a document entitled *Guidelines for the Preparation of Research Reports, Dissertations and Theses* produced by the UM Institute of Graduate Studies (2015), it is stated that the research findings should be contrasted and compared with the findings of studies presented in the literature review (2015:12). This is certainly one approach. However, many researchers take a broader approach to the discussion section. For example, Annesley states that the discussion should describe the ways in which the obtained results and the interpretations presented in the current work differ from or align with the results of other studies (Annesley, 2010, p. 1672). Additional sources could be cited, but in the interest of brevity the above will be considered adequate. The point is that it appears from the literature on discussion sections that there is no need for the discussion to either be restricted to or systematically comment on every source cited in earlier sections. Indeed, in the present case, such an approach would result in an unwieldy, lengthy and somewhat less focused discussion, due to the extensive literature cited in this work. Much of the analysis was theoretical in nature or intended to build a broad picture of the research area to situate the current study and was not necessarily intended to form the basis for a later re-discussion. Also, much of the earlier discussion related to work done by the most prominent scholars in the field, whereas the present discussion will necessarily focus more on Malaysian studies, since such studies are highly relevant to this study. Of course, reference may be made to studies done in other contexts too when required. Thus, the approach taken in this section will be to refer to whichever studies appear most relevant to the discussion at that point, even if those

studies have not been referenced earlier, and no attempt will be made to reanalyze studies.

5.1 Interpretation of scores

Discussion of numerical values requires that verbal descriptors be used to characterize the results. For example, the present discussion will necessarily characterize mean scores of measured constructs as ‘high’, ‘medium’ or ‘low’. This implies the need for an appropriate rubric to be used. While no universally accepted interpretation of Likert scores is available, one approach would be to divide the number of total possible scores correct to two decimal places (in this case there are 401 possible scores, i.e., 1.00 to 5.00 inclusive) by three and derive three roughly equal bands of, for example, 1.00 to 2.33 (134 points), 2.34 to 3.66 (133 points) and 3.67 to 5.00 (134 points), which could be declared to represent low, medium and high, respectively. However, this arrangement could well produce anomalies. For example, a mean score of 3.66 would have to be interpreted as ‘medium’ under the above rubric, which would seem unreasonable since 3.66 is closer to 4 than to 3 and as such appears better treated as ‘high’. To define the lower cut-off score for ‘high’ as 3.67 would be to sharply curtail the conceptual territory covered by the descriptor ‘high’, since by following this rubric fully 16 data points (3.51 to 3.66) which would appear more reasonably associated with the verbal descriptor ‘high’ (4) would be assigned to the descriptor ‘medium’.

To avoid such undesirable results and given the fact that in a sample of this size it appears highly unlikely that any mean score (as opposed to individual score) would fall into the extreme upper and lower ranges (i.e. 1.00 to 1.49 or 4.50 to 5.00), the solution adopted here is to extend the upper and lower boundaries of the lower and higher ranges (i.e. ‘low’ and ‘high’), since the additional territory covered is not expected to contain any mean values and the extension is thus not expected to produce anomalous results.

Widening the upper and lower bands in the manner described appears preferable to the alternative of making the three bands equal, for reasons given above. Based on the reasoning above and noting that in the present study response option 1 indicated 'strongly disagree, 2 indicated 'disagree', 3 indicated 'neutral', 4 indicated 'agree' and 5 indicated 'strongly agree', mean scores of 1.00 to 2.50 are here interpreted as low, mean scores of 2.51 to 3.50 as medium and mean scores of 3.51 to 5.00 as indicating high levels of constructs. Each band is subdivided into three to allow for more fine-grained analysis.

Table 5.1 presents the means scores included in each band along with the number of points in each band, the midpoint, a numerical band label, a description of the band and an interpretation of the band. This table will be used as the basis of the following analysis.

Table 5.1: Interpretation of scores

Mean	Points	Midpoint	Band	Description	Interpretation
1.00-1.83	84	1.415	1	Lower part of low range	Very low
1.84-2.17	34	2.005	2	Middle part of low range	Low
2.18-2.50	33	2.340	3	Higher part of low range	Relatively low
2.51-2.83	33	2.670	4	Lower part of middle range	Lower moderate
2.84-3.17	34	3.005	5	Middle part of middle range	Moderate
3.18-3.50	33	3.340	6	Higher part of middle range	Higher moderate
3.51-3.83	33	3.670	7	Lower part of high range	Relatively high
3.84-4.17	34	4.005	8	Middle part of high range	High
4.18-5.00	83	4.590	9	Higher part of high range	Very high

5.2 Discussion of research questions (RQs)

In this section, study findings are discussed and interpreted in view of relevant theoretical and empirical considerations, and research questions are viewed based on the discussion and interpretation. The answers suggested by the interpretation will be indicated for each question.

5.3 Research question 1

Research Question 1 was worded as follows: *Is it theoretically possible that integrativeness might be observed in this sample despite claims in the literature that integrativeness is less relevant in modern ESL/EFL contexts?* Literature proposing that integrativeness is less relevant in modern ESL/EFL samples was reviewed in Chapter 2. Three proposals may be identified: (1) levels of Gardnerian integrativeness in modern EFL/ESL contexts will be low, as attested to by fewer studies in the recent literature confirming its presence; (2) in many language learning contexts, physically present target language communities are not available, so learners cannot form the attitudes required for integrativeness; and (3) the current role of English as a lingua franca undermines notions of integrativeness because the English language is no longer associated with the cultures of the English-speaking communities which created it. These proposals were carefully considered elsewhere in this thesis and problematized on a case-by-case basis. Here, they will be considered from a more general and theoretical perspective. It will be argued below that (a) such proposals fail to acknowledge a significant body of SLM research suggesting that attitudes to target language communities continue to affect achievement even in modern ESL / EFL contexts; (b) the absence of physically present target language communities does not prevent language learners from forming attitudes towards such communities since such attitudes can be formed even with limited and indirect contact; and (c) the current global use of English as a lingua franca does not undermine the association of English with English-speaking communities since languages continue to be imbued with the cultures of their creators regardless of context.

The first proposition is an empirical one and suggests that integrativeness is becoming less relevant because studies finding it belong chiefly to the period before 1990. However, a wealth of empirical literature demonstrating the continuing finding of

integrativeness in learner samples since 1990 was examined in Chapter 2 of this thesis; additional studies are referenced in for example Masgoret and Gardner (2003). Integrativeness was being found by researchers in learner samples well after proposals by Dornyei (e.g. (1990)) and others (e.g., Lamb (2004)) to the effect that it is being found less often and is therefore less relevant in the modern world appeared in the literature. The fact that integrativeness is still being found in learner samples worldwide to this day (Chapter 2) constitutes a significant hurdle for those seeking to argue that it is not being found in the modern world or in EFL contexts. Its continued existence and connection to language achievement, as demonstrated by a significant body of continuing research, indicates that regardless of claims to the contrary, integrativeness continues to demonstrate relevance and explanatory power to this day.

The second objection is a theoretical one and can be summed up as a claim that individuals cannot form meaningful attitudes towards language communities with which they have limited contact. Little attention appears to have been paid to arguing this position. To investigate the claim, theorizing from psychology in relation to attitude formation may be referenced. Eagly and Chaiken (1998) suggest that (i) attitudes are tendencies to evaluate attitude objects with some degree of favor or disfavor; (ii) attitude objects are anything which can be thought about, such as freedom, the Eiffel Tower, or African Americans; (iii) attitudes are not pre-existing but rather develop in response to encounters; that is, attitude formation requires direct or indirect experience of attitude objects; (iv) a single encounter may be sufficient for an attitude to begin to develop; (v) once a tendency to respond in a certain way is established, an attitude can be said to exist; (vi) tendencies to evaluate attitude objects in particular ways may be carried forward in time by individuals; and (vii) individuals may be unaware of or unable to articulate their attitudes to some degree (pp. 269-270). Analyzing these propositions, we can note that for attitude formation: (a) there is no need for direct

contact with attitude objects, since indirect contact suffices; (b) there is no requirement for frequent contact with attitude objects, since even a single encounter may be enough to generate an attitude; and (c) there is no requirement for conscious awareness of attitudes, since they may tend to influence reactions even without conscious awareness. It appears that despite claims in the SLM literature to the contrary, then, attitude formation does not require frequent or direct contact. In today's world, television, radio, newspapers, and cultural artifacts surely provide ample opportunities for the great majority of learners, even those in EFL contexts, to form attitudes towards English-speaking peoples. Taking the above proposals together, then, it appears highly unlikely that individuals alive today, possibly excepting small numbers of people living in remote communities, do not have attitudes towards English-speaking groups. Thus, from a theoretical perspective, individuals can form attitudes towards language communities with which they have limited contact. Given the global presence of English, the claim that learners cannot develop or do not have the English language attitudes required for the socio-educational model's proposition that language attitudes will affect language learning to function would seem untenable.

The third proposition is also a theoretical one and will be assessed from a theoretical perspective. The claim may be summed up as stating that the use of English as a language of communication in international contexts makes integrativeness less relevant. Lamb (2004) states that "… whether learners have a favorable attitude towards English-speaking cultures may not be a relevant question any longer, as English is no longer associated just with Anglophone countries" (p. 14); numerous versions of this claim may be seen in the literature. However, to claim that because English is no longer linked solely with English-speaking countries (i.e., is used as a communication language in international contexts) it has therefore somehow lost its cultural associations is to propose, effectively, that languages can be divorced from the cultures which created

them even while those cultures are still living and highly salient; that is, while the languages in question are still being used as primary languages in their cultures of origin, and are highly visible and highly influential on the world stage. This claim appears highly questionable. Scholars from a wide variety of disciplines have proposed that there is a very real link between languages and their cultures of origin. Consider, for example, this from Jiang:

> It is commonly accepted that language is a part of culture, and that it plays a very important role in it … Language simultaneously reflects culture and is influenced and shaped by it. In the broadest sense, it is also the symbolic representation of a people, since it comprises their historical and cultural backgrounds, as well as their approach to life and their ways of living and thinking (Jiang, 2000, p. 328).

This passage clearly argues that languages and their creating cultures are intertwined. Further support for the proposition that languages (living ones at any rate) cannot be divorced from associations with the cultures which created them may be produced. In no particular order, one could consider, for example, the suggestions that (1) since languages embody the beliefs, history, values and culture of their creators, their use has profound implications for the identities of those who adopt them (Tsui & Tollefson, 2017, p. 2); that (2) culture shapes language to a significant degree (Wierzbicka, 2005, p. 641); that (3) since languages index numerous cultural values and assumptions, culture and language are inextricably interlaced (Brody, 2003, p. 40); that (4) speakers routinely and automatically bring to languages set of ideas, attitudes, beliefs and other "cultural baggage" (Schiffman, 2006) that (5) languages are indexical of the cultures of their speakers (Swiderski, 1993, p. 6); and (6) that languages limit and/or influence the ways in which speakers form conceptions of the world, since 'every language … incorporates certain points of view' (Whorf, 1952, p. 169). The position that languages are infused with the cultures of their creators appears reasonable, since it would seem probable that languages would necessarily reflect aspects of the beliefs, ideologies,

conventions and attitudes of their creators. As such, the position taken (or implied) by Lamb (2004, p. 14) and others (with little discussion) to the effect that when a language is used as a communication language the attitudes of the learners of that language towards the community which uses the language natively are of little relevance can be considered problematic.

Recent commentary by Al Hoorie and MacIntyre (2020a) supports the argument presented in this section and throughout the thesis, namely, the continued relevance of the socio-educational model, and in doing so insightfully highlights some key aspects of Gardner's contribution to the field. For example, while making the point that Gardner and Lambert's seminal (1959) study has inspired unnumbered investigations into the social psychological correlates of language learning, the authors stress the importance of attention to measurement, a point also made by Rock, Danaee and Coluzzi (accepted), and the continuing relevance of powerful data analysis techniques, which despite calls in the literature for more a more qualitative approach to the analysis of language learning (e.g. Boo et al. (2015)), are important since, among other things, they continue to be useful in enticing reluctant data sets to yield meaningful information (p. 2).

Based on the analysis presented in Chapter 2 and in this subsection, therefore, it appears that RQ 1 can be answered in the affirmative. According to the empirical evidence and theoretical reasoning considered here, it appears possible that integrativeness may be found in modern ESL / EFL contexts despite claims to the contrary. Indeed, the findings of the current study, which are discussed in detail in the sections which follow, provide evidence of attitudes indicative of integrativeness in a modern non-SLL context. Thus, the empirical evidence considered supports the theoretical arguments advanced above.

5.4 Research question 2

Research question 2 was worded as follows: *What are the levels of the main constructs proposed by the socio-educational model in this sample?* The question was asked because establishing the level of the constructs (INT, ALS, MOT, LAN and ACH) was necessary to set up a foundation for the discussion in this study. This was particularly important in the case of integrativeness, since not just its level but its very existence has been questioned in the literature. Based on the evidence presented in this study, the response to RQ 2 is that the levels of all theoretical constructs (INT, ALS, MOT, and LAN) are appreciable, i.e., detectable and non-negligible (Section 4.2). This is an important finding since some argumentation in the literature relating to the lack of relevance of the model hinges on the supposed absence of appreciable levels of these constructs as measured by the model. It may be worth noting that although ACH is not a theoretical construct, it was important to establish its level as well, since its level is required to test the proposed theoretical relationships.

5.4.1 Level of INT (RQ 2a)

RQ 2a was expressed as follows: '*What is the level of integrativeness in this sample?*' It was noted in Section 4.2.1 that the overall mean for integrativeness in this sample was 3.83 (SD = .60). This implies that most students agreed, to varying degrees, with positively worded statements measuring attitudes to the language community, integrative orientation and interest in foreign languages. The mean score was well over the mid-point of 3.0; in fact, it was just 0.17 short of 4.0. Thus, RQ 2a can be answered by stating: *The mean level of integrativeness in this sample was 3.83.*

How can these results be understood given claims by Sung (2013:379) and others that integrativeness can be expected to be weak to non-existent in modern ESL / EFL contexts? It was suggested in Section 1.15 that this claim should be examined against

relevant available data. The following paragraphs, which direct attention to very recent local data, attempt to do just that.

(Rahman & Amin, 2019) studied the levels of integrativeness among 75 male and female international undergraduates learning Malay at a Malaysian university. The mean integrativeness of the male and female participants as shown by (sex differentiated) responses to items S2, S3 and S4 reported in Table 2 was 3.99 (this figure was calculated by the present writer by averaging the scores for reported items) (2019 n.p.). Although the language studied was Malay, the design and small scale of the study precludes generalization. the sample was composed of international students only and the commentary above is based on just three items (since the other items in the scale did not appear to unambiguously reflect integrativeness), the study provides some support for the position argued in the previous paragraph regarding the continuing existence of integrativeness among language learners in Malaysia and the openness of Malaysian language learners towards cultural aspects of target languages.

Nidana (2017) administered a 20-item 5-point Likert style questionnaire based on attitude / motivation items adapted from Gardner (Wimolmas, 2013) to 50 students at Selangor International Islamic University College (pp. 1-3). Nidana's purpose, as is clear from the items (pp. 4-6) and from other statements in the article (e.g. (p. 1)), was to investigate levels of integrative and instrumental orientation (although these are referred to by Nidana as integrative and instrumental motivation) to better understand success in English learning in this context. The items assessing integrative orientation are listed in Table 3 (pp. 5-6) of Nidana's article. While not all the items appear to unambiguously assess integrative orientation, items 12, 17, 18 and 19 arguably do so; item 12, for example, is worded 'Studying English enables me to better understand and appreciate the ways of life of native English speakers' (pp. 5-6). The mean scores and

standard deviations for items 12, 17, 18 and 19 were 4.56 (SD .67), 4.36 (SD .83), 4.20 (SD .81), 4.26 (SD .08) and 4.20 (SD .86) respectively. Since in the questionnaire used by Nidana 4 represented 'agree' and 5 represented 'strongly agree' (p. 2), the results indicate what can be described as high levels of integrative orientation. Nidana's comment to the same effect (p. 6) is also applicable here, although his comment refers to items 11-20 rather than the subset of items referred to above. Although this study suffers from conceptual problems (as noted above, integrative orientation is referred to as integrative motivation throughout), care appears to have been taken in measuring and commenting on the results. It thus appears fair to conclude that this study supports the existence of integrative orientation among English learners in modern Malaysia. Demonstrating integrative orientation does not demonstrate integrativeness, but it certainly goes some way towards it. Also, some of the items do appear to assess interest in foreign languages and attitudes towards the language community (pp. 5-6)).

Finally, a 28-item 7-point Likert-style online questionnaire based on the AMTB was administered to 471 randomly selected undergraduates from universities in the north, south, east and center of Malaysia to assess levels of attitudes and motivation towards English language learning (Kadir, Rosmahalil, & Palpanadan, 2020). The stated goal of the study was to measure levels of integrative motivation, but the discussion and commentary throughout the article tends to indicate a focus on attitudes to the language community and integrative orientation rather than integrative motivation. For example, the authors state indicate that the students have strong integrative motivation and surmise that they would probably like to be included in the target language cultural group (p. 76). The mean integrative orientation level for this sample (referred to in the article as an integrative motivation mean) was 6.37 (p. 76). Given that the scale had seven points and ranged from strongly disagree to strongly agree (p. 74), this score implies that a large proportion of respondents either agreed or strongly agreed with the

integrative orientation items. From this, it is possible to state that this very recent study found that undergraduates drawn randomly from four universities in different regions of Malaysia displayed high levels of integrative orientation towards studying English. While conceptual and other problems suggest that this report should be treated with care, and while due to inadequately detailed reporting it is not possible to know whether all components of integrativeness were tested, this study does nevertheless appear to indicate that high levels of integrative orientation were recently detected in a Malaysian context.

The studies analyzed above, in conjunction with the current study, appear to indicate that despite claims to the contrary, moderate to levels of integrative motivation, or at least integrative orientation, are indeed detectable in language learner populations in modern Malaysia, despite changes in the ways in which English is used in the world and the possibly 'foreign' character of the English language for some students (despite its official status as a strong second language in Malaysia). Indeed, it was argued in section 5.3.1 that there are no strong theoretical reasons to assume that substantial levels of integrativeness should not be found in modern ESL / EFL contexts. The operational formulation of the socio-educational model (Gardner, 1985a) (Figure 5.1) posits that cultural beliefs engendered by social milieus precede both integrativeness and attitudes to the learning situation. It may be that features of the Malaysian social environment led learners to develop attitudes and beliefs towards native English speakers and their cultures which, along with other things such as family environment, influence the development of integrativeness. Thus, to attempt to account for the relatively high levels of integrativeness among these students, one might suggest that the social milieu itself, specifically in terms of its attitudes towards English speakers and their cultures but also in terms of its attitudes towards outgroups and their languages in general, may, along with family environment, have influenced these students to develop relatively positive

attitudes towards outgroups in general and English speakers. This influence might have been transmitted through, for example, statements about outgroups and their languages made in family, school, social or media contexts and heard by the learner. The theoretical model (Appendix A) relates to this discussion.

5.4.2 Level of ALS (RQ 2b)

RQ 2b was expressed as follows: *What is the level of attitudes to the learning situation in the sample?* This RQ requires a simple numerical answer based on descriptive statistical analysis. It was indicated in Section 4.2.5 that the mean level of ALS in this sample, based on means of 3.98 for EVT and 3.68 for EVC, was 3.83 (SD .66). This score falls within the seventh of the nine bands set out in Table 5.1 and the verbal descriptor associated with that band is 'relatively high'. Thus, the level of ALS in this sample is relatively high based on the rubric. This score implies that most of the students in the sample had positive attitudes to their learning situation. Specifically, EVT was 3.98, which is in the eight band and therefore 'high', while EVC was 3.68, which falls between 3.51 and 3.83 and is thus 'relatively high'. These high scores are part of an overall narrative told by the data to the effect that students in this sample, on average, display qualities which are expected to be of use in second and foreign language learning. The relatively lower level of EVC as compared to EVT is of interest. This might indicate relatively lower levels of satisfaction with textbooks, materials, curriculum, grading or objectives as compared to EVT. The high teacher evaluations are also of interest. These scores indicate that the students generally feel that the English teachers communicate clearly in class, present the material in an interesting way and are generally 'good teachers.'

5.4.3 Level of MOT (RQ 2c)

RQ 2c was: *What is the level of motivation in the sample?* The overall level of motivation (MOT) in the sample was 3.85 (SD .59), which is within the eighth band (3.84 - 4-17) and is thus considered 'high'. Motivational intensity (MIN) was 3.67 (SD .53) ('relatively high'), desire to learn the language (DLL) was 3.90 (SD .64) ('high') and attitudes to learning the language (ALL) was 3.99 (SD .59) ('high'). Malaysian students can be supposed to be aware of the importance of the English language to Malaysia and to themselves, and to thus display elevated levels of DLL, ALL and MIN. However, there appears to be a slight discrepancy between levels of ALL and DLL on one hand and MIN on the other, since the scores for ALL and DLL are in band 8 (high) and average 3.945, while the score for MIN is in band 7 (relatively high) and stands at 3.67, more than 27 points away. While this study did not enquire into the reasons for the disjunct between ALL and DLL on the one hand and MIN on the other, interesting commentary by the Indonesian researcher Samah suggests that although students may be motivated to expend effort (e.g., to do their homework) since they desire to obtain good grades and acquire greater knowledge and understanding, they may be hampered by not having fully understood the material while in class or by inappropriate homework assignments, which might prevent them making the effort they want to make (Samah, 2019, p. 55). The implication is that teachers should ensure students really are following the material in class and that homework is not too difficult, since this could result in lack of effort. In terms of classwork, teachers could perhaps seek to boost in-class effort by emphasizing the relevance and benefits of class activities.

5.4.4 Level of LAN (RQ 2d)

RQ 2d was worded: *What is the level of language anxiety in the sample?* As indicated, the mean level of language anxiety (LAN) in this sample was 2.71 (SD .92). This score falls within the fourth band (2.51 - 2.83) and is classified as 'low moderate'

(Table 5.1). Language class anxiety (LAN), at 2.87, was in the moderate band, while language use anxiety (LUA), at 2.55, was fully 32 points lower, in the low moderate band. Thus, the students in this sample, on average, displayed a low moderate level of English anxiety as measured by English use anxiety and English class anxiety. The English language anxiety of the sample ranged from moderate to low moderate, with a notable difference between English use anxiety and English class anxiety.

Budin (2014) studied the foreign language anxiety of 200 upper secondary students in Perak, Malaysia (p. 67) using a 33-item adaptation of Horwitz et al.'s Foreign Language Classroom Anxiety Scale (FLCAS) (p. 71) and reported mean levels of 3.15 for communication apprehension, 3.07 for anxiety about of negative evaluation and 2.57 for test anxiety, for a total mean overall foreign language anxiety score of 2.93. The FLCAS differs from the AMTB in that it adopts a more fine-grained approach to analyzing foreign language classroom anxiety, dividing it into fear of negative evaluation, communication apprehension and text anxiety. In addition, it deals only with classroom-based language anxiety, rather than out-of-class language anxiety. However, examination of the items of the FLCAS (Horwitz, Horwitz, & Cope, 1986, pp. 129-130) indicates a striking similarity with the language anxiety items of the AMTB (Gardner, 2004, pp. 2-11). Thus, even though Budin does not report the nature and extent of his adaptations, it seems probable that his language anxiety items are conceptually like those of the current study. Budin's language anxiety mean of 2.93 (p. 67) is roughly comparable to the mean of 2.71 found in the current study. The two studies were based on roughly similar sample sizes and drew on the same educational level (fourth form students in Malaysia). The location (the relatively homogenous state of Perak as opposed to the highly mixed Klang Valley) and the slightly different measurement method (a modified FLCAS as opposed to a modified AMTB) may account for the slight difference in mean anxiety levels reported.

Kamarulzaman, Ibrahim, Yunus and Ishak (2013) studied, among other things, the English language classroom anxiety of 119 gifted Form Four students (p. 23) at the Malaysian National Gifted Center at the National University of Malaysia (UKM), Selangor, Malaysia (p. 20) using Horwitz et al.'s (1986) FLCAS scale (p. 23), and reported a mean overall English classroom anxiety level of 2.76. The similarities between the classroom anxiety items of the FLCAS and the AMTB was noted in the context of Budin (2014), and comments regarding the similarity of the mean levels of classroom anxiety apply here too. Although Kamarulzaman et al.'s study was based on gifted rather than average English language learners, the striking similarity of the classroom anxiety scores obtained by Kamarulzaman et al. and the present study (2.71 and 2.87) suggests the possibility that the language anxiety processes at work in gifted language learners are similar to the processes at work in non-gifted ('average') language learners. It may be that gifted learners tend to expect success, and that this expectation tends to decrease their foreign language classroom anxiety slightly as compared to their non-gifted fellow students. This might at least somewhat account for the slightly lower foreign anxiety levels of the gifted learners (2.71) compared to the average learners (2.87).

Alias and Rashid (2018) measured the language anxiety levels (among other things) of 96 students at Sultan Mizan Zainal Abidin Polytechnic, Terengganu, using an adapted version of Horwitz et al.'s (1986) FLCAS (p. 50). On a Likert scale of five points, mean levels of communication apprehension, test anxiety and fear of negative evaluation were found to be 2.61 (SD .26), 2.72 (SD .22) and 2.77 (SD .36) respectively (p. 55), which yields a mean overall classroom anxiety level of 2.70. This score is interpreted by the authors as moderate; based on the rubric presented in the present study it would be interpreted as low moderate. The score of 2.70 is very close to the mean score for English language anxiety of 2.71 obtained in the current study. This

level of anxiety, however moderate it may seem, is interpreted by Alias and Rashid as a definite threat to students' English language learning, since one of its components, test anxiety, was shown to have a significant negative relation to achievement (referred to as proficiency in the article) (p. 56). The recommendation of the researchers was that lecturers should work hard to ameliorate the students' English class anxiety by, for example, being 'delicate and creative' rather than humiliating, when correcting students' mistakes (p. 56). While the learning context, age and location of these students differed from that of the students in this study, and while the instrument was not identical, it can nevertheless be said that both groups were comprised of young adults in secondary or tertiary education institutions learning English in formal contexts in peninsular Malaysia, and that the items in the two instruments are similar in many ways. Thus, the findings of Alias and Rashid are arguably relevant enough to compared to the present findings, and on that basis, it can be said that they support the present findings.

Overall, then, it appears reasonable to conclude that the other Malaysian studies reviewed here offer strong support for the legitimacy of the present findings. In fact, the mean language anxiety level of 2.71 is remarkably similar to the means found in comparable recent studies. The marked difference between language use anxiety and language class anxiety is of interest. This discrepancy could indicate that there is indeed room, as suggested by Alias and Rashid (2018, p. 56), for teachers to find ways to reduce student classroom anxiety. Since language anxiety has been argued to have a significant, even a 'devastating' effect on students' educational achievement in target languages (Alias & Rashid, 2018, p. 50)), it certainly appears worth determining students' language anxiety levels and developing theory-based proposals for, potentially, reducing anxiety and thus clearing the way for more substantial achievement.

5.4.5 Level of ACH (RQ 2e)

RQ 2 (e) was worded: *What is the level of language achievement in the sample?* The mean score for oral proficiency in this study was 3.61 (self-assessed oral proficiency plus oral exam score divided by 2), the mean score for written proficiency was 3.53 (self-assessed written proficiency plus written exam score divided by 2), and the overall mean score for English language proficiency was 3.57 (the four measures divided by 4). An interpretation of these written and oral scores will be suggested in view of relevant recent Malaysian studies.

Samad, Husin, Zali, Mohamad and Mat (2018) investigated, among other things, the English language oral and written proficiency of 329 undergraduates (p. 407) at the University of Technology MARA (UiTM) in Terengganu (p. 412) using scores on end-of-semester examinations designed by a team of experienced lecturers and checked by senior lecturers (p. 414). The mean score for speaking was 10.36 out of 15 (SD = 1.58) (p. 420) and the mean score for writing was 11.44 out of 20 (SD = 2.54) (p. 421). These scores were interpreted as moderately low (p. 423). In discussing these achievement levels, the authors note that students appear to have difficulty with content, language and organization when writing English and with lack of confidence, poor vocabulary, poor pronunciation and general difficulty in expressing themselves when speaking English (p. 423). To compare these results to the present results, the speaking score, which was out of 15, was divided by 3, while the writing score, which was out of 20, was divided by 4. This yielded a mean score for oral proficiency of 3.45, a mean score for written proficiency of 2.86 and a mean overall score of 3.16 (3.45 plus 2.86 divided by 2).

Latif et al. (2011) studied the impact of motivation and other factors on English language performance among 757 English learners at Open University Malaysia.

Unfortunately they did not report the mean achievement level for their sample. However, based on Table 3 of their article and assigning numerical scores of 5, 4, 3, 2, and 1 to the letters A, B, C, D, and E in order to produce numerical results which can be compared to the results obtained in the present study, a mean achievement score of 4.04 (p. 6) can be calculated. While the assessment method (in-house rather than national examinations), level of study (university rather than secondary school) and year (2011 vs. 2020) differ, the findings can be considered at least somewhat relevant. The difference between achievement means found in that study and the present one is only .47.

Bidin, Jusoff and Abdulaziz (2009), who studied the relationships between attitude, motivation and English among 620 pre-university students in three UiTM locations in Northern Malaysia, reported that in the end-of semester examination, which was the basis of the analysis, 18.7% of participants scored an A, 53.2% scored a B, 27.9% scored a C, and 0.16% scored a D (no Es were recorded). As with Abdol Latif et al., the overall mean was not reported, but a calculation based on the information provided, once again assigning a score of 5 to A, 4 to B, 3 to C and 2 to D and inferring that there were 116 As, 330 Bs, 173 Cs and 1 D, results in an overall mean out of five for this sample of 3.90.

Bodian (2017), who studied the relationship between the instrumental and integrative motivation and achievement of 213 students of French at Universiti Malaysia Sarawak (UNIMAS), reported that 35 students received a grade of ‘very good’, 77 students received a grade of ‘good’, 60 students received a grade of ‘average’, 28 students received a grade of ‘below average’ and 13 students received a grade of ‘weak’ (p. 19). As with the other studies reviewed in this subsection, the mean performance of the sample is not reported, but assigning a score of 5 to very good, 4 to good, 3 to average,

2 to below average and 1 to weak, then rounding to the second decimal place, we can calculate a mean achievement grade 3.44 for this sample ((35x5) + (77x4) + (60x3) + (28x2) + (13x1)) / 213).

Ismail (1994), who investigated the level of exposure to English and the relationship between English exposure and competence among 441 upper secondary students in nine schools in Selangor (p. 11), reported that 14 students scored distinctions on their end-of-middle-school (SRP) examination, while 116 gained credits, 212 gained passes and 9 failed (p. 14). Converting these to scores out of five and calculating a group mean on the basis noted above, we obtain a mean achievement level for the sample of 3.10 ((14 x 5) + (116 x 4) + (212 x 3) + (99 x 2) / 441)).

Jain and Sidhu (2013), who studied relationships among attitude, anxiety and motivation among 60 undergraduates at a university in Selangor, reported that, based on their high school English exit examination results, 4 students were rated highly proficient in English, 8 students were rated average in proficiency and 48 students were rated low. On the basis noted above and assigning 4 to high proficiency, 3 to average proficiency and 2 to low proficiency, we obtain a mean proficiency (achievement) level for the sample of just 2.27 ((4 x 4) + (8 x 3) + (48 x 2) / 60). While this score may appear surprisingly low, and while it is based on a relatively small sample, it does appear to reflect the low English proficiency level of many students in Malaysia, as noted in the Malaysian literature. Santa Singh, for example, who studied the attitudes of 30 lower secondary students in a semi-rural area of Malaysia towards learning English, stated ‘Despite at least eleven years of English language education, many Malaysians are still not proficient in the language’ (p. 5), while Yamat, Fisher and Rich stated that ‘English language competency has always been [an] obstacle … at university ... as well

as in job opportunities' (2014, p. 27). Table 5.2 displays the sample means of seven studies.

Table 5.2: English language proficiency of selected samples

Study	Year	Level	Location	Sample size	Mean
Current study	2020	Upper secondary	Kuala	278	3.57
Samad et al.	2018	Undergraduate	Terengganu	329	3.16*
Abdol Latif	2011	Undergraduate	Nationwide	757	4.04*
Bidin et al.	2009	Pre-university	Perlis,	620	3.90*
Bodian	2017	Undergraduate	Sarawak	213	3.44*
Ismail	1994	Upper secondary	Selangor	441	3.10*
Jain	2003	Undergraduate	Selangor	60	2.27*

* Converted to a score out of 5 for ease of comparison

Examining these results, which are based on research of considerable variety (while still having enough in common to make comparison meaningful), one is struck not so much by their diversity as by their consistency. The above discussion and sample means appear to support the view that the mean scores obtained for the current sample fall well within expected parameters. Allowing for some variation due to geographic location and educational context, the mean scores of these Malaysian studies show remarkable homogeneity. Perhaps this is not on reflection particularly surprising. It has been pointed out elsewhere in this thesis that language attitudes change slowly; thus, it may be reasonable to expect a certain amount of consistency in study results despite the passage of time, differences in geographic location and variations in educational context. Most of the studied students can be expected to share a common cultural and educational background. Thus, on reflection, the mean sample score of 3.57 obtained in the current research appears reasonable. Measuring language achievement is not straightforward. Variation can come from teachers, teaching methods, the society, the school and the family, was well as from individual differences, assessment methods, evaluation instruments (e.g., the coverage, depth and representativeness of test items), marking standards (e.g., exacting versus lenient evaluators) and score standardization (often based on political decisions as to acceptable pass rates). However, calculating and

comparing achievement levels is still of value. Not only does it provide feedback to individual students, teachers, institutions and states, but it is essential feedback for entire nations as it allows meaningful assessments and adjustments to be made.

5.5 Research question 3

Research question 3 was worded as follows: *Do the subscales proposed by the socio-educational model contribute significantly to the constructs they are supposed to contribute to in this sample?* If the subscales did not contribute significantly to the constructs they are supposed to contribute to, that could imply a problem with the relationships proposed by the model. Thus, determining the contribution level of the subscales to the constructs is essential. The inferential statistics reported in Section 4.3 allowed this question to be answered in the affirmative. In this study, the subscales contribute significantly to the constructs to which they are supposed to contribute. This is not unexpected, since the subscales were based closely on the socio-educational model (Gardner, 2006, p. 246), which has been tested extensively (Chapter 2). It was important to test the proposed relationships in the current environment because the model's applicability to non-Canadian or modern contexts has been much challenged. Despite these challenges, the utility of the subscales in assessing the constructs has been demonstrated by much research (Masgoret & Gardner, 2003). It has been argued in this thesis that for theoretical reasons the subscales can be expected to still contribute significantly to the constructs, even in modern, non-Canadian contexts. This has been shown to be the case in the current research. The subsections below discuss the results in respect of each relationship of interest.

5.5.1 Contributions of ALC, INO, and IFL to INT (RQ 3a)

This RQ sought to establish the level of the contributions of INO, ALC and IFL to INT. The results of the second order model test using bootstrapping, as reported in

Section 4.3.1.3, indicated outer loadings of .495 for INO → INT, .313 for ALC → INT and .414 for IFL → INT. These results are comparable to those obtained in other recent Asian structural equation modeling (SEM) based studies. Adithepsathit (2016) investigated the relationships between language learning beliefs, language learning attitudes, language learning strategies, self-efficacy, motivated behavior and achievement among 848 foundation course students at a university in Thailand using SEM. Language attitudes (LA) were measured by, among other things, interest in foreign languages (IFL), attitudes towards English-speaking people (AEP) and integrative orientation (IGO); these paths were all significant, with AEP → LA measured at .36, IFL → LA at .59 and IGO → LA at .72 (p. 163). Despite some variations, which may be due to sample characteristics, Adithepsathit's results are comparable with results obtained in the current study. Yamashiro and McLaughlin (2001) found even stronger relationships in their research on relationships between attitudes, motivation, anxiety and proficiency among 220 undergraduates in Japan (p. 120). The relevant section of their structural equation model showed path values from the 'attitudes' construct to the 'attitudes towards Americans living in Japan scale' of .74, to the 'attitudes towards Americans in general' scale of .66, to the 'interest in learning foreign languages' scale of .89 and to the 'integrative orientation' scale of .86 (p. 122). It is not clear why these relationships should be so much stronger than those reported in the current study, but as noted by the Yamashiro and McLaughlin, results are contingent on various factors including the students and the setting (p. 117). Mohammadi (2014) studied the relationships between integrative orientation, cultural orientation, instrumental orientation, anxiety, intrinsic orientation, extrinsic orientation, gender and proficiency using items adapted from Schmidt, Boraie and Kassabgy (1996) and Dornyei (1990) among 425 undergraduates at a university in Iran (p. 161) using a structural equation modeling approach. The relevant parts of the first structural equation

model presented in the article indicate paths of .62 for integrative orientation and .34 for cultural orientation (p. 169). Again, while contextual and sample-specific factors undoubtedly influenced the results, and while some of the constructs studied by Mohammadi (e.g. 'cultural orientation') are clearly not identical to those studied in the present research, the results of the study do tend to add further general support for the continued relevance and existence of the relationships between factors of interest proposed by the socio-educational model and for the relationships between those factors uncovered by the present research.

5.5.2 Contributions of EVT and EVC to ALS (RQ 3b)

This RQ was worded '*What are the contributions of EVT and EVC to ALS?*' and it inquired into the contributions of evaluation of the course (EVC) and evaluation of the teacher (EVT) to attitudes to the learning situation (ALS). The results of the second order model test using bootstrapping, as reported in Section 4.3.1.3, indicated outer loadings of .840 for ALS → EVT and .849 for ALS → EVC. These associations suggest a strong link between the scales and the construct. Thus, the answer to the research question, in view of the results of the current study, appears to be that the subscales in question contribute in a meaningful way to the construct in question. Recent studies in the Malaysian or even Southeast Asian context reporting the strength of the relationships between EVT and ALS and EVC and ALS are not easy to find. However, an attempt is made below to discuss the findings in view of relevant studies.

Susandi and Khaerudin (2015), in a recent Indonesian study into the relationships among attitudes towards teachers, motivation and achievement, highlight the importance of teacher behavior in student motivation (p. 77), describing teachers as 'active agents' capable of influencing the learning motivation of students (p. 82), and proceed to report a moderate association ($r = .569$, $p < .01$) between the studied

students' attitudes to the teachers and their motivation for learning English (p. 86). The authors speculate that the relatively distant social relationship between teachers and students in non-Western settings such as Indonesia, where communication is largely limited to information transfer and involves little interaction, could have limited the teachers' role in contributing to the motivation of the students and thus prevented higher associations being observed (p. 87). Putting this intriguing possibility aside for the moment, this study appears to suggest that a meaningful relationship was found between AMTB-like measures of attitudes to the learning situation and evaluation of the teacher, and at a level not dramatically different to the level reported here. However, it must be noted that the relationship measured by Susandi and Khaerudin is not identical to that measured by the current study and therefore cannot be compared directly.

Clement, Dornyei and Noels (1994) cover much ground in their study of the attitudes and motivation of Hungarian students, but one significant aspect of their research for the present context is the 'evaluation of the learning environment' factor which emerged from their analysis (p. 434). This factor was defined by several variables relating to the evaluation by the student of the course and teacher, and in fact emerged as the first factor in the analysis. The parallels between this factor and its components, as well as the conceptually very similar content of the factor to Gardner's attitudes to the learning situation, despite the different name given to the factor here, appear to allow the conclusion to be reached that this study supports a meaningful association between EVT and EVC on one hand and ALS on the other.

Gardner, Masgoret and Tremblay (1999), who studied the effect of early social attitudes on later attitudes and motivation to learn languages among 109 undergraduates in Canada as indicated by responses to measures based in part upon items from the AMTB (Gardner, 1985b), present an adapted causal model founded on the socio-

educational model (Gardner, 1985a) which shows coefficients of .63 for ALS → French Teacher Evaluation (which corresponds to EVT in the current study) and .89 for ALS → French Class Evaluation (which corresponds to EVC in the current study), stating that these coefficients are significant and in the proposed direction and thus may be taken as supporting the view that the model proposed adequately describes the data (p. 432). The coefficients in the present study are higher in both cases, at .84 in the current study compared to .63 in Gardner et al. (1999) for ALS → EVT and .85 in the current study compared to .89 in Gardner et al. (1999) for ALS →EVC. However, these variations are not unexpected, and the coefficients are still comparable. Indeed, as pointed out elsewhere, extremely close correspondences between measured coefficient levels would be highly unusual given that each sample must be considered unique to a certain extent due to differences in environmental variables. In addition, although this does not invalidate the comparison, the students in the current study were at a slightly lower educational level than the students in the Gardner et al. (1999) study, since the former were upper secondary students while the latter were first year undergraduates. Thus, some variation must be expected. The main point is that the associations predicted by the model continue to be seen despite the passage of time and the different geographical location.

5.5.3 Contributions of MIN, ALL and DLL to MOT (RQ 3c)

RQ 3c was worded '*What are the contributions of MIN, ALL and DLL to MOT in the sample?*'. It inquired into the contributions of motivational intensity (MIN), desire to learn the language (DLL) and attitudes towards learning the language (ALL) to motivation (MOT). The results of the second order model test using bootstrapping, as reported in Section 4.3.1.3, indicate outer loadings of .797 for MOT → MIN, .841 for MOT → ALL and .912 for MOT → DLL. These figures suggest strong associations

between the scales and the construct. Thus, the answer to the research question is that MIN, ALL and DLL contribute in a meaningful way to MOT.

Gardner, Lalonde, Moorcroft and Evers (1987), who studied the extent to which motivation and attitudes were related to the attrition (rather than acquisition) of French language skills over a summer vacation of 98 Grade 12 students in 5 schools in Ontario, present a causal model showing, among other things, regression weights for MOT → ALF of .90 and MOT → MI of .71, where MOT is motivation, MI is motivational intensity and ALF is attitudes to learning French (p. 43). The most striking feature of these results is how closely they align with the results for the present study: MOT → MIN in the current study was .79 as compared to .71 for MOT → MI in Gardner et al. (1987), while MOT → ALL in the current study was .84 as compared to .90 for MOT → ALF in Gardner et al. (1987). That is, despite the differences in the rationale for the study (to examine the relation of attitudes and motivation to attrition rather than achievement), the location (Canada rather than Malaysia), the year in which the study was reported (1987 rather than 2020) and the target language (French rather than English), the levels of associations between constructs of interest in these two studies are remarkably comparable. This would appear to lend support to the ongoing utility of the subscales in assessing the levels of the construct of interest, and to indicate that the subscales contribute meaningfully to the construct.

5.5.4 Contributions of LCA and LUA to LAN (RQ 3d)

RQ 3d was worded: '*What are the contributions of LCA and LUA to LAN in this sample?*'. This question inquired into the contributions of language use anxiety and language class anxiety to language anxiety. The original bootstrapped unmodified path model (Figure 4.1) indicated values of .941 for LAN → LCA and .953 for LAN → LUA. Based on the unmodified model, then, it can be said that the observed variables

LCA and LUA contribute meaningfully to LAN, since their contributions were assessed as .953 and .941, respectively. Thus, the research question has been answered as above.

However, as stated in Section 4.3.1.2, it should be noted that while all measures were assessed as having sufficient discriminant validity according to the Fornell-Larker analysis, LCA and LUA were assessed as insufficiently distinct according to HTMT analysis, since the HTMT value for LCA-LUA was .97, which is larger than the recommended value (.90). Therefore, LCA and LUA were merged. Thus, while RQ 3 (d) can be addressed as above, in the present study it appears that the RQ was not particularly meaningful, since the variables LCA and LUA were determined to be insufficiently distinct. The discussion below will therefore first address the issue of the contributions of LCA and LUA to LAN before being merged, and second, address the question of the lack of discriminant validity between the two variables.

Tests of the full socio-educational model using structural equation modeling are not common. This may be because researchers very often, quite naturally, have their own particular interests and wish to investigate specific model constructs such as language anxiety (e.g. MacIntyre and Gardner (1994)), or to research the interplay of selected model elements with elements from other SLM constructs such as self-efficacy, expectations, strategies, classroom factors and so on (e.g. Papi (2010)), or investigate the interplay of model elements excluding language anxiety (e.g. Gardner, Lalonde, Moorcroft and Evers (1987)). However, several structural equation studies reporting comparable relationships, such as those between French class anxiety, French language anxiety and French use anxiety, are available. For example, Gardner, Lalonde and Pierson (1983, p. 10) present a causal model showing paths from language anxiety to French class anxiety (ANX → FCA) at .94, a level which may be considered high, and from language anxiety to French use anxiety (ANX → FUA) at .70, a level considered

moderate. Lalonde and Gardner (1984, p. 232) report an association between French language anxiety (ANX) and French class anxiety (FCA) of .83 (the association between French language anxiety and French use anxiety was not tested in that study). Finally, Papi (2010, p. 474) reports an association between English anxiety and question 64 (How nervous and confused do you get when you are speaking in your English class) (English Anxiety → Q. 64) of .67; between English anxiety and question 76 (How afraid are you that other students will laugh at you when you speak English) (English Anxiety → Q. 76) of .62; and between English anxiety and question 68 (How afraid are you of sounding stupid in English because of the mistakes you make?) (English Anxiety → Q. 68) of .60. Although Papi does not use the terms 'English class anxiety' and 'English use anxiety', questions 64 and 76 clearly measure English class anxiety, while question 68 could be viewed as a measure of English use anxiety. Although single-measure items are not generally considered reliable assessors of variables due to their restricted coverage of the content of the domain of interest, the results obtained by Papi and the other studies referenced in the preceding paragraph may be interpreted as providing some support for moderate to strong relationships between language anxiety, language use anxiety and language class anxiety. Thus, the strong associations reported in the present study between these variables are not unexpected, since similar associations have been found in previous studies. The fact that Gardnerian measures of language use anxiety and language class anxiety have been found by several studies to be moderately to strongly associated with measures of language anxiety could be because such measures capture much of the content of the language anxiety construct.

Turning now to the question of discriminant validity, it was noted in Section 4.3.1.2 that it is desirable that differently labeled components of constructs be truly distinctive because if they are not it is difficult to argue that they are truly measuring different components. That is, differently labeled components should reflect different aspects of

the phenomenon under study. This distinctiveness is known in statistics as discriminant validity. It will be recalled that three methods were used in the current research to attempt to ensure each variable in the proposed model were sufficiently distinctive, i.e., the Fornell Larcker (1981) criterion, the HTMT (heterotrait-monotrait) ratio of correlations criterion and the cross-loading criterion. In the present research, the components labeled ‘language use anxiety’ and ‘language class anxiety’ failed to demonstrate adequate distinctiveness when subjected to HTMT analysis (Table 4.23) and were therefore combined.

This finding was unexpected. Numerous studies using the AMTB have found that the concepts of language use anxiety and language class anxiety are meaningfully related to language anxiety and are sufficiently distinct. For example, in the Gardner, Lalonde and Pierson (1983) study referenced above, no issues with discriminant validity were reported. Similarly, Gardner and Lysynchuk (1990, p. 264) reported values of .80 for French class anxiety and .61 for French use anxiety and did not report discriminant validity problems related to the two variables. Finally, the items making up the components ‘language use anxiety’ and ‘language class anxiety’ are key parts of the AMTB (Gardner, 1985b), which was developed through many years of research, and the discriminant and convergent validity of which, according to Gardner, has been assessed as satisfactory (Gardner, 2010, pp. 51-52).

If it is accepted that the constructs of language use anxiety and language class anxiety are in fact separate, as argued by Gardner and as demonstrated by numerous studies using versions of the AMTB, how can the lack of distinctiveness found in the present study be accounted for? One possibility is that the HTMT test, a relatively recently developed test of discriminant validity, is more sensitive than tests used in studies which have failed to report problems with discriminant validity among the

measures of the AMTB. This argument would imply that the two concepts were always too similar to be meaningfully separated, but that the statistical tests used in studies investigating the issue in the past were insufficiently sensitive to detect the problem. Another possibility is that the two concepts are indeed meaningfully distinct in Canadian and certain other research contexts, but not in all contexts. It is possible that certain as-yet-not-fully-understood characteristics of the Malaysian socio-linguistic situation make the distinction between the two concepts less meaningful in the Malaysian context. A third possibility is that despite the rigorous adaptation process and theoretical adequacy of the changes made to the items in this study, the changes resulted in the items ceasing to reflect the distinct underlying anxiety domains. That is, it is possible that the adapted items which seek to measure the distinct constructs of language use anxiety and language class anxiety do not in fact do so. This would imply that the items did not perform adequately despite the extensive item testing process employed, and that there may be a need for further work to be carried out in identifying the problematic items and either adjusting them or replacing them with new items (or indeed, items from the 2004 AMTB). A final possibility would appear to be that certain not fully understood features of the sample (rather than of Malaysian society) used in the present research are responsible for the apparent lack of discrimination between the constructs. Based on these considerations, given that it does not appear possible to determine at present which of the above possibilities is correct, it would appear appropriate to state that further investigation may be required to clarify this issue.

5.6 Research question 4

Research Question 4 was worded as follows: *Are the main relationships proposed by the socio-educational model observed in this sample?* The relationships referred to are those between attitudes to the learning situation and motivation, integrativeness and motivation, motivation and achievement and language anxiety and achievement. This

question (RQ 4), as operationalized by its sub-questions RQs 4 (a) - (d), is in a sense the main research question of the current study. If the main relationships proposed by the socio-educational model were observed and were significant, the study would tend to offer strong support for the continued relevance of the socio-educational model in the current world, both in non-Canadian contexts and with English as the target language, despite claims as to the possible non-applicability of the proposed relationships in the case of English. If, however, the relationships were not observed or were not significant, the study would tend to add support to those arguing for the reverse conclusion.

Structural equation modeling was used to assess the existence and strength of the relationships of interest. Figure 4.2 showed that the standardized regression coefficients for the constructs of interest were .372 for INT → MOT, .494 for ALS → MOT, .110 for MOT → ACH and -.650 for LAN →ACH. All relationships were statistically significant. The relationships proposed by the socio-educational model are observed in the sample and are significant. Thus, RQ4 may be answered in the affirmative. The socio-educational model proposes that attitudes to the learning situation and integrativeness tend to be positively associated with motivation, that motivation tends to be positively associated with achievement, and that achievement tends to be negatively associated with language anxiety. The present study lends support to these proposals by presenting evidence that such associations do exist in the study sample.

These findings were not unexpected. Such relationships have been found in numerous research contexts worldwide. From a theoretical perspective, such relationships are expected to continue to be found, even in the modern world, even in non-Canadian contexts, and even in locations where English is a lingua franca. From an empirical perspective, Masgoret and Gardner's (2003) meta-analysis of 75 studies found that in most cases, significant relationships between integrative orientation, instrumental

orientation, attitudes to the learning situation, integrativeness, motivation and achievement were reported. From a theoretical perspective, suggestions that changes in the ways in which English is used in the modern world might tend to weaken such associations have been shown to lack depth. The current study offers evidence supporting the continuing existence of the relationships proposed by the model and suggests that integrativeness continues to exert a powerful influence on motivation, and that motivation and language anxiety continue to be associated with achievement.

The sub-questions of this research question are discussed below. To make the discussion more meaningful, structural equation studies will form the bulk of the analysis. However, a search by the present author for recent rigorous structural equation modeling tests of the socio-educational model in Malaysia, Southeast Asia or even Asia revealed few studies. Researchers may have been reluctant to conduct such studies due to the sustained and prominent criticisms of the model seen between 1990 and 2019, to fundamental misunderstandings about the nature of the proposals of the model, as discussed in Chapter 2, or to inadequate statistical expertise. However, some studies have been done in other locations globally. Thus, in what follows, an attempt will be made to discuss the findings of this study in view of existing studies. Much of the discussion will focus on effect sizes. Cohen (1988, pp. 79-80) defines effect sizes of .50 as large, .30 as medium and .10 as small. In offering these interpretive guidelines, Cohen stresses that even effect sizes so small as to be invisible to the naked eye may be meaningful (p. 79), and notes that, perhaps due to substantial levels of ‘noise’ caused by measurement difficulties, imperfect adherence to constructs, or effects of the move from theory to measurement, small effect sizes are quite common in the in the social sciences (p. 79). Cohen’s three figures (.10, .30 and .50) (pp. 79-80) imply three bands, i.e., 1-20 for small, 21-40 for medium and 41-60 for strong. The use of such bands will, it is

hoped, allow greater sense to be made of the data when it comes to the difficult task of interpreting and comparing effect sizes among studies.

5.6.1 Correlation between INT and MOT (RQ 4a)

RQ4a was worded: '*What is the strength and direction of the correlation between INT and MOT?'*. The standardized regression coefficient for the relationship between INT and MOT in the current study was measured at .37, was in the expected direction and was significant. It is generally agreed that the size of an effect is related to the size of the reported coefficient. The effect of integrativeness on motivation as measured by the standardized regression coefficient falls into the medium range based on the yardstick proposed above. The finding is not unexpected. Since the proposals of the socio-educational model relate to deep-seated human psychological tendencies such as attitudes towards outgroups and the sometimes-unconscious influence of social attitudes on individual attitudes, it can be expected that the proposed relationships would not become less relevant due to the passage of what is in cultural and social terms a very short time indeed (a few decades). It can also be expected that, if indeed they are based on deep-seated insights into the psychology of human beings, the proposed relationships would operate globally, without regard to borders, although, of course, local variations in their operation due to local variations in attitudes to outgroups etc. can be expected. While commentary as per the above is valuable, it is also considered beneficial to compare results to those obtained in other studies. The results obtained in the current research will thus be discussed below in view of relevant research.

Bernaus and Gardner (2008, p. 394) reported an effect size of .66 for the association between integrativeness and motivation. This is far stronger than the effect found in the current study. However, this could be because Bernaus and Gardner's study was conducted in Spain, whereas the current study was conducted in Malaysia. It is possible

that the strength of the effect of integrativeness depends partly upon a variety of social and cultural factors in the research environment of any study, and that in the case of Catalonia, the combined impact of those factors was to increase the effect of integrativeness on motivation for studying English, whereas in the case of the Klang Valley region of Malaysia, the combined effect of socio-cultural factors in the environment was to decrease the effect of integrativeness on motivation for English studying. Despite this, the effect of integrativeness on motivation to study English in this research was found to be significant and at a level which appears reasonable to describe as moderate.

Sugita-McKeown, Sawaki and Harada (2017, p. 541) found an association of .28 between integrative orientation and intended effort in language learning. This could be argued to have some bearing on the present results, since the research was done in Asia and is recent, although admittedly differences between that study and the present one in terms of target languages (English vs. languages other than English), target constructs (integrativeness vs. integrative orientation, and motivation vs. effort), context (Japan vs. Malaysia), and level (undergraduate vs. upper secondary school) make comparisons between the studies tentative at best. However, since fully relevant studies are not easy to locate, this study may be considered somewhat acceptable for purposes of comparison. On that basis, the striking similarity of the association of interest in this study (.28) as compared to that found in the current study (.37) may be noted. The effect size is in the medium band (based on the bands proposed above) in both studies. This result, then, may be taken as offering some support for the current findings.

Khodadad and Kaur (2016, p. 162) reported an association of .36 between motivation and integrativeness in a study of 240 16 to 20-year-old learners studying English as a foreign language (EFL) at a language institute in Iran. The remarkably similar result of

that study to the present one in terms of the level of association between integrativeness and motivation (.36 vs .372), despite the differences in context (Iran vs. Malaysia), education level (upper secondary and undergraduate students vs upper secondary students) and classification of English in the environment (a foreign language vs. a second language, although, as discussed elsewhere in this thesis, some Malaysian commentators have noted that to many Malaysian students, English appears to be regarded as a foreign language), adds further support for the present findings.

Despite considerable variation in the level of association between integrativeness and motivation reported in the studies discussed here, the evidence overall appears to support the existence of a considerable link between integrativeness and motivation and suggests that the level of association between the constructs found in the current study is within the range of what might be expected, once socio-cultural factors are taken into account.

5.6.2 Correlation between ALS and MOT (RQ 4b)

RQ4a was worded: '*What is the strength and direction of the correlation between ALS and MOT?'*. The standardized regression coefficient for INT - MOT relationship in the current study was measured at .49, was in the direction expected and was significant. It thus appears that the effect of attitudes to the learning situation on motivation as measured by the standardized regression coefficient can be viewed as strong, based on the Cohen-derived rubric presented above. It appears that the motivation levels of the Malaysian students in this study are strongly influenced by attitudes towards the course and the teacher. Of course, the result should be interpreted in terms of other reported results for its significance to be appreciated. Results from other studies are considered below.

Bernaus and Gardner (2008, p. 394), who as noted above studied the attitudes and motivation of 694 students of English as a foreign language in Catalonia, report a statistically significantly association of .15 from attitudes to the learning situation (ALS) to motivation (MOT, noting that the model fit is very good as assessed by several appropriate measures. The authors conclude among other things that ALS influences MOT (p. 395), and that the results offer very good support for the proposition that ALS may be considered foundational to MOT, and is one of several factors accounting for individual differences in language learning success (p. 398). The relatively small effect size of ALS in this study as compared to the current study (.15 vs .49) appears modest. No discussion of the effect size of this variable is offered by the authors. However, it is possible that the correlation strength of model variables (i.e., INT, ALS, MOT and LAN) may vary considerably from sample to sample. Variables may be affected by a number of factors such as the general sociocultural context, the environment and so on. Indeed, since the variables are multifaceted (Gardner 2010: xi), it appears reasonable to assume that variation may be expected. Despite the difference in level, however, the essential point here is that Bernaus and Gardner's results offer support for the results obtained in the present study.

MacIntyre and Charos (1996), who studied the relations among socio-educational model variables and the impact of those variables on second language communication among 92 English-speaking adult students studying introductory French in evening classes at schools, report an association of .19 between ALS and MOT (p. 19). This result is not discussed in the article, possibly because the focus of the authors was on investigating the role of willingness to communicate in communication frequency, but it is commented that ALS may have been less stable than INT in their study due to its greater salience (resulting from the ever-present possibility of communicating in the target language) (p. 16). Nevertheless, the result obtained by MacIntyre and Charos here

aligns with the significant association between motivation and attitudes to the learning situation found in the present study, despite the difference in level obtained, which again may have been due to environmental differences.

Chang (2018, p. 14) reported a correlation of .54 between attitudes to the learning situation and motivation among 596 undergraduates studying English at a university in Taiwan. Several differences between this study and the current one may be noted. For example, the sample was somewhat skewed towards females (males = 194, females = 402), the participants were Taiwanese, and the target language was English as a foreign language. In addition, the questionnaire was administered in Chinese (presumably Mandarin), only three items were used to assess attitudes towards the course(p. 11), and achievement was measured using Clark's Can Do scale rather than a combination of standardized grades and self-assessment. However, similarities can be noted too. The items were based on the 2004 AMTB, the ages of the participants were similar, and the socio-cultural environment may be expected to have been relatively similar, at least to the extent that both Taiwan and Malaysia are democratic east Asian nations in which English is expected to occupy a somewhat similar social position as the language of wider communication. Thus, it appears reasonable to compare Chang's study with the current one, with care. The effect size reported in the study (.54) is remarkably close to that found in the current study (.49). This may be at least partly due to similar perceptions of and attitudes towards English in the two locations. The result appears to offer some support to the conclusion that the effect size found in the current study can be considered reasonable.

5.6.3 Correlation between MOT and ACH (RQ 4c)

RQ4c was worded: '*What is the strength and direction of the correlation between MOT and ACH in this sample?'*. As noted in Section 4.3.2.1, the standardized

regression coefficient for the relationship between MOT and ACH in the current study was measured at .11, was in the direction expected and was significant. Referring to the rubric presented above, the effect of motivation on achievement found in the current study, based on the standardized regression coefficient, may be considered significant but weak. This finding, of course, must be interpreted in terms of the other studies and scholarly commentary to be appropriately understood. However, it must be emphasized that the finding was that the relationship was statistically significant, although weak. It is improbable that the association was due to chance. The association in this study, then, although surprisingly low compared to that reported in other studies, is still valid and may be considered an important though muted validation of the predictions of the socio-educational model of a link between motivation and achievement.

Masgoret and Gardner (2003, p. 193), basing their findings on a meta-analysis of the results of 55 studies of second language motivation using Gardnerian measures and methods, report mean corrected correlations between motivation and achievement of .37. Examination of the relevant figure (p. 195) indicates a standard deviation of .10. The effect size found in the current study (.11) is more than two standard deviations below the mean effect size reported here. Other Gardner-authored or co-authored studies also tend to find stronger effect sizes for the MOT-ACH correlation. For example, Bernaus and Gardner (2008, p. 394) found an association between Motivation and Mean English Achievement of .43, while Gardner (1983, p. 225) reported an association between Motivation and Achievement of .52. Such findings, along with commentary in those articles about effect sizes, support the characterization of the .11 effect in the current study as ‘slight’ (p. 395) or ‘relatively low’ (p. 226).

Khodadad and Kaur (2016, p. 119), studying the attitudes and motivation of 240 learners of English at a language institute in Iran, reported an effect size of .24 between

motivation and English achievement. This effect size is below the results reported by Gardner and associates (previous paragraph) but above the effect size found in the current study. Again, taking Cohen's (1988, pp. 79-80) descriptions to imply three bands of gradually increasing strength, i.e., 1 - 20, 21 - 40 and 41 - 60, Khodadad and Kaur could be said to have obtained an effect size towards the lower end of the 'medium' band. The authors do not comment on the level of the effect, but it may be pointed out that it does not differ greatly from the result obtained in the current study, since the scores differ by just .13, while it does differ appreciably from the average of the results obtained by Gardner and associates, since the average of the scores reported in the three Gardnerian studies reported in the previous paragraph was .44 (.37 + .43 + .52 / 3), indicating a difference of .20 between the results of Khodadad and Kaur and those of Gardner and associates reported above.

Yousef, Jamil and Razak (2013, p. 210) obtained an effect size of .35 between motivation and communication competence in a structural equation modeling study of 313 undergraduates studying English at a university in the Federal Territory of Kuala Lumpur, Malaysia (the name of the university is not reported by the authors). Their interpretation is that this is a large effect size (p. 211). The basis for this interpretation is not stated. According to the Cohen guidelines reported above, it appears preferable to interpret a .35 effect size as moderate rather than strong; nevertheless, such an effect size is clearly of considerably greater magnitude than the .11 effect size reported in this study. No discussion of the level of the effect is presented in the article. Given that Gardnerian measures were used in both studies (p. 208), that the target language (English) and study location (Kuala Lumpur) were identical, and that the participant age may be assumed to have been comparable (upper secondary vs undergraduate), the difference in effect size is not easy to account for. It is possible, for example, that unaccounted-for variables or variations in sample composition affected the

measurement in the current study, producing an unexpectedly low association in the current study, or that age plays a greater role than expected role in Kuala Lumpur, with lower associations between motivation and achievement being found in younger participants.

5.6.4 Correlation between LAN and ACH (RQ 4d)

RQ 4d was worded: '*What is the strength and direction of the correlation between LAN and ACH in this sample?'*. The standardized regression coefficient for the relationship between LAN and MOT in the current study was measured at -.65, was in the expected direction and was significant. It therefore appears that the effect of language anxiety on motivation as measured by the standardized regression coefficient is strong. As above, of course, this figure must be interpreted in terms of the context and other relevant studies to allow its significance to be appreciated. Such an interpretation will be attempted in passages which follow. The meta-analysis by Masgoret and Gardner (2003) referred to in preceding subsections does not deal with language anxiety. Possibly this was to limit the very substantial analysis somewhat, or possibly there was another reason. No meta-analysis dealing with the relationship between language anxiety and achievement from the perspective of the socio-educational model was seen by the current researcher. However, individual studies will be discussed.

Bernaus and Gardner (Bernaus & Gardner, 2008, p. 394) report an association of -.11 between language anxiety and mean English achievement. This result may be contrasted to the associations obtained in that study for paths from integrativeness to motivation (.66), attitudes to the learning situation to motivation (.15), and motivation and mean English achievement (.43). The association between language anxiety and achievement, then, appears somewhat weak in Bernaus and Gardner (2008), particularly when contrasted with other results found in the same study, or indeed with the result obtained

in the current study (-.65). What could account for this? The apparent weakness of the effect of language anxiety on achievement is not commented on in Bernaus and Gardner. Possibly it was found unremarkable; that is, perhaps it was expected by the authors that the strength of the effect of the various elements of the model on achievement would vary greatly from context to context. One important difference is that Bernaus and Gardner made use of the mini-AMTB, while this study used an adapted version of the full AMTB. Perhaps this, along with environmental and sample differences, might have contributed to the marked difference reported.

Macintyre, Potter and Burns (2012, p. 138) reported an effect size between anxiety and self-reported achievement of -.21. While the relevance of this finding must be considered limited given that anxiety was in this case measured as general (not language) anxiety and that musical performance rather than language performance was the focus, the finding still lends general support to the notion that anxiety may tend to significantly impede performance in academic subjects such as music and language. This is of relevance, since as noted elsewhere, musical performance may be considered analogous to second language performance in some ways, and language anxiety may be conceived of as simply a specific form of generalized anxiety (with the target being language in this case).

Khodadady and Khajavy (2013, p. 280) found an association of .26 between L2 Anxiety and Language Achievement, based on the responses of 264 EFL learners at a language institute in Kashmir, Iran. While the items used by Khodadady and Khajavy were drawn from Horwitz, Horwitz and Cope's (1986) Foreign Language Classroom Anxiety Scale rather than the AMTB, and as such covered ground not relevant to language anxiety as conceived in the present study, a sizeable proportion of the conceptual territory covered is strikingly analogous to material covered in the present

study. For example, item 26 reads “I feel more tense and nervous in my language class than in my other classes”. As such, it seems reasonable to compare Khodadad and Khajavy’s result for language anxiety (-.26) with the language anxiety result obtained in the current study (-.65). Clearly, the association between language anxiety and achievement obtained in the current study appears far stronger.

Finally, two recent meta-analyses investigating the proposed relation between language anxiety and language achievement support the importance of language anxiety as a powerful influence in language performance. In the first of these, Teimouri, Goetze and Plonsky (2019) meta-analyzed 105 samples involving 19,933 participants from more than 20 countries and reported a mean correlation of r = -.36 between language anxiety and language achievement (p. 363). While this result was based on results from a variety of language anxiety scales, including the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986), the Foreign Language Reading Anxiety Scale (Saito, Garza, & Horwitz, 1999) and items from Gardner’s (1985b) AMTB, which makes it difficult to draw firm conclusions since the degree to which the same underlying construct is being measured is unknown, it is nevertheless highly suggestive of a strong negative effect of language anxiety on language achievement levels. The second meta-analysis limited its focus to studies using the FLCAS and found a moderate negative correlation between foreign language classroom anxiety and various measures of language achievement (writing, reading, speaking, listening and general), reporting an r level of -.39 for the association between foreign language anxiety and general foreign language achievement based on data from 12,585 participants, (Botes, Dewaele, & Greiff, 2020, p. 26), which provides strong general support for the existence of the relationship of interest, although of course this does not speak directly to results obtained using AMTB items, since the measures are not identical.

The above studies suggest that the association between LAN and ACH in the present study is rather strong. The participants appear rather sensitive to language anxiety, both inside and outside the classroom; their performance is considerably affected by language anxiety. while further research would be required to understand this matter, one can suggest possible causes. For example, perhaps Malaysian students, due to living in an ethnically mixed social environment, feel a need to 'save face', that is, to project a competent and unperturbed demeanor. In other words, it is possible that part of the elevated language anxiety revealed by the present study is due to an attempt to appear competent and avoid mistakes. Language learning, however, challenges learners' masks of competence, as it involves many complex rules. Saving face may be difficult when using a language in which one is not competent. As such, a learner's level of anxiety, when face-saving is a priority, may strongly impact achievement levels. Those who are afraid of making mistakes may have difficulty achieving highly.

5.7 Research question 5

Research question 5 was worded as follows:

Based on the theoretical analysis and empirical evidence presented in this study, does it appear that the socio-educational model and its key construct, integrativeness, are still relevant in modern SLL?

This question has been addressed in a detailed and systematic way throughout the discussion presented above. As such, it appears appropriate to provide a concise and straight-forward response here. The theoretical analysis and empirical findings of the present study appear to support the view that the socio-educational model and its key construct, integrativeness, are still relevant in modern second or foreign language learning contexts.

5.8 Status of statistical hypotheses

Based on the discussion of the research questions above, it is now possible to systematically present the conclusions regarding the statistical hypotheses of this study. Since the data leading to these conclusions has been presented, discussed and interpreted in preceding sections of this thesis, it appears appropriate to deal with the statistical hypotheses in a brief and straight-forward manner. Table 5.3 restates each statistical hypothesis, indicates its status and indicates the reason for the decision to accept or reject.

Table 5.3: Status of statistical hypotheses based on study data

H	RQ	Wording	Status	Comment
1	3a	The contribution of INO to INT is not significant	Rejected	Significant/strong .49
2	3a	The contribution of ALC to INT is not significant	Rejected	Significant/moderate .31
3	3a	The contribution of IFL to INT is not significant	Rejected	Significant/strong .41
4	3b	The contribution of EVT to ALS is not significant	Rejected	Significant/strong .84
5	3b	The contribution of EVC to ALS is not significant	Rejected	Significant/strong .85
6	3c	The contribution of MIN to MOT is not significant	Rejected	Significant/strong .79
7	3c	The contribution of ALL to MOT is not significant	Rejected	Significant/strong .84
8	3c	The contribution of DLL to MOT is not significant	Rejected	Significant/strong .91
9	3d	The contribution of LCA to LAN is not significant	Rejected	Significant/strong .94
10	3d	The contribution of LUA to LAN is not significant	Rejected	Significant/strong .95
11	4a	The effect of INT on MOT is not significant	Rejected	Significant/moderate .37
12	4b	The effect of ALS on MOT is not significant	Rejected	Significant/strong .49
13	4c	The effect of MOT on ACH is not significant	Rejected	Significant/weak .11
14	4d	The effect of LAN on ACH is not significant	Rejected	Significant/strong -.65

5.9 Status of alternative hypotheses

The rejection of the null statistical hypotheses based on the study data implies that the alternate statistical hypotheses may be accepted. As noted elsewhere in this thesis, the conclusions below are based on a rejection region of 5%. The data showed that the research hypotheses were unlikely to be correct. This led to the acceptance of the alternative hypotheses. Table 5.4 presents the alternative hypotheses and indicates their status.

Table 5.4: Status of alternative hypotheses based on study data

H_A	RQ	Wording	Status
1	3a	The contribution of INO to INT is significant	Accepted .49
2	3a	The contribution of ALC to INT is significant	Accepted .31
3	3a	The contribution of IFL to INT is significant	Accepted .41
4	3b	The contribution of EVT to ALS is significant	Accepted .84
5	3b	The contribution of EVC to ALS is significant	Accepted .84
6	3c	The contribution of MIN to MOT is significant	Accepted .79
7	3c	The contribution of ALL to MOT is significant	Accepted .84
8	3c	The contribution of DLL to MOT is significant	Accepted .91
9	3d	The contribution of LCA to LAN is significant	Accepted .94
10	3d	The contribution of LUA to LAN is significant	Accepted .95
11	4a	The effect of INT on MOT is significant	Accepted .37
12	4b	The effect of ALS on MOT is significant	Accepted .49
13	4 (c)	The effect of MOT on ACH is significant	Accepted (.11)
14	4 (d)	The effect of LAN on ACH is significant	Accepted (-.65)

5.10 Limitations and suggestions for future research

The limitations of this work, as indicated in the Abstract, include the use of purposive rather than probabilistic sampling and the fact that quantitative research, of its nature, is unable to offer deep insights into the reasons behind the findings. In addition, the data is drawn from just a few schools located in just one small part of the Klang Valley. In addition, in compliance with a request of a Ministry of Education official in December 2018, all items were phrased in the positive direction, as mentioned in Section 3.12, which implies a risk of acquiescence bias. As such, it is recommended that future research along similar lines use random sampling and consider the use of qualitative methods such as interviews to supplement the quantitative data. Information of particular interest to the line of research would include seeking to understand the precise nature of, for example, local conceptualizations of ‘native speaker’, ‘English speaker’, ‘English-speaking country’, language class anxiety and language use anxiety. In addition, studies comparing the levels of the constructs of interest among the different ethnic groups, and among different parts of the country, would be of interest.

Finally, further research on the effectiveness of cultural instruction modules in compulsory instructed language classes would be of interest.

5.11 Summary of Chapter 5

In relation to RQ1, which enquired as to whether it was theoretically possible that integrativeness might still be found in the sample despite objections raised in the literature such as the fact that in the modern world English is widely used as a lingua franca and may therefore have lost its associations with its culture/s of origin, it was argued that it was indeed theoretically possible for integrativeness to be found in the sample since despite its use as a lingua franca, English is still very much infused with features associated with its culture/s of origin. Other claims were considered and were also rejected based on theoretical analysis and argument.

In relation to RQ2, which enquired as to whether the main constructs proposed by the socio-educational model are observed in the sample, it was stated that they were. The levels of integrativeness, attitudes to the learning situation, motivation and anxiety were discussed; it was noted that the levels found in the present study appear comparable to those found in similar studies; an attempt was made to interpret those levels. In relation to integrativeness, it was suggested that features of the Malaysian social environment might lead learners to adopt attitudes and beliefs towards native speakers and their cultures which tend to facilitate the development of integrativeness. In relation to attitudes to the learning situation, it was suggested that the learners might tend to take a positive view of their learning situation due to socialization; that is, they might tend to focus on the rewarding and beneficial aspects of the situation rather than the less beneficial aspects due to the efforts of, for example, the Malaysian government, which promotes education as a ‘nation-building tool’ (G. K. Brown, 2007, p. 318) and thus, conceivably, influences teachers and parents towards viewing education (and by

extension the learning context) positively, with the result, possibly, that these actors tend to inculcate positive attitudes towards the learning situation among the students. In relation to motivation, it was suggested that the relatively high levels found might relate to the presumed awareness of modern Malaysian students of the importance of English for success in the modern world, at both a personal and a country-wide level, as well as a desire to project a modern image, participate in English-medium entertainment and education, get a good job, pass their courses and please their parents and teachers, given that English is an important asset in the job market in Malaysia. As suggested by the socio-educational model, it is expected that there would be a strong element of integrativeness fueling the motivation, as indeed appears to be demonstrated by the data collected and interpreted in this study. Finally, in relation to language anxiety, it was suggested that the relatively low levels might result in part from a tendency to look for and perceive the beneficial aspects of situations, and to expect and generally receive respectful treatment from teachers and classmates for cultural reasons such as, possibly, a general desire by parties in most interactions to save face, and/or a comparatively greater emphasis on cooperation rather than competition in social situations such as classrooms. This could tend to result in participants in interactions generally avoiding embarrassment to self and others, as for example by tending not to ask direct, difficult or challenging questions, with the result that language anxiety, much like other forms of anxiety, is noticeably lower. Finally, in relation to achievement levels, it was shown that the achievement levels reported in the present study were comparable to English achievement levels reported in other recent Malaysian studies, and it was suggested that such results might reflect the widespread currency of and respect for English in the population generally, not least of all among the parents and grandparents of today's high school students, who may be expected to encourage positive attitudes towards, effort in and respect for English language achievement among the high school students of today.

In relation to RQ3, which enquired into the contribution of the various subscales to the constructs to which they are intended to contribute, it was noted that the subscales do in all cases contribute meaningfully to those constructs, and that this was not unexpected, since the subscales were based closely on the socio-educational model, which has been tested extensively in various environments, as discussed at length in Chapter 2 of this thesis. The relationships between the variables reflected in the subscales and the constructs they were intended to contribute as seen in the present study were examined in view of a number of comparable recent studies; the relationships, despite variations presumably due to environmental and sample differences, were essentially supported. The interpretation offered was that it is possible that the concepts tapped by the subscales are indeed related to the constructs they are intended to measure in the manner proposed by the socio-educational model; that is, that the subscales tap important aspects of the constructs of interest, and that this accounts for their apparently substantial contribution to them.

In relation to RQ4, which enquired into the strength of the correlations between constructs of interest, it was noted that while the correlations between integrativeness and motivation and attitudes to the learning situation and motivation were approximately in the region expected (moderate to strong), the correlations between motivation and achievement and language anxiety and achievement were unexpected. The relation between motivation and achievement was weaker than expected, while the relation between language anxiety and achievement was stronger than expected. However, after comparing the results to other similar studies, it was determined that the levels of relationship, while unexpected in their details, were still well within the bounds of what can be expected in studies of this nature. The characteristics of the sample, as well as unrecognized environmental factors, may have influenced these results in terms of those constructs. Alternatively, it could be the case that due to

reasons particular to Malaysia, motivation has a far weaker effect than found in other locations worldwide, while language anxiety has a stronger effect. These findings can be viewed as opportunities. It would be most interesting to conduct further carefully controlled studies along similar lines with both similar and different upper high school groups in Malaysia to attempt to determine whether the current findings are representative of hitherto unexamined processes, and if so, to what extent.

RQ5 has been dealt with in a comprehensive and systematic manner throughout this thesis. To support the claim that the socio-educational model and integrativeness are no longer relevant in non-Canadian, modern instructed language learning contexts, it would have to have been shown that (a) it is theoretically unlikely for integrativeness to be found in modern non-Canadian language learning contexts (RQ1); (b) integrativeness is absent or low in the sample (RQ2); and (c) the correlation between integrativeness and motivation is weak or non-significant (RQ4). However, this position is not supported by the analysis and data presented in this thesis. In fact, the analysis and data presented in this thesis have provided support for the opposite position. That is, the analysis and results presented here indicate that (a) contrary to claims in the literature, it remains theoretically possible for integrativeness to be found in modern non-Canadian language learning contexts; (b) attitudes indicative of the Gardnerian construct of integrativeness are present to a meaningful degree in the sample; and (c) the correlation between integrativeness and motivation is significant. It thus seems suitable to summarize the position by stating that the findings, analysis, interpretation and theoretical discussion presented in this study appear to support the view that claims as to the diminished utility or relevance of integrativeness and the socio-educational in modern non-Canadian contexts are not persuasive. This study supports the view that integrativeness and the socio-educational model are still relevant today.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

This thesis has examined questions relating to (a) the continued applicability of the socio-educational model in the modern world and in non-Canadian contexts, (b) the continued applicability of the notion of integrativeness in contexts lacking clearly defined physically present target language communities and among groups using English as a lingua franca, (c) the levels of integrativeness, attitudes to the learning situation, motivation, language anxiety and achievement among upper secondary students in Malaysia today, (d) the contribution of the subscales of the socio-educational model to the major constructs, and (e) the relationships between the major constructs in the model. Findings related to those issues have been presented and discussed in preceding chapters. This chapter will present conclusions and recommendations which appear appropriate in view of the research data, analysis and interpretations presented.

6.1 Conclusions

First, since the socio-educational model has been shown to be of continued usefulness as an analytical tool for understanding individual variation in second language achievement in modern Malaysia, as demonstrated by the discussion and evidence presented in this thesis and supported by recent commentary by Al Hoorie and MacIntyre (2020a) (Section 5.3.1) and discussion within the volume edited by those authors (2020b), it follows that the model may beneficially continue to be used by those wishing to investigate and understand second language achievement in instructed second language learning situations. It is not here implied that the model is better or more suitable than other models, but it is concluded, based on the evidence presented in this study, that the model remains a viable and useful analytical tool for quantitative investigations of second language achievement among large groups of instructed learners. This conclusion applies at the very least to Malaysia, the study site, but there

appears no logical reason it could not also be concluded that the model may also be of continued usefulness in other research locations globally as well.

Second, the much-debated construct of integrativeness would appear to continue to have explanatory power and relevance in the modern world. No indications were seen during the item development, pre-testing, piloting, administration or analysis phases of this research that the construct of integrativeness as reflected in the items of the current study was seen by participants as outdated, inappropriate or lacking in explanatory power. Suggestions in the literature to the effect that the construct somehow belongs to a previous era and is no longer suitable for use in second language motivation studies have been shown to lack depth. Again, no suggestion is here made that other constructs and paradigms are not valid and/or useful. However, the present research suggests the conclusion that it would be inadvisable to seek to exclude the concept of integrativeness from investigations into the causes of language learning success.

Third, the adapted version of the AMTB used in the present study possesses adequate psychometric properties in most respects. However, the lack of adequate discriminant validity among the items comprising the subscales of the Language Anxiety construct may indicate that further testing, and possibly refinement, is needed in respect of those items. Theoretically, language class anxiety and language use anxiety are distinct. It is unclear why they did not emerge as separate aspects of language anxiety in the present study. It is possible that language anxiety in the present research context has properties which are not entirely aligned with existing theory in this tradition. Further research would appear called for to investigate this issue.

Fourth, the weak effect of language learning motivation on language achievement found in this study appears to suggest three possibilities. One possibility is that the instrument failed to adequately capture the construct of language learning motivation in

this context. This appears doubtful for theoretical reasons; however, to determine the extent to which this may be the case, further investigation into the ways in which the motivational profile of local students differs from expectations would be required. A second possibility is that language motivation has, relatively speaking, less of an impact on language achievement in the present context due to the presence of other factors not accounted for in the model. If this were the case, further investigations into what exactly those other factors might be appears called for. A third possibility is that the achievement measures failed to discriminate accurately enough between students at various achievement levels; to test this, a similar study could be conducted using more objective or at least more fine-grained achievement and/or motivation measures such as, for example, observation of classroom behavior (for motivation measures) or scores in objective language tests (for achievement measures).

Fifth, the unexpectedly strong effect of language anxiety on achievement, assuming the adequacy of the anxiety and achievement measures, leads to the conclusion that anxiety may have a far stronger than anticipated effect on achievement in this research context. Although the recent meta-analyses by Teimouri et al. (2019) and Botes et al. (2020), in conjunction with other studies reviewed in Section 5.3.4.4, provide strong general support for this relationship, the strength of the relationship is somewhat surprising. The strong effect of anxiety on achievement found here is even more surprising given that the reported language anxiety levels were not particularly high, failing on average to even reach the mid-point of the scale for most study participants. At the very least, it may be concluded that language anxiety is potentially a very significant contributor to language achievement in the present context; again, further carefully designed research focusing on the precise issue of language learning anxiety may be of interest.

6.2 Recommendations

Based on the foregoing, the following recommendations may be made.

First, based on careful consideration of the available evidence, it seems there is no need for researchers to exclude the socio-educational model from their research arsenals. Indeed, as shown and discussed at length elsewhere in this thesis, to do so would arguably be inadvisable, since the model appears to have retained much explanatory power despite the passage of time, the evolution of world societies and changes in the ways in which English is used globally. In fact, the continued applicability of the socio-educational model should come as no surprise, given that its key insights, however inadequately developed even to the present day, rest on fundamental psychological tendencies such as affective reactions and perceptions and attitudes towards outgroups. The passage of what is from a broader perspective a few short years could hardly be expected to bring about significant changes in basic human tendencies as applied to intergroup relations. It is therefore recommended that interested researchers continue to use the socio-educational model as a research paradigm, with the caveat that it should, of course, be applied carefully and critically, and not used when other paradigms more suited to research objectives are available.

Second, based on this study, there appears no reason for the concept of integrativeness to be excluded from second language motivation studies. Criticisms of the concept investigated in the present research have been shown to be themselves open to criticism from several angles; and indeed, despite several challenges with the definition and application of the concept, it has been shown to continue to be useful, and in fact was used and proved useful in this study. As such, it is recommended that researchers continue to seek to develop, refine and utilize the concept in cases where it may be of explanatory value. Much work could be done, for example, in seeking to

understand the degree to which the concept could apply to online communities, imagined communities, local communities, and embodied communities worldwide.

Third, it is suggested by the analysis presented in this thesis that the AMTB has the potential to remain a relevant and highly useful foundation for designing instruments for assessing language attitudes and motivation levels. Knowledge of such levels may be beneficial for the management of language instruction programs. However, the shortcomings of the 2004 tool in its present form were discussed, and the need for up-to-date, briefer and more culturally appropriate versions of the tool was highlighted. Indeed, a first attempt was made to produce such an instrument for the Malaysian context; however, it is presumed that the instrument used in this study would benefit from further testing and refinement. It may be possible to develop a truly modern, brief and international version of the tool. As such, much work could be done in developing up-to-date, culturally appropriate versions of the AMTB, applicable to the learning of various languages in various instructed language learning contexts. Work could proceed first on a modern, brief, culture-free, English-language version of the AMTB for worldwide use, with input from second language motivation scholars in many countries, and second, on local versions, ideally in both English and appropriate local languages, based closely on the global version but with variations as needed to ensure equivalence of meaning and cultural appropriateness and relevance.

Fourth, since the present study tends to suggest a continuing association between attitudes towards target language communities, interest in foreign languages and integrative orientation on one hand and motivation levels on the other, it seems reasonable to recommend that a cultural component be included in second language courses in Malaysia. The purpose of this component would be to improve students' familiarity with the culture of the speakers of the target language. If it is true that

integrativeness is associated with motivation, and that motivation is associated with language achievement, as this study tends to suggest, then the introduction of a cultural component may be useful since it may tend to heighten students' understanding of and positive feelings towards target language speakers and their cultures, which may tend to lead to better language achievement. It need not be re-emphasized here that higher levels of competence in English are presumably desirable not only for the rewards such competence may bring individuals but also for the benefits to societies which may be expected to flow from such competence, such as increased business opportunities, improved national productivity and better international outcomes through better communication.

It has been implied by some commentators (e.g., Crookes & Schmidt (1991)) that Gardner's model lacks practical applicability. Indeed, Gardner recently stated that teachers cannot motivate students (2010, p. 201). This statement could at first appear to call into question the practicality of an entire line of research. However, Gardner immediately clarifies his position by noting that even if teachers cannot create student motivation as such, they can help promote and maintain it (p. 201). This insight, presumably, could be applied not just by teachers but also by curriculum designers and other education authorities. Teachers, coursebooks, programs, schools and education authorities cannot create student motivation or motivate students, according to Gardner, but they can certainly attempt to promote and maintain the motivation of students. Specifically, as suggested above, one potentially effective way of promoting and maintaining student motivation could involve the use of cultural components in language courses. The inclusion of such cultural modules might tend to improve the results of tuition by helping students to develop clearer and more positive mental images of target language speakers and stronger emotional connections with target language cultures, which might in turn, as suggested by Gardner's model, tend to

promote higher levels of motivation (which in Gardner conceptualization involves attitudes, desire and effort), which could then, conceivably, tend to lead to better results among students in language classes.

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